Strategies for Communication between Teachers and Pupils in a Rural Malaysian School

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STRATEGIES FOR COMMUNICATION BETWEEN TEACHERS

AND PUPILS IN A RURAL MALAYSIAN SCHOOL

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MALAYSIAN SCHOOL

ABSTRACT

ARFAH ABDUL AZIZ

The purpose of this study was to assess teacher-pupil communication in the classroom through an analysis of verbal interactions. Teacher-pupil interactions in the classroom were examined to identify instances and patterns of effective and ineffective communication, and these were compared to instances and patterns of communication used at home and among peers. A profile of the teachers' and pupils' competence in specific strategies for communication was used to develop specific hypothesis about the causes of ineffective communication in classrooms; that ineffective communication was caused by the selection of different strategies during the interaction. The hypotheses suggested further speculations on the pedagogical effects of communicative events. Specific recommendations were then formulated to improve classroom communication and related classroom learning.

The study was conducted at a primary school situated in a federal land development scheme (FELDA) in Sungai Tiang, in north peninsular Malaysia. All teachers and pupils were first speakers of

Kedah Dialect, and Bahasa Malaysia which was used in classroom inter-
actions. The sample was composed of two teachers and four girls and
four boys, two each from two second grade classrooms. The data
consisted of audiotapes of classroom lessons for Elementary Science,
Language and Reading (both in Bahasa Malaysia and English Language),
and spontaneous communication at home with mothers and other members
of families, and with peers for both teachers and pupils. In addition,
the pupils were individually administered a simulated teaching-learning
task, the Nested Boxes, and each mother and teacher was informally
interviewed.

The main unit of analysis was the episode, a complete
communication event in which one of the subjects was an active
participant. The analysis was done in two phases, each phase using
one or a combination of two theoretical frameworks that accounted
for social and psychological bases of the communication process:
(1) Gumperz's model of conversational analysis, and (2) Pascual-Leone's
theory of constructive operators.

The data indicated that each individual, whether teacher or
pupil has a repertoire of strategies for communication that are used
to attain basic objectives. Information-based objectives were giving,
requesting, and sharing information; strategies were questions,
statements, narrations, discussions, and problem-solving. Activity-
based objectives were directives requiring an activity or task in
response; strategies were commands, requests, indirect requests,
and persuasions. General negative feedback was used when a response
was not what the initiator intended and usually implied some degree

of reprimand; strategies were rhetorical questions or requests for repetition.

All strategies were available to all participants. Selection was determined by a combination of factors, including constraints of time, assumptions of social hierarchy and amount of information brought into the interactions, and importance of objectives to participants. These factors differed in classrooms and other settings, thus strategies differed too. But pupils tended to treat classrooms like other settings, consequently there were more instances of ineffective communication in classrooms between teachers and pupils then between participants during home and peer interactions. The diagnosis of ineffective communication between teachers and pupils during daily classroom interactions indicated that these were caused by one or a combination of three factors: mismatches of strategies for negative feedback, teachers' treatment of errors, and mismatches in contextual boundaries.

It seemed reasonable to speculate that the effects of an ineffective teacher-pupil communication was of two kinds, immediate and long-term. When pupils were not able to comprehend the teacher's information or directives, they could not follow the classroom procedures, would make incorrect responses to the teacher's requests, and would not learn the lesson content. Over a period of time, ineffective communication would accumulate and affect pupils' interest and performance in classrooms and also the teacher's performance and expectations of pupils.

To my parents:

        Hj. A. Aziz bin Din

        Hjh. Safiah bt. Hj. A. Wahid

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A.   Introduction

With the growth of technological bureaucracies, the educational
system has gained ever-increasing power as the arbiter of economic
opportunity. Educational success becomes critical for all social groups.
Unequal distribution of educational opportunities, whether due to
geographical locations of institutions or problems of learning caused
by different language systems, creates some social conflicts and
dissatisfactions. Groups who feel excluded from the system clamor for
revision or better implementation of educational policies, so that
everyone can have equal access to education and, thereby, equal
economic opportunities and participation in society.

Education in Malaysia is the responsibility of the federal
government. The federal constitution states that "...the right
to education is one of the fundamental liberties...all pupils receive
equal treatment" (Ministry of Education, Malaysia, 1970, pp.5).
But an examination of the system of education in the country indicates
educational opportunities are sometimes distributed unequally,
particularly among rural and urban areas.

The Malaysian primary and secondary school system, through its
syllabi, methods, and systems of evaluation appears "to a large extent
to [be] servicing the higher levels of education, thence...enhancing
urban cultures, and its values" (UNESCO, vol. 1, 1971, pp.41). Most
rural schools are not as large or as well-equipped as many urban schools.
Results in yearly national examinations conducted by the Examination

Syndicate, Ministry of Education, consistently show that pupils from rural areas in Malaysia generally perform more poorly than their urban peers. The most disadvantaged are the rural poor, "The poor, and especially the rural poor, at present receive the poorest education by all measurable standards" (Murad [b], 1973, pp.50). Because of distance and limited financial resources, most rural parents are not able to send their children to the better schools located in urban areas. The study on dropouts (Murad [b], 1973) showed that the rural poor have a high rate of attrition. Valuable human resources are not fully developed and used in the rural areas resulting in waste and the social problems caused by unemployment.

The problems of rural education in Malaysia could be compared to those faced by some minority groups in the United States. Since the last decade, the problems of minority education have been much researched in efforts to improve teaching techniques and curricular programs (Williams, 1970; Cazden, John, and Hymes, 1972). Questions of pupil's motivation and interest, teacher expectations, relevance of curriculum, and school experiences to out-of-school activities have been suggested to explain the poorer performance of these pupils. The concepts of the linguistically disadvantaged or culturally deprived child are no longer acceptable as bases for teaching and curricular improvements. The inclusion of alternative dialects or language forms is not enough to cause much significant change in these classrooms. We must also identify and understand the social values and attitudes that accompany the alternative forms (Gumperz, 1974).

Rural classrooms and minority classrooms in the United States are mainly composed of poor children with lower socioeconomic values,

while most teachers were trained in and have acquired middle class, urban values. While teachers and students use similar language forms and can understand each other and decipher each other's dialects, misunderstandings may occur because of differences in the social values attached to these verbal forms (Gumperz and Gumperz, 1976). Pupils may have difficulty in correctly interpreting the teacher's messages and intents in classrooms, as teachers may have difficulty in fully under-standing their pupils. Thus, both pupils and teachers may make inappropriate responses during daily classroom interactions.

Effective communication, when both teachers and pupils comprehend each other, is a prerequisite for an optimal teaching-learning situation in the classroom. The dynamics of classroom interactions reflect teacher expectations, pupil performance and motivation for learning. A starting point for improving the quality of rural and minority education is the daily communication in the classroom. An analysis of classroom interactions could indicate problem areas of pupil learning and could also be used as a basis for making policies to improve classroom administration, evaluation systems, teacher training, and curriculum.

In the last decade, the ministry of education's preoccupation with quantitative expansion of education in Malaysia has resulted in some significant lack of attention toward quality improvement of education (UNESCO, 1971, pp.44). There is general agreement that attention should now be given to improvement of the quality of education offered in the system. Strategies and steps to attain this objective can be seen in such projects as the establishment of a

National Curriculum Center in 1973, a review of teacher training programs in 1972-73, and the revision and development of several curricular programs to make school experiences more relevant to each child's intellectual, emotional, and social growth within the frame-work of the nation's cultural, social, economic, and political development.

High on the list of priority for attention is the group of pupils at the primary level, from age three through eight or nine years. The education of this group of children should be viewed as a continuous program, taking into account all relevant variables, including the child; the curriculum and the child's physical environ-ment, including physical and social aspects of the school, the home, and the community (Murad [a], 1973). This is an opportune time for a study focusing on the primary age group to diagnose and develop strategies for improving teaching effectiveness in rural education.

This study diagnoses teacher-pupil communications in the classroom, in particular effective and ineffective communication. It identifies instances and patterns of inappropriate responses made by teachers and pupils and compares these responses to appropriate and/or inappropriate responses found during mother-child and peer interactions outside the classroom. The study also develops profiles of teacher's and pupil's strategies for communication during effective communication in various social situations. The diagnosis, comparisons, and profiles of communication skills of both teachers and pupils form the basis for specific recommendations to improve teacher-pupil class-room interactions, thus maximising teaching-learning effectiveness in the classroom.

An investigation of classroom verbal interactions that would adequately diagnose and predict patterns of teacher-pupil behavior and relate them to learning problems requires two important components: reliable, valid data on communication; and a system of analysis that accounts for both social and cognitive processes involved in expressing and interpreting messages during the interaction. To fulfill these requirements, this study combined several approaches and theoretical frameworks: (a) an anthropological, observational method to collect data, and (b) two approaches to analysis: (1) a conversational approach to analyse communication (Gumperz and Herasimchuk, 1973), and (2) a Neo-Piagetian theory of constructive operators (Pascual-Leone, 1976; Ammon, 1977) to analyse the cognitive processes underlying communication.

B.   Ineffective Communication in Classrooms as It Could Affect Learning

For the purpose of this study, communication is defined as a face-to-face verbal interaction between two or more participants. When both participants understand the content of messages in the interaction, and the objective of the interaction is attained, effective communication has occurred. If either or both participants do not comprehend the content adequately and the objective of the interaction is not attained, ineffective communication has occurred.

Many rural and inner-city classrooms that serve minority children in the United States are composed of teachers and pupils who have had different life experiences, social values, and attitudes. These

differences in cultural experiences are reflected in the different
linguistic and dialectal forms used by teachers and pupils during daily
classroom interactions and are believed to be one of the main causes
of ineffective classroom communcation. Among other things, pupils are
not able fully to comprehend the content of lessons, and this affects
their performance in school. Minority children, whether blacks (Baratz,
1970), native Hawaiians (Boggs, 1972), or American Indians (Phillipps,
1972; Dumont, 1972) consistently perform below the national norm,
particularly in reading.

Baratz (1970) studied inner-city Negro children and suggested that
their inability to read was language-based; their different language
forms interfered in the process of learning. These interferences
could be both structural - i.e., a phonological and grammatical mismatch
in linguistic systems - and/or functional, where "functions of language
were at odds, which occurred either when teachers did not listen care-
fully to children, as if they were interested only in a correct answer
and did not expect to hear it, or when children did not attend to the
lesson, as if they gave up on its making sense or being of interest"
(Piestrup, 1973, pp.71). Analysis of reading lessons in first grade
classrooms indicates that functional interference can alienate teachers
and children and may be the most significant factor in interrupting
learning.

The effect of language interferences in children's ability to
learn to read was not a simple relation between the language and the
speaker but a result of attitudes that accompanied or arose from the
speaker's use of the particular language. In classrooms, the attitudes
were mediated by the teacher, and affected the ways children were

treated and the teacher's expectations of the particular pupils. Pupils who used a different language might be considered less capable than other children, and this would affect teachers' treatment of them in classrooms.

The effects of ineffective communication were not confined to learning skills and content but spilled over into teacher attitudes and expectations and pupil interest and motivation. Gumperz and Hernandez (1972) studied classroom interactions and suggested that language differences in urban classrooms, while they may or may not interfere with reading, do have significant influence on a teacher's expectation, and hence on the learning environment. The ways teachers deal with pupil's use of language, e.g., the correction of nonstandard forms, can alienate children from the school and increase negative teacher expectations of their pupils (Piestrup, 1973). Cultural stereotypes such as the child's different linguistic system and consequent negative teacher attitudes toward the child and his language could also lead to reading difficulties and subsequent school failure (Baratz, 1970).

Previous studies on classroom procedures indicate that the problem of communication between teachers and pupils - as reflected in the form of silence in native American Indian classrooms (Dumont, 1972; Philipps, 1972) or nonresponse to teacher's questions in native Hawaiian classrooms (Boggs, 1972) - is a result of conflicts on the use of strategies for communication. Teachers who are mostly non-Indian or urban-trained do not comprehend or correctly interpret the communication strategies used by these children.

Dumont (1972) viewed long periods of silence as part of a complex system of communication and control within the classroom, silence governed teaching and learning, representing a student-developed and student-controlled tactic to cope with school. Indian children failed to participate verbally in classroom interactions because the social conditions for participation to which they were accustomed were missing (Philipps, 1972). John (1972) suggested that the periods of silence were caused by the different ways of thought that Navajo children developed on the reservation, so that "in contrast with urban middle class children...who are expected to display their growing skills through language, the Navajo child is a doer," (John, 1972, pp.334) and these are accompanied by different patterns and styles of communication.

Boggs (1972) suggested that such communicative phenomena as minimal response were caused by the difficulty with which children understand adults in such a situation, and this was caused by the different patterns of behavior used inside and outside the classrooms. Teachers could not get feedback from pupils about how much or exactly what was learned, and thus did not have adequate information to improve or restructure classroom activities. Most teachers interpret periods of silence as indicative of the absence of learning, whereas they could be symptoms of conflicts of strategies or ways of communication used in different social situations. An attempt to understand these phenomena requires examination of social situations outside the classrooms, i.e., at home and among peers, where these "silent" children are often more verbal.

A study of classroom communication would indicate the process variables that interact and affect pupil success in classrooms and identify problem areas that face both teachers and pupils in a classroom learning situation. The data could be used by educational planners and policy makers to improve and revise curriculum, teacher training, and evaluation programs, so that these educational issues would be made more relevant to the pupils.

C.   A Review of Related Literature

Problems of minority education, language differences, conflicting values, and attitudes in classrooms have been researched extensively. Most research on verbal interactions concentrates on linguistic differences as related to teaching techniques, content, and/or social class differences. The social values and attitudes that determine the interpretation and expression of messages within the classroom inter-actions are virtually ignored. Information for a viable strategy to diagnose and improve classroom communication must incorporate knowledge from other fields of research. This section reviews relevant research and works in various related fields --- sociolinguistics, child language and communication development, and education --- under the following topics:

1. Development and selection of strategies for communication.
2. Studies on communication skills.
3. Recent research on language use in classrooms.
4. Summary.

1. Development and Selecting of Strategies for Communication

Recent studies of child language acquisition put less emphasis on the child's learning of grammatical rules and more on the acquisition of other rules of communication, including social rules (Cook-Gumperz, 1973; Bates, 1976). Children acquire strategies for communication rather than grammatical rules per se. Grammatical knowledge is developed from practice in producing and comprehending socially appropriate or at least acceptable speech. Children develop different strategies for communication according to their different social milieus. These more recent studies on communication relate the process of language acquisition to the effects of social factors. These studies are more revealing of social factors, and they integrate language acquisition with the acquisition of social rules. The increasing amount of research using this sociolinguistic approach has a component of ethnography of communication.

An individual uses numerous strategies for communication in his daily activities-asking for information, requesting an article, narrating experiences, issuing commands or persuasions, and so on. Each object of communication could be achieved by a variety of strategies; the selection of a suitable strategy is determined by the topic, the participants, and the setting (Gumperz, 1972; Ervin-Tripp, 1973). The selection of appropriate strategies from among possible alternatives is further governed by rules of alternation and co-occurrences (Ervin-Tripp, 1973, 1974).

These rules are acquired from an early age. Ervin-Tripp (1977) studied request forms used by children, found evidence that children

responded to certain social variables-age of addressees, familiarity with other participants, the task, and the probability of compliance-and adjusted request forms accordingly. Studies on four-year-old children (Gelman and Shatz, 1973) talking to three groups of people, two-year-olds, four-year-olds, and adults showed that even at the age of four, children were sensitive to the requirements of suitable strategies, and they varied their linguistic forms according to the social requirements, in this case the age of their listener.

Correct use of strategies for communication is particularly important during face-to-face interactions, when the interpretation of messages is not a constant, but depends on the message received and how it has been received. What is said at one point of the conversation may change the interpretation of everything that has gone before (Gumperz and Herasimchuk, 1973). But rules on the use of strategies for communication are unverbalized, and quite unconscious until one of them is broken.

Breaking a communication rule has different implications from breaking a grammatical rule. Use of an inappropriate strategy for communication such as an inappropriate response during an interaction may be interpreted as impoliteness and a negative attitude toward the other participants. Attempts to repair the damage may lead to more problems (Gumperz, 1974).

Brief reviews of recent work in the ethnography of communication (Gumperz and Hernandez, 1972; Gumperz and Herasimchuk, 1973) suggest that social meanings are conveyed in several ways during face-to-face interactions: sequential ordering of utterances and allocation of turns of speaking among participants; choice of message forms or speech events;

code switching or selection from among co-occurrent clusters of variables; intonation, stress, speech rhythm, and other paralinguistics cues.

Gumperz (1977) used the notion of contextualization cues to explain communication difficulties between people of different cultures. Habitual verbal and non-verbal strategies subconsciously affect judgements of attitudes and abilities. These tend to go unnoticed in everyday situations although their effects are constantly felt. Those competencies are learned in the course of previous interactive experiences.

The development of communicative competence allows an individual to acquire rules to select from among several strategies and forms of expressing and interpreting messages to convey both content and social values. These social meanings include attitudes toward other participants and subtle indications of social relationships between participants.

A response that is considered inappropriate in one context may be acceptable in another. A study of strategies for communication used during verbal interactions should take into account the total repertoire of strategies the individual uses in other social situations with different participants and on various topics.

2. Studies on Communication Skills

There are two major research traditions in this area. The first is psychologically oriented and regards communication as the development of referential communication skills. A more recent tradition views communication as containing a social component in

addition to the referential/cognitive element.

Glucksberg (1975) reviewed major contemporary approaches in the first tradition, which concentrated on the development of referential communicative competence. Essentially this type of research was conducted in laboratory settings. Situations were created in which the participant's task was to construct a message that would enable someone else to know what that message refers to. Findings suggest that both listening and speaking skills contribute to communicative performance and that the development of communicative skills is a function of age and grade levels in schools. There were attempts to relate the development of communicative skills to such concepts as role taking, egocentrism, and social class differences, but lack of information on the process involved in the development of these skills and the rigid experimental conditions under which the variables were studied limited the generalization and further elaboration of the findings.

In a more recent review on studies on communication, Flavell (1976) discussed a new research tradition, that approaches the development of communication from a different angle. Communication is taken to mean more than the acquisition of referential communication skills. It also includes the child's developing ability to use language to request, demand, command, and perform numerous other communicative acts or functions. The research methods used in this type of study tend to be either systematic observations of children's spontaneous communications or "tasks" that closely mimic the natural, real-life communication situations the child encounters at home or at school. There is somewhat less explicit concern with the cognitive

processes underlying communicative performance than in the earlier tradition.

The different methods for collecting data, the first involving laboratory settings and specific communicative tasks and the other more natural settings and more meaningful and suitable tasks, could be used to explain the different findings the traditions produce. A comparison of the findings shows that the second tradition had evidence indicating that children are more competent at an earlier age than was indicated by the studies of the first tradition.

The second research tradition is still in its formative stage, but it does hold much promise as a more fruitful methodology than the first. Data collected under more natural settings should be more representative of the process of communication. Careful observations of the context, social relations between participants, and social meanings and attitudes attached to the utterances obtained in these studies could provide valuable supplementary data for further analysis and investigations. Aspects of communication that have not been accounted for or studied in laboratory settings could be identified and isolated during analysis of natural data, and these could later be refined and studied more explicitly under controlled laboratory settings. Thus, both research traditions could be combined in investigating the process of communication.

3. Recent Research on Language Use in Classrooms

Teacher-pupil interactions in the classroom have been extensively investigated through interaction analysis systems, which have been described as shorthand methods for collecting

objective data about the ways people talk and act (Simon, 1967; Flanders, 1970). Classroom proceedings are reduced to codable categories, and classroom interactions are characterized by amount, type of interactions and teacher control. One major disadvantage of this type of system for the present purpose is that although the system makes possible a relatively simple record of what is happening, it does not record what is being said. Trained observers code verbal behavior into categories, and there is no way to retrieve verbal exchanges in their original form, either for analysis or for confirmation of categorization. Much valuable data is lost during the process of coding, and analysis and interpretation of data becomes complex and inadequate.

There is an increasing amount of research based on audiotapes of teacher-pupil verbal exchanges in classrooms. Transcripts and other supplementary data, such as information on paralinguistic cues and impressions of observers, are used to describe verbal behavior in classrooms. Methods of analyzing data include lingustic analysis, and descriptions of verbal interactions.

Bellack (1966) and Sinclair and Coulthard (1975) used transcripts of teacher-pupil interactions in classrooms and described the structure of language use in terms of linguistic games. All data was coded in units of games, subgames, cycle, and moves. Barnes (1969) focused on the teacher's use of question forms to identify and specify areas of language difficulty met by children when they first entered secondary school with new classrooms and new teachers. The analysis was designed to relate the use of specific linguistic forms, i.e., questions, to learning in the classroom.

The linguistic analysis of language use dealt with the selection and organization of grammatical and language forms, but did not deal with situational and related social factors of selection. In addition, the audiotapes and other data did not allow for retrieval of valuable paralinguistic cues that had affected the dynamics of interactions. Instances of ineffective communication, where teachers or pupils made inappropriate responses could be identified from the transcripts, but there were too few contextual cues to hypothesize causes and effects of these occurences. The analysis also dealt only with classroom data. There was no information on the pupils' or teachers' interactions within other social situations to help explain any ineffectiveness in communications.

Several other researchers described verbal exchanges between teachers and pupils in classrooms (Mishler, 1972; Boggs, 1972; Dumont, 1972; Philipps, 1972) and during testing situations (Cicourel, 1972). These descriptions give a lot of useful information on the situation and utterances, but they are lengthy, informal, subjective, and usually based on a small number of classrooms and/or teachers. The collection of this vast amount of data could be regarded as a first step toward an adequate analysis of classroom interactions, but the data must be organized within a framework to allow reduction of the data into manageable and useful units of analysis.

Gumperz and Herasimchuk (1973) suggested an alternative methodology for data analysis that would compensate for the inadequacy of the linguistic analysis and include the descriptive information on social and contextual cues within which interactions took place. Such analysis woud take into account the social values attached to

various language forms and would organize them into units for analysis. Gumperz and Herasimchuk suggested an empirical method of conversational analysis, capable of recovering the social assumptions that underlie the verbal communication process by focusing on an actor's use of speech to interact, i.e., to create and maintain a social situation.

4. Synthesis and Summary

An individual acquires and develops a repertoire of strategies of communication from which he selects suitable strategies for certain situations. The selection of a strategy from among several seemingly equivalent grammatical and/or linguistic forms depends on other factors, among them the topic, social relations with other partici- pants, and the context.

The selection of an appropriate strategy of communication will result in an effective communication whereby the objective is attained. The use of an inappropriate strategy will result in an ineffective communication, the objective is not attained, and some degree of misunderstanding and negative effects may result from it.

Each strategy of communication carries both content and social components. The social component includes the social values and attitudes expressed by a particular strategy, which may include sequencing of utterances, turn-taking, and so on. Misuse of such strategies and any misinterpretations of any of them would lead to some misunderstandings. Differences in rules for interpreting and expressing messages in these verbal interactions would result in the misuse of the strategies.

Strategies of communcation are acquired within the familial, social, and cultural environment. Different social values are attached to particular strategies, and the misuse of one of them could create some social problems of understanding and interaction between the participants. The use of different strategies of communication for interpreting and expressing messages would cause ineffective communcation when participants who have different social and cultural values, environment, and experiences meet during face-to-face communication. One situation where ineffective communication of this type could occur is the classroom in inner-city schools where minority children interact with teachers from mainly middle class cultures, and rural classrooms where children interact with teachers who have acquired some middle class, urban values.

Ineffective communication in the classroom impedes the learning process. Pupils do not comprehend the lessons adequately, and there may be some negative effects on their motivation, interest, and performance in the classroom. Teachers may not be able to restructure and improve their teachings, and may even develop negative expectations of their pupils due to inadequate information on their communicative competences.

Efforts to improve the performance of minority and rural children should begin in daily classroom interactions; the communication between teachers and pupils must be improved and made more effective. Analysis of ineffective teacher-pupil communication could identify areas of problems for pupil learning, and such information could be used to improve teaching. Most studies on language use in classrooms use linguistic analysis or lengthy descriptions. Also,

most of these studies focus on classroom interactions only. Descriptions of American Indian classrooms (Philipps, 1972; Dumont, 1972; John, 1972) suggest that what happened in the classroom was determined, in large part, by what happened outside the classrooms. An adequate diagnosis of communication problems in the classroom should include comparisons with interactions outside the classroom, in particular at home and among peers, where the child has developed adequate, suitable strategies and patterns of interaction.

During the first six years of a child's life, he acquires and develops strategies of communication to be used in the home with members of his family and with his peers. When he goes to school he has to understand a different set of strategies and possibly develop new strategies to deal with the new situations. What adjustments does a child have to make in order to cope with the new situation, different objectives, and different participants?

Recent studies on the development of language and communicative skills in children suggest that an adequate study and analysis of communication should begin with natural, spontaneous data. Data collected in laboratory settings may not give adequate samples of various variables and components of communication to allow for a complete description of the process. Any tasks that subjects are asked to do should be meaningful and administered in reasonably natural situations that simulate the real situations children face at home and in classrooms.

The process of communication contains both content and social components that interact during the communcation to allow for interpretation and expression of messages. The analysis should be

able to account for both the components in the interaction and the
step-by-step development of the process, from the initiation of the
interaction to the completion or closure of the interaction. The
system of diagnosis and analysis should describe, explain, hypothe-
size, and predict instances of effective and ineffective communication.
Such factors as social and content components and cognitive/psycho-
logical steps for development should be included within the framework
of analysis. It is suggested that two frameworks of analysis be used
to accommodate and incorporate all these characteristics: (1) the
conversational analysis suggested by Gumperz and Herasimchuk (1973),
and (2) the Neo-Piagetian theory of performance proposed by Pascual-
Leone (1974).

D. A Framework to Analyze Classroom Communication

Communication is a process; its evolution does not follow a
rigid format. Moment-to-moment inputs from participants and the
context maintain, control, evaluate, and regulate the direction of
the process, and the interaction of these inputs with variables of
participant, topic, and context gives communication its fluid quality.
The process of communication cannot be broken up into segments of
time or variables without losing the dynamic quality that is funda-
mental to all verbal exchanges.

Previous methods of analysis, as described in the sections
above, researched particular components or variables of communication
and focused on either linguistic forms, social categories, or terminal
objectives. Such analyses have tended to obscure the fact that

communication is an on-going process that develops over time.

An adequate framework of analysis that attempts to account for the process of communication with all its complexities should consider its social and psychological bases. Two theoretical frameworks were used to analyze the process of communication, and each was used at different stages of the analysis. A conversational analysis developed by Gumperz (1976, 1977) was used during the first phase of analysis to describe and identify instances of effective and ineffective communication. A neo-Piagetian theory of constructive operators (Pascual-Leone, 1976; Ammon, 1977) was used for task analysis of specific instances and episodes of communication to identify and specify psychological processes involved in the communication.

The methods supplemented each other to account for major social and psychological bases of the process of communication. Findings from these analyses could be used to hypothesize causes and effects of ineffective communication that occurred during teacher-pupil verbal interactions in the classroom.

1. Gumperz's Conversational Analysis

Conversation is defined as a cooperative endeavor, subject to systematic constraints. Participants assess each other's intentions, and base their responses on "conversational inference", i.e., the "situated" or context-bound process of interpretation (Gumperz, 1977 [a],[b]).

A successful interaction between participants begins with each participant talking in a certain mode, using certain contextualization

cues. Then by the verbal style in which they respond and the listener-
ship they produce, participants implicitly signal their agreement or
disagreement; thus they "tune into" each other's way of speaking.
Once this has been done, and a conversational rhythm has been estab-
lished, both participants can reasonably assume that they have success-
fully negotiated a frame of interpretation; that is, they have agreed
on what activity is being enacted and how it is to be conducted. At
this point, a principle of strategic consistency takes over. Speakers
continue in the same mode, assigning negotiated meanings to contextual-
ization cues, until there is a perceptible break in rhythm, a shift in
content and cues, or until a mismatch between content and cues suggests
that something has gone wrong.

Effective communication, i.e., when participants are involved
in the conversation and are able to evaluate each other's intent is
determined by the amount of shared knowledge between them. Unshared
habitual verbal and nonverbal strategies that subconsciously affect
judgment of attitudes and abilities may result in communication
difficulties between participants. These strategies of interpreting
and expressing messages are a function of home background and cultural
and socioeconomic values.

The study of conversation is essentially the study of social
meanings. Social categories and social roles-the sorts of things
that social anthropologists and sociologists refer to as role, status,
social identities, and social relationships-are treated as communica-
tive symbols. It is necessary to know what social values, categories,
and relationships are implied in the message in order to understand
the situated meaning of a message, that is, its interpretation in a

particular context. These contextualization cues and other culturally determined inferences are used to differentiate between literal and humorous, technical or colloquial meanings and to indicate whether the speaker means to inform or instruct, to argue or agree, and so on.

During a conversation, the participants constantly interpret and express messages. Interpretation of a message is a process in which a speaker must match the social meaning of an utterance with the content of what is said and with other contextual features incident to the speech act. When these show the expected match, the activity is carried out in the prescribed manner. Situated meanings must be interpreted within the total context of what has been said before and what is said afterwards. The interpretation of a message is not a constant, it depends on the message to which it responds and how it is received. What is said in one part of the conversation may change the interpretation of everything that has gone before. Units of analysis are exchanges of utterances rather than single sentences, and attention is concentrated on how speakers react to each other through speech (Gumperz and Herasimchuk, 1973; Gumperz, 1974, 1975, 1976).

2. Pascual-Leone's Theory of Constructive Operators

Pascual-Leone's neo-Piagetian theory of performance takes into account the performance in a task, the step-by-step process of performance, and the physical, psychological, and social variables of the situation. This theory attempts to correct some deficiencies of Piaget's theory of cognitive development. In particular, it accounts for the step-by-step process of the subject's performace in a task,

explains situational variability and/or individual differences, and generates a performance model with greater power of prediction (Pascual-Leone, 1974; Case, 1974).

The theory could be summarized by means of three sets of notions: (1) the Piagetian notion of schemes, (2) the notion of "field of activation" in the subject's repertoire of schemes and the related notion of a schematic overdetermination of performance, and (3) the notion of scheme boosters, i.e., factor constructs applying on the schemes to increase their activation or assimilatory strength. The content of the subject's external or mental behavior results from the activation of his schemes and their application to the inputs. In other words, behavior follows from the assimilation of the inputs by the schemes.

Pascual-Leone has not set down an explicit set of heuristics whereby his theory may be used to generate a detailed performance in any particular task. But a task analysis based on his notions of schemes and metaconstructs will take into account such variables as the subject's motivation (affective factor), his mental capacity (M-factor), saliency and arrangement of the field of inputs (F-factor), and learning (content and logical learning factors).

An analysis of a task based on Pascual-Leone's theory identifies the schemes necessary for the correct performance of a task. The subject's performance may be inadequate because the necessary schemes are not available in his repertoire, or because the schemes are available but the weightings from the metaconstructs have produced a pattern of dominance among the schemes such that the correct schemes are weakened or are not activated.

An analysis of communication using this framework could map out the underlying cognitive processes which result in the production and comprehension of utterances.

3. Summary

Both Gumperz's conversational analysis and Pascual-Leone's theory of constructive operators are in their formative stages, but there is a growing amount of research using both frameworks, which indicates that both are promising tools for analyzing classroom communication.

Gumperz used natural conversational data during classroom interactions (1972, 1973) and interethnic communications (1976, 1977 [a], [b]) to formulate a methodology to account for the social values, contextualization cues, and cultural inferences that participants use during the process of a conversation. The mismatches of these variables result in what he termed "communication difficulties," which is parallel to what this study defined as "ineffective communication."

Pascual-Leone's theory of constructive operators, through a task analysis, identifies the psychological steps that bring about ineffective communication and allows hypothesis development and speculation on the causes and effects of such instances of communicative failure. This theory is also in its formative stage, but while it is relatively new, there is a small but growing body of evidence supporting its unique assumptions and suggesting that it can be successfully used to make rather strong predictions about a child's ability to perform (or to learn) a particular cognitive task. The theory seems especially

promising as a tool for educators because of the extent to which it addresses educationally important issues, such as important objectives for instruction and adjustments of a teaching method to the experience, the developmental level, and the cognitive style of the learner (Ammon, 1977).

The principles outlined in conversational analysis will be used during the first phase of analysis of data, that is, organizaing and identifying episodes of effective and ineffective communication, and providing a description of the strategies for communication used in classrooms and outside classroom interactions. Pascual-Leone's theory of performance will be used to examine specific episodes in a task analysis to identify, diagnose, explain, and predict similar instances of communication.

E.   The Design of the Study

Effective teacher-pupil communication in the classroom is a major prerequisite to the learning situation in the classroom; when pupils can comprehend the teacher, learning can proceed. When pupils cannot understand the teacher adequately to allow for effective communication-e.g., if the pupils cannot follow the teacher's directives and so make several inappropriate responses-an optimum situation for learning does not exist. Teachers may not understand the pupils, pupils may not understand teachers, and in fact they may draw inappropriate conclusions on each other's intent and messages. An accumulation of inappropriate responses, directives, questions, and other statements could negatively affect a child's performance and motivation and the

teacher's expectations of pupils and performance and effectiveness in the classroom.

The child's inappropriate response to a teacher's question or directive may be caused by one or a combination of several factors that could originate within the classroom setting, such as the composition of the classroom, the materials, and the other pupils, or it could be caused by factors from outside the classroom, such as the child's experiences at home and among his peers. Too little is known about the components of communication to allow for definite isolation and identification of the specific variables involved. It is assumed that all the mentioned factors can contribute to effectiveness or ineffectiveness of teacher-pupil communication in the classrooms.

This was an exploratory study, an in-depth investigation of strategies for communication used by a small number of subjects (teachers and pupils) in classrooms and homes and among peers. Supplementary data were collected in a simulated teaching-learning situation, and in informal interviews with mothers and teachers. This study was not testing hypotheses, it was designed to generate hypotheses for further studies. Data were collected using an anthropological, observational approach and were analysed within the framework of two theories-from sociolinguistics, Gumperz's conversational analysis, and from psychology, Pascual-Leone's theory of constructive operators.

1. The Problem

When rural children go to school at age six plus they have acquired and developed a set of communicative skills and strategies that they use at home and among peers. When they go to school, they are faced with different strategies of interpreting and expressing messages. They must develop an alternative or parallel set of communication strategies to deal with those used by teachers in classrooms. The objective and content of interaction inside class-rooms differ from those they are used to outside. Children have to make adjustments in linguistic, social, and cognitive areas to cope with classroom interactions, and yet they must maintain other strategies already developed for use when they are in other social situations.

2. Statement of Purpose

This study was undertaken to assess teacher-pupil communication in the classroom through an analysis of verbal interaction. Informa-tion from the study would be used to diagnose teaching-learning problems in the classroom and provide basic information for educational planners.

The study investigated the teacher's and pupil's strategies for communication in classroom proceedings, and compared them to strategies used outside the classroom, i.e., at home and among peers. Teacher-pupil interactions in the classroom were examined to identify instances and patterns of ineffective and effective communcation. These were compared to instances and patterns of communication used at

home and among peers. A profile of the teacher's and the pupils'
competence in specific strategies for communication was developed
during classroom and other social interactions.   .

Information from the diagnosis of ineffective communication
in classrooms, comparisons with communication strategies used
outside the classrooms, and profiles of strategies for teacher-pupil
communication were used to develop specific hypotheses about the
causes of ineffective communication. These hypotheses suggested
further speculations on the effects of communicative events.

Specific recommendations were then formulated to improve
classroom communication and related classroom learning. For example,
components of effective home and peer interactions could be assimil-
ated into the classroom to improve teacher effectiveness, decrease
negative teacher expectations of pupils, and increase pupils'
motivation and interest in classroom proceedings, thus making
classroom interactions more meaningful and effective for teachers
and pupils.

3. Research Questions

Data on verbal interactions for both teachers and pupils were
collected in a variety of social situations, i.e., in classrooms, at
home, and among peers. These data were transcribed, and spontaneous
and natural episodes were identified, compared, and analyzed to
answer the following questions:

a. Strategies for communication

1. What strategies for communication were used in the following situation:

     (a) the classroom

     (b) at home

     (c) among peers

     to accomplish the following objectives:

     (a) directives

     (b) requests for information

     (c) giving of information

2. What different strategies for communication were used between the following participants:

     (a) teacher and teacher

     (b) teacher and pupils

     (c) pupils and pupils

     (d) teachers and children

     (e) children and mothers

3. When parallel or similar strategies for communication were present within the repertoire of an individual, what determined the selection of one strategy over another?

     (a) topic

     (b) situation and context

     (c) social relationships between participants

     (d) time factor

     (e) objective of the interaction

b.   Ineffective communication

1. What kinds of ineffective and effective communication occurred in classrooms between teachers and pupils?

2. Were there similar instances of ineffective communication outside classroom situations, i.e., at home and among peers?

3. What were the possible causes of such ineffective communication in classroom situations?

4. What were the possible consequences of such ineffective communication in classrooms, at home, and among peers?

4. Limitations of the Study

The limitations of the study could be viewed from three angles: the data, the analysis, and the design.

The data was mainly composed of audiotapes of interactions in classrooms and homes and between peers. Although the two observers took notes on nonverbal cues and other variables in the situation, data on paralinguistic cues, such as stress, intonation, accompanying facial expressions, physical distance, and closeness, which could have affected the communicative events, could not be adequately recorded or accounted for during data collection and transcription. But the amount of linguistic data was considered adequate to develop a framework for further studies. Other nonlinguistic cues and para-linguistic features of the interactions could be further studied during a later phase of the study, when particular variables or

components of the communicative process and strategies would be investigated further.

Any message in a verbal interaction ultimately is open to a number of interpretations, depending on the extent to which personal backgrounds of participants and analysts are brought in. Thus the interpretation of episodes in the analysis may not be considered final; other alternative interpretations could be developed and be plausible and acceptable. However, the use of two theoretical models, a conversational analysis from sociolinguistics and neo-Piagetian theory of behavior from psychology would account for the major social and psychological bases of the communication and strengthen the interpretations and analysis. In addition, the main purpose of the study was to isolate problems of communication in classrooms, and analyses based on the two theoretical models will complement each other to identify, describe, analyze, and possibly predict instances of effective and ineffective communication.

The generalizability of the findings from this study must be very limited. It was an in-depth study of a small number of class-rooms, teachers, pupils, and homes. But as an exploratory study, it was considered advantageous to concentrate on a small number of subjects and classrooms to obtain a more complete study of the interactions.

CHAPTER II   METHOD

The diagnosis of ineffective communication in classrooms requires examination of communication strategies used inside and outside classroom situations. The study should incorporate the community, including home and peers, and social situations. Social and psychological process variables are affected by the participants' life experiences. It was considered important to minimize the varieties of life experiences of the participants so that analysis and interpretations of language use would not be complicated by additional factors. A suitable community for a study of this kind would be composed of a stable population, the horizontal and/or vertical mobility of its members kept at a mimimum. A rural community where the traditional culture was still quite intact and familial relationships were relatively stable would fulfill these requirements. Such a community was found in Sungai Tiang, a FELDA (Federal Land Development Authority) scheme where this study was conducted.

This study is exploratory, more hypothesis-developing than hypothesis-testing. Essentially, the study required in-depth case studies of a small number of classrooms, teachers, and pupils. Both teacher and pupil subjects were observed and audiotaped in the classroom, at home, and with peers. Supplementary data included a simulated teaching-learning situation with individual subjects (pupils), and an informal interview with both teachers and mothers of pupils in the sample.

The original design of the study was considered a tentative plan

of approach and was modified to facilitate data collection when the
researcher was in the field.

A.   Overview of Methodology

        This was an exploratory, observational case-study of a small
sample of classrooms, teachers, and pupils. Communication was
studied as an ongoing process. Natural, spontaneous data of verbal
interactions were collected, and frameworks of analyses were developed
to account for some social and psychological basis of the process.
        Collection of data was done in three phases:

1. Selection of subjects

2. Observation and familiarization in classrooms and homes

3. Observations and audiotapings of verbal interactions

        In all three phases, the investigator worked closely with an
assistant, a teacher in the school, who was, in fact, one of the
teachers in the sample. Bias in the data due to close association
with the main investigator was minimized through a discussion and
explanation of the need for spontaneity and naturalness in classrooms
and other social situations.
        At all times, the investigator maintained an informal, open
relationship with teachers, parents, and pupil-subjects in the study.
All phases of data collection, including audiotapings of the simulated
teaching-learning situation were discussed with both teachers, who
contributed their views on the best ways to get spontaneous samples
of communication episodes. This informal approach allowed for much

discussion on events of communication and some relevant implications of the different components of participants, topics, and situations, which were later used to interpret some of the data.

The subjects in the study were two teachers and eight pupils, four boys and four girls. Each teacher and pupil was observed in the classroom and in the home. When both investigators were accepted in the homes, and all participants were at ease with both investigators, spontaneous verbal interactions were audiotaped. Initially the investigator was to be an observer; her tasks were to note relevant events and contexts of the interactions, and control the audiotapings. After a two-week period of familiarization, both investigators had come to know the pupils' families well enough that both investigators were sometimes drawn into activities and interactions, becoming participant-observers.

Audiotaping was done with one of two tape recorders, a SONY TC 135, and a smaller SONY 45. Audiotaping in the classroom was done with the SONY TC 135. Two microphones were used, one attached to the teacher, another controlled by the investigator. Both tape-recorders were used to audiotape home interactions. In every case, the investigator controlled the audiotapings using a remote microphone that was switched on and off without distracting the participants. All interactions between peers were audiotaped with the smaller tape recorder. All audiotapings were done on Philips C90 cassettes.

Analysis of data was done in two stages:

1. Description and identification of ineffective communication in classrooms. Gumperz's model of conversational analysis

was adapted for this stage.

2. Task analysis of selected episodes to hypothesize and
   speculate on causes and effects of instances of
   ineffective communication in classrooms. Pascual-Leone's
   neo-Piagetian theory of constructive operators was used
   at this stage.

B.   Setting

Sungai Tiang Federal Land Development Scheme (FELDA) is one
of the oldest land development areas in northern Malaysia. It is
composed of 518 settler families. Each family owns approximately
six acres of rubber land, two acres of fruit orchard, and a quarter
acre for living quarters and home compound. The scheme was started
in 1959, settlers moved in with their families in 1960, and the first
yield of rubber was obtained in October 1967. The land scheme is
supported by several other ministries in the federal government:
the Ministry of Health provides a clinic and other health facilities
and personnel, the Ministry of Defense the police force, the Ministry
of Post and Telecommunications the postal service, and the Ministry
of Education the two schools, primary and secondary levels.

Settlers of the scheme were drawn from two groups of rural
population: ex-members of the armed forces (home guards and police
constables), and civilians who had less than two acres of workable
land. To qualify as settlers and land owners, all applicants had to
be married, and both spouses were to live on the land scheme. When
the scheme began each family was composed of an average of five members,

parents and three children. At the time of study, the population of
settlers had increased enormously through normal birth rate and
marriages.

Sungai Tiang is essentially a self-sufficient rural community
with road links to nearby urban and rural areas. Most families in this
community are of Malay origin, their life-style is typical of traditional
Muslim culture and customs. The community's first language is Kedah
Malay, a dialect of Bahasa Malaysia*, the more formal national language
of the country. Most communications in school, and with administrators
of the scheme would use Bahasa Malaysia. Kedah Malay, the dialect, is
used in the home, during market negotiations, and other informal inter-
actions.

Although all members of the community use the dialect in most
of their daily interactions, they are daily exposed to Bahasa Malaysia.
Radio and television networks use Bahasa Malaysia in most of their
daily programs. Almost all families own a small transistor radio,
and it is normally tuned to the national network for music and news,
offered all day. Several federal officers attached to the scheme
owned television sets and many children and some adults from the
scheme did follow some programs, including several American-produced
series, such as Six Million Dollar Man and Police Woman. At regular
intervals (fortnightly or monthly) there was a commercial film show
in a makeshift theatre on the playing field, usually popular epics or

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*   Bahasa Malaysia is the name given to the national language,
formerly known as Bahasa Melayu (Malay language). Malay belongs to
the Malayo-Polynesian family of languages. It is closely related to
Javanese in Indonesia and Tagalog in the Philippines.

long, romantic stories in Bahasa Malaysia or Hindi with subtitles in Bahasa Malaysia.

Three levels of education were available in the scheme: TADIKA (preschool for age group four to six years, organized by the Parent-Teacher Association), primary education (age group six through eleven years), and secondary education (age group twelve through seventeen years). Both primary and secondary schools were administered by the State Department of Education, under the Ministry of Education. All schools were well-attended by children from the scheme. A small number of children from nearby villages were also accepted to both primary and secondary schools. Most children in the primary school continue their education at the village secondary school, except for a small number of pupils selected to enroll at special residential schools located in urban areas.*

This study was conducted in the primary school in the village. The investigator had access to the school as she was an officer in the Ministry of Education at the time. The school was considered suitable for a study of this kind: it is situated in a rural area, pupils are drawn from a rural community, all have similar socioeconomic backgrounds, all speak the dialect at home.

At the time of the study the scheme had been in operation for sixteen years, the settlers had been in the place long enough to form permanent, stable social relations with each other. There was not much

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* The Ministry of Education established these schools, which emphasize science and technical subjects, in the early 1970's. Pupils selected to attend these schools are mainly from rural areas, and admission is based on nationally conducted examinations at the end of grade five.

mobility among the settlers, as all heads of households and wives were required to live on the settlement. Only the children would be able to move to urban or other rural areas, and when this happened, in most cases it was done for one of two reasons, for further education or to seek alternative employment.

The primary school had six grades (one through six). It was located in two different buildings, School A and School B, separated by a row of settler houses. School A housed the school administration, the library, and grades five and six, both of which were on the morning session. School B had grades one and four in the morning and grades two and three in the afternoon. Both buildings had their own staff room for teachers, but they shared a canteen, which was in the compound of School B.

School B's afternoon session had eight classes, four each for grades two and three. There were eight regular teachers (one of them was the afternoon supervisor), and one religious teacher. Each regular teacher was assigned to a class, and was responsible for all subjects, except religious studies and one language. All teachers specialized in teaching either Bahasa Malaysia or English and would interchange with another teacher of the same grade level to teach that one language. In this way, each teacher taught a different group of children for two periods daily. Each teacher had one free period daily when the religious teacher took over the class for religious studies. Other subjects taught included health education, social studies, arithmetic, handwork and art, and physical education.

School for grade two began at 1:00 p.m. and ended at 6:00 or 6:30 p.m., depending on days of the week. The school week was from Sunday to Thursday, Friday being holiday in this predominantly Muslim area. There was a weekly assembly on Sundays at 5:30 p.m. at which the afternoon supervisor made announcements of coming school events, and the duty teacher gave reports of school activities of the previous week. At each school assembly, the national and state anthems were sung, and the Malaysian flag was raised.

The building of the school is based on the model of all schools built by the Ministry of Education in the 1960s. There are two rows of four classrooms parallel to each other, connected by a roofed corridor. There is a fairly large playing field in front of the school building and a small canteen at its edge that sells snacks to teachers and pupils during school hours. There are climbing structures at the edge of the playing field near the school building. Both had been built several years before by two teachers from the Peace Corps who were attached to the school. During both recess periods, from 3:00 to 3:15 and 4:15 to 4:30, groups of boys and girls would take turns climbing both structures.

Most pupils enrolled in the primary school were from the land scheme. There was a small group of children from nearby villages or areas who also attended the school. They lived within walking distance of the scheme, had relatives on the scheme, and spent much of their time there too. These children were similar to children from the sheme in socioeconomic background and in home and peer cultures, and could be included as subjects in the study.

C.   Subjects

Recent research on language development indicates that children in the seven-year-old group are interesting subjects for study. These children have acquired most grammatical rules of language and are still in the process of developing social and communicative rules of interaction. This age group is enrolled in grade two of the school system. This was another reason why this group of children was selected to be the subject of the study. Since it was their second year in school, they had acquired some rules of classroom procedures, while still maintaining some of the rules of language use developed during the first six years of their lives.

There were four classes of grade two in the primary school, and pupils were streamed into different classes on the basis of their performance in the school-administered examinations at the end of grade one (November 1975). These classes were named Tuah, Jebat, Kasturi, and Lekir after four ancient Malay warriors in descending order of strength and ability, which corresponded to the pupils' descending order of performance on the examinations. Two classes-Tuah (above average pupils) and Kasturi (average to below average pupils)-were selected for study. Both class teachers (Tuah-female, Kasturi-male) were automatically the teachers in the sample. Teacher T taught Bahasa Malaysia and reading and Teacher K taught English and reading for both classes.

1. Teachers

The two teachers included in the study could be considered typical teachers in rural primary schools with regards to teacher training, years of teaching experience and cultural background.

Teacher T was the class teacher of grade two, Tuah. She was twenty-three years old and had been teaching for two years in Sungai Tiang Primary School. She was the eldest daughter of the five children of an original settler on the scheme and had spent most of her life on the settlement, except for three years when she did her teacher training in an urban center. At the time of the study, she lived with her family.

Teacher K was the class teacher of grade two, Kasturi. He was thirty-five years old and had had eleven years of teaching experience, five years of which was in Sungai Tiang Primary School. He, too, had three years of teacher training in an urban center. He was married and his wife taught in the same school. He had six children, ranging in age from two months to nine years.

2. Pupils

The original design of the study was that both teachers would be female, and a small sample of four girls would be adequate. With the change in the composition of teacher sample, the pupil sample was modified to eight pupils, four girls and four boys, two each from both classes.

The pupil sample was selected through several phases of elimination of unsuitable subjects on various characteristics, until a

small group of possible subjects was identified. At this last phase, the final selection was determined by the availability of the mothers for audiotaping sessions.

The selection of pupils was done with the advice and assistance of both class teachers, who knew the families of children in their class quite well. If specific information about some particular families was not known to either teacher, such information was available from other teachers, in particular the religious teachers.

All pupils in both classes were considered potential subjects. The investigator had informal discussions with both class teachers and other teachers in the school to identify pupils who could be considered verbal. The study required a large sample of verbal interactions in the home and between peers, and including pupils who were judged to be nonverbal would make data collection more difficult, and would require a much longer period of audiotaping. Pupils who were considered nonverbal, i.e., they did not respond when called on in class and were comparatively reticent, were eliminated. Pupils who were judged verbal, i.e., responded in classrooms and were more communicative with each other, were then considered as possible subjects.

Each pupil's family background was then considered. The sample should consist of pupils with normal, average families, i.e., both natural parents present and at least one other sibling. At this phase, pupils who had only one natural parent (through death, adoption, or remarriage) or were only children were eliminated from consideration.

Generally, the pupils in the school had similar socioeconomic backgrounds, whether they were members of settler families or were from villages nearby. Although each family had an average income of M$300.00 per month from the rubber holdings, total income varied somewhat. Some families had additional income from relatives outside the settlement in the form of rice or other food commodities. Other families operated additional small-scale economic enterprises, for example, to sell household articles like Tupperware (on similar lines as in the United States) and clothing materials. Some of the settlers' children were fully employed on jobs outside the scheme, and were sending money to their parents regularly. These extra incomes were reflected in the size of house occupied by the families. Most of the small houses originally built by the scheme authority had been remodeled to accommodate larger families, and reflected the comparatively better economic status of the family. Pupils from either extremely large houses or the original small houses were eliminated from the possible sample.

After informal discussions with teachers in the school, the number of possible subjects was reduced to the following:

	Total No. of Pupils in Class	Possible Subjects Boys	Girls	Total
Tuah	43	9	12	21
Kasturi	42	15	11	26
Total	85	24	23	47

Each of forty-seven possible subjects were then informally interviewed by the investigator to check for the following information:

a. Whether pupil was verbal or nonverbal

b. Whether mother would be available for inclusion in study

c. If answer to (b) was positive, when would be the best time for data collection

With regard to data on interactions in the home, it was considered more feasible to get data on pupils interacting with mothers rather than fathers for various reasons. Mothers would be more inclined to spend time at home, while fathers would spend more time at the mosque or at other social places and would be home mainly during meal times and late evenings. In most cases, when the father was at home interacting with the child, the mother was also present and participating in these interactions. Thus, it would be easier to get more child-mother interactions. Also, since the investigator is a woman, the mothers were more at ease in her presence during the daily activities when data collection was done. However, interactions with the father and other siblings were also considered as part of the data.

After informal interviews with possible subjects, three pupils were selected from each class and sex, making a total of twelve subjects. The final list of subjects was confirmed with both class teachers and the supervisor of the afternoon school. Data were collected on eight subjects and the additional four subjects were

held in reserve in case any of the subjects included was found to be unsuitable during the data collection phase.

Each of the eight families was contacted, and the investigator made the first visit to inform parents about the purpose and data required in the study and to get formal agreement and consent of parents to participate in the study. All the parents readily gave their consent, commitment, and cooperation to the study and the schedule of data collection. Observations and audiotapings were done during subsequent visits.

On the basis of the first and second visits, it was found that two subjects (one boy from grade two, Tuah and one girl from Grade two, Kasturi) were found to be reticent when at home, and/or the home situation was not conducive for audiotapings and observations because of such factors as frequent visitors, etc. In both cases, reserve subjects were substituted for the original subjects.

D.   Collection of Data

Data collected were observations and audiotapings inside and outside the classrooms. Supplementary data included audiotapes of a simulated teaching-learning situation, the nested box, and informal interviews with teachers and mothers.

1. Observations and Audiotapings of Classroom Lessons

Interactions in the classroom were audiotapes of lessons in three subject areas: elementary science, language, and reading. Both classes covered almost the same content area for all three

lessons in elementary science classes, Teacher T taught the same content for both language lessons, and Teacher K taught similar drill patterns for both lessons. Each had a reading lesson with grade 2, Tuah. All lessons were taught in the traditional structure, the teacher stood in front of the class, the pupils sat in rows facing the teacher and the blackboard.

The investigator spent a total of six weeks in the classroom. The first two weeks were to observe the classes; actual data collection was done during the last four weeks. At the beginning of each week, the investigator met with both teachers individually and suggested a schedule of observations and audiotapings. At all times the investigator entered a classroom only with prior agreement and consent of the teacher. Several possible lessons were audiotaped, and the lessons to be included as data were finally selected on the basis of similar content for elementary science lessons and similar content or drills for language lessons.

The investigator spent an initial period of familiarization so that teachers and pupils would be used to her presence in the classroom. During these two weeks, she observed in the classrooms, and did several tryouts of audiotapings to find the best method of audiotaping the lesson so that valuable data would not be lost.

All data collection in the classroom was done using two microphones. One was attached to the teacher and connected to the tape recorder with a twenty-foot cord. The tape recorder was placed in the middle of the classroom, near one of the pupils' tables. The investigator sat on a chair near the tape recorder, and she

controlled the audiotapings using the second microphone, which was on remote-control. This was tried several times, and it picked up more pupils' responses and other kinds of pupil interactions than any other method. Several tryouts were conducted to ensure that teachers and pupils would get used to the microphones, the cord, and the tape recorder in the middle of the room.

During the first few tryouts, the investigator moved to sit near particular subjects. This was done to see if it would be possible to get audiotapes of pupil interactions with each other, and/or pupils' interactions with teachers. It was found that pupil interactions with each other were minimal, and teachers did not interact with individual pupils frequently. Any such interactions were not part of classroom interactions and would not reflect typical teacher-pupil or pupil-peer interactions in the classroom.

The two teachers in the sample differed on many variables-age, sex, and years of teaching experience-and these in turn seemed to affect their communicative and teaching styles in the classroom. Both teachers also taught both classes-grade 2 Tuah was judged to be composed of pupils who were above average, and grade 2 Kasturi had pupils who were considered average to below average-and it would be possible to see if both teachers treated the classes differently based on these assumptions of pupil quality.

Each lesson was taped as a unit from beginning to end. Each elementary science lesson was thirty minutes; the language and reading lessons were sixty minutes. Each lesson had a definite structure: an initial period to review previous materials and/or preparation of

books for the lesson proper, the lesson proper, and written exercise on the day's materials and/or directives for homework. The written exercise was about fifteen minutes during language and reading lessons, and about five minutes for science lessons. During this time, the teachers moved around the room to individual pupils to ensure that all pupils had the appropriate exercise book and were doing the appropriate task. The teachers moved freely around the room, and it was not possible to audiotape much of the interactions they had with individual pupils. Initially it was thought that much valuable data would be lost in this way. But it was observed that neither teacher spent much time with individual pupils. Such interactions formed only a small percentage of normal classroom interactions, and any individual attention given to pupils was generally to correct errors in writing or copying format and was not dissimilar to regular procedural directives during the formal lesson. When there was much time for written exercise, the teachers would move around the classroom to ensure that all pupils were doing appropriate tasks, and then would spend the extra time to catch up on paper work, such as the daily register of attendance, or correcting pupils' exercise books.

2. Observations and Audiotapes Outside Classrooms

This portion of data collection was done concurrently with collecting data in the classroom. There were two kinds of data in this section: (1) interactions in the home, and (2) interactions among peers.

a. Interactions in the Home

Introduction into each home was initiated by the afternoon school supervisor, who met with each head of household or parents, briefly explained the objectives and procedures of the study, and obtained informal consent and commitment of the parents to participate in the study. This was followed by a visit from the investigator and a teacher in the school (who later assisted in collection of data) to obtain written consent of the parents.

During the first visit, the investigator elaborated the specific objectives of the study and set out the proposed schedule of data collection and requirements for audiotapings. As far as possible, the schedule of audiotapings was determined to be at the mother's convenience, when both she and the pupil would be at home. This turned out to be the few hours before school when the child would be preparing to go to school. It turned out that most mothers did not go to work on the rubber holdings, so scheduling became more flexible and easier.

All children in the sample were in grade two and attended the afternoon school. Most home audiotapings were done in the mornings or during weekends (Fridays and Saturdays). Even during the weekends, the audiotapings tended to be near mealtimes, for that was when most children would come home from their normal playtime with friends.

Audiotaping in the home was done in natural situations, only spontaneous interactions were obtained. Parents and children were urged to proceed in their normal activities and behavior, and "ignore" the investigator. Both investigators tried to be mere observers,

but toward the end of the audiotaping sessions the investigators became so familiar with each family that they were frequently drawn into activities and conversations. Thus the investigators were both observers and participant-observers.

Most audiotapings in the home covered similar activities: preparation of a meal (snack or lunch) and preparation for pupils to go to school. In some cases the pupil and mother were chatting. There were always other members of the family in these audiotaping sessions, such as a grandmother, younger or older siblings, and even the father in some cases. Their presence was considered a normal part of the daily routine, and interactions with their participation were also included as part of the data.

Audiotaping in the home was done in segments of five to ten minutes. At each recording session, the investigator would switch on the tape recorder and control the taping with a remote control microphone in her hand. The microphone would be switched on when the social welcome for her arrival was completed, the participants were at ease and doing their normal, daily routine, and there were verbal exchanges between the subjects.

The knowledge that the tape recorder was there did cause some slight change in interaction patterns in the homes. This was decreased when a remote microphone was used and the control of the recording done silently. At later sessions, subjects (parents and children) were able to "ignore" the tape recorder altogether.

Altogether, each child's interactions in the home ranged between forty and seventy minutes of tape time over three or four

audiotaping sessions. The first audiotaping for all subjects was done by the investigator and assistant together. Later audiotapings were done by both investigators separately.

Audiotapings of teachers interacting at home with members of their family were also collected. The data collected during one recording session in the home of each teacher was considered adequate for the purpose of the study.

b. Interactions with Peers

Audiotapings of peer interactions were done during the last session at home, concurrently with the informal interview with the mother. Each child was asked to have one or two friends to visit. Each was given the small tape recordder already switched on and requested to speak loudly with her or his friends so that the tape recorder would pick up their voices. Peer interactions ranged from thirty-five to forty-five minutes in tape time.

In all cases, children were initially aware of the tape recorder but after a few minutes proceeded with their particular activities, e.g., drawing, playing with blocks, and spontaneous interactions. In one particular case, Azhar, the subject, was not able to forget the tape recorder totally. His peer interactions data had to be taped three times before an acceptable text was obtained. At the first two audiotapings, he and his friend had seemingly spontaneous interactions that were really formal conversations they had "plotted out" together in whispers during audiotaping time. Spontaneous interactions were replaced by dramatization and conversations on similar lines as those used in classroom interactions

and on radio and television programs.

Several children were aware of the tape recorder from time to time and discussed it. Some of these exchanges were spontaneous interactions and were included in the data.

Interactions between each teacher and his or her peers were audiotaped separately in the teachers' staff room. Each teacher-subject and several peers were chatting in a spontaneous manner at the audiotaping session.

3. Supplementary Data

The focus of this study was language use as it might affect pupils' learning in the classroom. It was considered relevant to gather some data on teaching-learning situations-where pupils would be first in a learning and then in a teaching role outside the classroom-and analyze the data for effects of changing role on the use of language and strategies for communication. A simulated teaching-learning situation was set up, using a nested box as the stimulus and content. Supplementary data were obtained from the mothers' and teachers' views and impressions of the teaching-learning context. This portion of data was gathered through an informal interview with each teacher and mother.

Both sets of supplementary data were used as additional materials to analyze selection and use of strategies for communication during teaching and learning situations inside and outside the classrooms.

a. <u>A Simulated Teaching-Learning Situation, the Nested Box</u>

Essentially, in this situation, the investigator taught the use of the nested box on a one-to-one basis to each pupil-subject, and then he or she was required to teach it to a friend. The whole task took thirty minutes to administer, five to seven minutes for the investigator to teach the pupil, and fifteen to twenty minutes for the pupil to teach it to a friend. This task was administered on one school day, except for two subjects; one was absent, and the other had done it previously on another day.

The task was administered in a small room that was partially used to keep textbooks. The pupil and the investigator sat opposite each other at a small table. The tape recorder was placed on a bookshelf beside the table and was switched on before each pupil entered the room.

The task was done in two stages. In stage one, the investigator showed the box to the pupil, and asked him or her what could be done with it. She then asked the pupil to open the box and to continue to open it until the smallest box (the set contains twelve boxes). The pupil was then asked to play with the box, and the investigator suggested that the boxes could be arranged to be a house, a train, a road, steps, etc. The pupil was also asked to count the boxes and requested to arrange the boxes as he or she had found them at the beginning of the teaching session. He or she was then asked to invite a friend he or she wanted to show the box to. During stage two, the pupil-subject taught the friend about the box. Both pupils were left in the room by the investigator, who instructed them both to talk about the box.

Each pupil subject was given an estimated 15-20 minutes
to complete the second stage. At the end of the time given the
investigater reentered the room. In all cases, the pupils
had completed the task. One subject, Harniyaton, was still
teaching about the box to a peer. It turned out that she
had asked two friends, in turn, to come and "play the game".
The investigater was unaware of this event as she was in
another room. In this case, only verbal interactions with
the first peer was included for ~~Malaysia~~. analysis.

b. Interview with mothers and teacher.

Each pupils' mother and teacher in the sample was
informally interviewed at the last audeotaping sesion in the
home or school. During this part of data collection in the
home, each pupil was audiotaped with one or more peers to
obtain data on interactions with peers. So in all cases, the
interview was only between the investigator herself and the
mother.

During the interview the investigator obtained data on the family such as age of parents, number of children, range of age of children, educational level of both parents and older siblings, and the mother's aspirations for the child's future. The mothers and teachers were also asked how they would teach their children or pupils certain informal skills, their way of reinforcement or steps to modify the child's inappropriate responses.

E.   Transcription of Data

All data were collected on audiotapes and transcribed by the investigator and two assistants. All three transcribers were native speakers of Bahasa Malaysia, one assistant spoke Kedah dialect, and the investigator herself was familiar with the dialect. The transcription was done in several stages. Initially the transcribers recorded all verbal interactions, and other nonverbal portions such as giggling or laughter, hesitations, and exclamations. The transcript was then checked several times by the investigator to ensure the accuracy of the script. Finally each transcript was typed on 8½" x 11" sheets of paper for preliminary analysis.

F.   Treatment of Data

All school lessons recorded were included for analysis. Only natural, spontaneous data from home and peer interactions were considered for analysis. In portions of these interactions participants were aware of the tape recorder. These portions were less spontaneous

and more contrived than those recorded when the participants
ignored the machine and were judged unsuitable as data on two bases:

1. Language form used: Participants normally use Dialect
   Kedah during informal interactions. Any informal
   interactions in Bahasa Malaysia were considered not
   spontaneous.

2. Structure of interaction: Informal, natural
   interactions were seldom composed of long exchanges
   of questions and answers. Such an interchange, if
   continued for a long period of time, was considered
   contrived and was judged not spontaneous.

All texts considered acceptable for analysis were divided
into episodes. An episode was defined as a whole unit containing
exchanges of utterances between two or more participants on a
coherent subject matter. This was done intuitively after the
investigator had familiarized herself with all the transcripts.
Each episode was then typed on one or several 5" x 8" cards for
easy data retrieval.

G.   Framework for Analysis

The focus of this study was ineffective communication
between teachers and pupils in classroom lessons. The analysis was
done in two phases, each phase using one or a combination of two
theoretical frameworks that accounted for the social and psychological
basis of the communication process as follows:

Phase 1: Description and explanation of patterns of
communication, use and selection of strategies for
communication, and identification of instances of
ineffective communication in classrooms.
Gumperz's model of conversational analysis was
adapted for this purpose.

Phase 2: A step-by-step task analysis of specific instances
of effective and ineffective communication to
diagnose the problem and develop hypotheses and
speculations on the causes and effects of ineffec-
tiveness. The task analysis was adapted from the
theory of constructive operators postulated by
Pascual-Leone.

Although there were two distinct phases of analyses, both
frameworks were used at both phases, in varying degrees.

1. An adaptation of Gumperz's Model of Conversational Analysis

Communication was viewed as an ongoing process and the
selection of strategies for interpreting and expressing messages
of content and intent was determined by the participant's cultural,
social, and cognitive experiences. Each utterance contained two
components, content, or cognitive, and social or intent. Social
components are signalled by unverbalized rules of language use,
including sequencing of utterances, turn-taking, and paralinguistic
cues. A description of a communicative event would consider both
the social and cognitive components of the process.

An interaction could consist of a single utterance or an exchange of utterances between two or more participants. An utterance could be either elicited or volunteered. An elicited utterance followed a question or a directive and was termed a response. A volunteered utterance could be a comment on an ongoing interaction and might be an initiator of a new interaction.

Preliminary analysis of the data suggested that there were natural transitions during interactions indicating that one topic or activity was completed and a new one beginning. A complete unit of interaction with a beginning and an end was termed an episode.

Some episodes proceeded simultaneously or were interrupted by other episodes. If utterances and components were isolated, such simultaneous interactions could be realized as several self-contained episodes. Such episodes were defined as parallel interactions. A participant could conduct two parallel interactions with different participants and topics and yet keep the exchanges separate.

An episode would have three linked components: initiation, response, and closure. All three components were joined together by a common objective and strategy of communication.

A strategy for communication was defined as the form within which the objectives of an interaction were attained. For example, the objective of a directive, i.e., to get another participant to perform a task, could be attained through several alternative verbal forms, such as a command, request, or persuasion. Each of

these forms have a definite format within which participants can move and make utterance and interpret and express their content and intent. There is a structure and organization within which participants initiate, respond, and resolve the objectives of the communicative event. This structure is called a strategy for communication.

There were three types of episodes with specific objectives and particular strategies for communication.

Type of Episode	Objectives	Strategies
Information-based	Request	Questions
	Giving	Statement Explanation Narration
	Sharing	Discussion Problem solving
Activity-based	Directive	Command Request Indirect request Persuasion
Negative feedback		Request for repetition Question

Irrespective of objectives, each episode used one or several strategies to attain the particular terminal objective. Each episode contained the following structure:

Step 1.   Initiation (e.g., question)

Step 2.   Response (information)

Step 3.   Closure (rejection or acceptance of response)

The structure of an episode may range from rigid to flexible. An episode is rigid when the role of initiator, responder, and closer is set and inflexible. Most episodes in classroom lessons were rigid; teachers assumed the role of initiator and closer, while pupils assumed the role of responder. A flexible episode is an interaction where any steps can be performed by any participants, no participant is assigned to any specific role. Episodes of this kind tend to be longer, and contain more exchanges of utterances between participants. Most episodes outside the classroom were of this kind.

A rigid episode is normally short with a limited number of exchanges of utterances. A flexible episode normally contains more exchanges of utterances and is longer than a rigid episode.

The language form used in episodes may also differ along a continuum from formal to dialect. In this particular case, the formal language was Bahasa Malaysia, the national language of the country, and the dialect was Kedah, a dialect particular to the area in the state of Kedah. The two forms were similar, except for some differences in pronunciation, selection of words, and sentence construction (Refer to Appendix B, for details on major differences between Bahasa Malaysia and Kedah dialect).

a. Errors

An error may be an incorrect activity or information in response to some directive or request for information. This may be caused by a lack of information on the part of the responder.

Treatment of errors may range from rejection to total avoidance of possible errors. Ineffective communication would arise from inappropriate interpretation of the initiator's and/or responder's intents within the episode.

b. Contextual Boundaries

This type of ineffective communication occurred over two or more episodes. A participant might make a response that was informationally incorrect and rejected as an error. But when this inappropriate response is set against two or more consecutive or separate episodes, the error may be diagnosed to be caused by differences in contextual boundaries, i.e., the participants did not have similar initial and ending boundaries in episodes. If the response had been given in a previous episode, it would have been considered appropriate. In this case, a participant failed to observe change in topic, and did not take into account that an episode had been closed and a new one had been initiated; the participant was still operating within another episode.

2. A Model for Task-Analysis Adapted from Pascual-Leone's Theory of Constructive Operators

A child's behavior results from application of schemes to the task at hand. This analysis accounts for moment-to-moment activation and application of schemes as schemes are strengthened or weakened, remain constant in strength or are deactivated, through the initiation of the task to its conclusion or closure.

When a stimulus is presented to the child, certain schemes are activated, by which the child attempts to assimilate various aspects of the situation. The subset of active schemes, or the field of activation, changes constantly from moment to moment in response to changes in internal and external conditions. The field of activated schemes could cause the child to do a number of things at any moment; the number of possibilities is limited only by the schemes the child has in his repertoire, for perceiving, thinking about, and acting on the situation. The arbiter of the child's decision on which possibility to follow is the relative "weighting" of the schemes in the field of activation. The schemes with the highest activation weight will be the ones that actually apply to the situation.

The weighting of the schemes is determined by several factors, including the input from the environment and the content of the input. The relative weighting of the schemes can also be modified by cognitive operators known as "scheme boosters," which can increase the activation weights of the schemes on which they operate. The scheme boosters postulated by this theory are the following:

a. F-operator, i.e., certain forces and/or elements in the field of activation

b. A-operator, i.e., affective factors

c. M-operator, i.e., attention or mental energy that determines the total weight of other schemes, and directs behavior toward its goal through executive schemes

The M-operator increases with age, until adulthood. The growth of M-energy is reflected in the number of schemes that can be M-boosted at any given moment, i.e., the number of psychological units that can be the focus of attention without assistance from other inputs and other scheme boosters.

When the child is faced with a task, certain schemes act on and are acted by inputs. When appropriate schemes are activated and used to act on the situation, the objective of the task is attained. If inappropriate schemes are so activated and strengthened that appropriate schemes either could not be activated or were not available for activation, the child would not make the appropriate responses and the objective of the task could not be attained.

An inappropriate scheme that resulted in inappropriate responses, or errors, could be an extension from a previous task, that was not yet adequately deactivated and continued to pervade the new task. It could also be caused by the absence of appropriate schemes, in which case an inappropriate scheme that seemed appropriate might be activated.

Judgment of behavior or performance in the task depends on the objective of the task. If the response satisfies the objective, the performance is considered successful. When the response does not satisfy the objective, the performance is considered unsuccessful. Strategies to modify the response toward the appropriate response would need to change the strength of schemes, so that inappropriate schemes are weakened, and appropriate schemes are activated, strengthened, or introduced through learning.

The steps for task analysis are the following:

Step 1: Identify task.

Step 2: Identify objective.

Step 3: Describe development/evolution of task at each moment
of task development; identify possible schemes that
were activated, strengthened, weakened, or remained
constant; identify scheme-boosters that could affect
the weightings of identified schemes.

Step 4: Evaluate performance, whether successful or
unsuccessful.

Step 5: If task successful, identify appropriate schemes and
operators; if task unsuccessful, i.e., an inappropri-
ate response was made, identify inappropriate schemes
and operators.

Step 6: Using information from step five, hypothesize causes
of unsuccessful performance.

Step 7: Using information from steps five and six, suggest
strategies that promote successful performance and
minimize unsuccessful response.

The above model of task analysis could be applied to communi-
cation problems in classrooms. The unit of task would be an episode.
In order to analyze the development of the episode satisfactorily,
the episode selected for analysis must contain some overt indicators
of the processes involved in activating, selecting, and applying
of these schemes. This model of analysis focuses on the psychological

changes of an individual, so an adequate analysis can only be done when the variety of inputs can be controlled, and the development of the episode can be identified.

For the purposes of this study, performance is analyzed in terms of effective or ineffective communication. All steps in the task analysis can be applied on a communicative event or episode that is long enough to allow for development of an interaction but controlled enough so that the inputs and related schemes can be identified.

H.   Description of Data

This section will briefly describe the data collected for the study. Not all data were used in the analysis, but an overview of the breadth of data was considered important in order that the portion selected for analysis could be set against a wider context of culture, both the school and the community, i.e., the homes and the peers.

1. Classroom Interactions

Data on communication in the classroom were composed of three subject areas: Elementary Science, Language (Bahasa Malaysia and English), Reading (Bahasa Malaysia and English).

All lessons could be divided into these main parts:

a. Preparation (discipline, directives to have books on table, review of previous materials)

b. Lesson proper

    c.   Written exercise based on the day's materials or

        directives for homework

The lessons on audiotapes could be divided into two major
categories:

    1.   Skill/Activity development.

        These lessons contain more activity-based episodes,

        including directives to read, write, and look at

        particular items in the books. Language and reading

        lessons could be included in this category.

    2.   Information-based lessons.

        These lessons contain proportionately more self-contained

        episodes requesting and giving information. These were

        elementary science lessons for both teachers.

The structure for most episodes in classrooms was fairly rigid.
The episodes were usually initiated by the teacher, and the pupils
made responses that were either rejected or accepted by the teacher.

Step 1:	Initiation	Teacher
Step 2:	Response	Pupil(s)
Step 3:	Closure	Teacher

Although all teachers and pupils were first speakers of
Kedah dialect, most communication in classrooms were done in
Bahasa Malaysia.

As was indicated earlier, the teachers differed in age, sex,
and years of teaching experience. Differences in their teaching
styles and strategies could be attributed to these differences,
and other factors, such as the composition of class, curriculum, etc.

However, it was considered possible to identify some teaching and communicative strategies and patterns of interaction that reflected the teachers themselves if other variables could be held constant. Both teachers had six lessons each on audiotape, both lessons were kept quite similar in content. Elementary science lessons consisted of one review lesson on animals, insects, and birds and two lessons on the topic "The Earth." Both teachers taught a lesson of language drills for both sets of pupils, and each had a reading class with grade 2,T(Tuah). For both language and reading lessons, Teacher T handled them in Bahasa Malaysia, and Teacher K(Kasturi) in English.

Although most classroom interactions were initiated and closed by the teachers, several utterances were volunteered by pupils, not in direct response to the teacher's directives or questions. A preliminary analysis of these utterances suggested that they reflected pupils' "desire" to have certain content or directives clarified. Others indicated pupils' attempts to relate their experiences outside the classroom to classroom proceedings. These utterances were included in the data for analysis.

2. Interactions Outside the Classroom

Data on home and peer interactions included transcripts for both teachers and eight pupils in the sample. Only spontaneous, natural interactions were considered for analysis. All spontaneous interactions were in Kedah dialect, no formal Bahasa Malaysia was used.

All subjects, in home and peer interactions, had samples of information, activity and negative feedback episodes. Episodes were generally flexible, any participant in the interaction could initiate,

respond, or close the episodes. Instances of ineffective communcation, in the form of mismatches in strategies for communication, errors, and contextual boundaries were comparatively less frequent in home and peer interactions, for both teacher or pupils.

Both home and peer interactions had some parallel episodes, e.g., when a mother would have several simultaneous interactions with two children, both kept separate in objectives and resolutions.

3. Supplementary Data

a. A Simulated Teaching-Learning Situation

This task was divided into two stages:

(1) investigator explaining about the box to a subject, and

(2) subject explaining about the box to a peer. The data of interest in the study was from stage two. To what degree could the subject-pupil assume the role of teacher? To what degree could the peer assume the role of pupil?

Although the time allotment for step two was limited (fifteen to twenty minutes), the data contained many activity- and information-based episodes.

b. Interviews with Mothers and Teachers

Each interview was twenty to thirty minutes in duration. It consisted of informal questions and answers on the child or pupils (in classrooms), mothers' and teachers' views on how the children learn, their communicative skills in the home, and so on. Although the data were not controlled and did not cover a large enough sample

for generalizations, there was enough information to explain some of

the teachers' and mothers' communicative problems with the children.

CHAPTER III   RESULTS I: A SOCIOLINGUISTIC APPROACH

A basic thesis of this study was that communication in
classrooms is inherently more ambiguous than communication at home
and among peers owing to the differing amount of information,
objectives, and experiences shared by participants in these different
situations. Communications outside the classroom were more effective
than classroom interactions. Ineffective communication between
teachers and pupils in classrooms was reflected in inappropriate
responses made by both teachers and pupils during the verbal inter-
actions there. Instances of ineffective communication in classrooms
could be explained through comparisons with strategies used outside
the classroom, in the home and among peers. An accumulation of
instances of ineffective communication could alienate pupils from
the school and negatively affect pupil motivation and performance
and teacher expectations and effectiveness. Steps to improve
learning situations in classrooms could be formulated by analyzing
pupils' responses to teachers' directives and questions, comparing
them to pupil performance outside the classroom, and identifying
problems of communicative transitions pupils have to make in classrooms.

The time units of audiotapings in the three social situations
where data were collected were not similar. Data in classrooms were
collected within specific and parallel time units for both teachers
and all lessons, data outside classrooms were collected over several
audiotaping sessions (home interactions) or were collected in one
audiotaping session (peer interactions). Also, the number of parti-

cipants in these situations was different, in classrooms the teacher interacted with forty or more pupils, and at home and among peers there were at the most three participants in an interaction. Quantitative comparison was possible only for classroom data, between teachers and lessons; even here there is no big emphasis on quantitative analysis, analyses between social situations were confined to descriptive comparisons.

This chapter describes and compares classroom interactions with outside classroom communication from a sociolinguistic approach. Analyses from a psychological approach is done in the following chapter.

A.   Selection of Strategies for Communication

A strategy for communication was defined as the specific process selected for attainment of the objectives of episodes in interactions. It contained several dimensions: dialect, flexibility of structure, and form.

There were two alternative dialects: Bahasa Malaysia and Kedah Dialect. A comparison of data indicated that the two forms were almost mutually exclusive in distribution and use. Bahasa Malaysia was the form most often used in classrooms, Kedah Dialect was used in informal interactions, i.e., outside the classrooms, at home and among peers.

Most interactions in classrooms were rigid; the teacher initiated and closed the episodes. Pupils' tasks were to make appropriate responses, whether in activity or information. Home interactions were

less rigid for the most part. Older participants, such as parents or older siblings initiated interactions, but pupils who were often the youngest participants in the interactions could also initiate and close interactions. The structure was most flexible during peer interactions, where all participants could, in turn, initiate, make responses, and close the interactions.

The nature of the classroom lessons determined that the teacher should initiate and close interactions. At most times, the teacher decided on the topic for discussion and the activity to be done, so the teacher would have the information and authority to change and close episodes. There was much to be covered during the limited time allotted to various content areas; only specific topics could be covered; and interactions had to be economical in time. Thus most episodes were short. Only topics relevant to the lesson could be raised. Pupils were able to raise questions at one point in the lesson, but this occurred mainly during the third part of the lesson when pupils were asked to do written exercises. At that time, pupils could and did raise a few questions for clarification from the teacher. Most of these questions were about the specifics of homework, format of written work, and such issues.

All three situations had instances of all three kinds of episodes: information, activity, and negative feedback. The selection of a strategy was systematic, and was determined by such factors as the social relationship between participants, the importance of objectives to the participants, and the amount of information brought into the interaction by each participant.

1. Information-Based Episodes

These episodes had three major objectives, realized in particular strategies, as follows:

Objectives		Strategies
(i)	Requests for information	Questions
(ii)	Giving of information	Statement Explanation Narration
(iii)	Sharing of information	Discussion Problem-solving

The above strategies ranged over a continuum from rigidity to flexibility in structure.

Most interaction in the classroom had objectives (i) and (ii), and used related strategies: questions, statement, explanation, narration. These strategies minimized time while maximizing topics covered. In these strategies, the person who was higher in social status, i.e. the teacher, was the initiator and closer of episodes. In most cases, episodes to attain the objectives of requesting or giving information were kept separate, i.e., an episode was either giving or requesting information, as in the following examples:

(1) T2M/Sc.1/8[*]   (How many legs do spiders have?)

T	*Berapa kaki labah-labah? Sapa tau?*	T	How many legs does a spider have? Who knows?
P(CH)	*Lapan*	P(CH)	Eight

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[*] Refer to Appendix B for explanation of notation to identify episodes

(2) T1F/Sc.2/27   (The earth's surface)

T	*Macam mana tanah dia? Kita kata tadi tanah dia rata? Adakah semuanya rata?*	T	How is its land surface? We said just now it is flat? Is it all flat?
P(CH)	*Dak*	P(CH)	No
T	*Ha, tanah yang semacam mana? Cikgu nak tau apa lagi tu. Maisharah*	T	Ha, what kind of surface is it? I want to know what else it looks like. Maisharah.
PA	*Tinggi, rendah.*	PA	High, low.

(3) T2M/Sc.2/4   (Our Earth)

T	*Bumi kita ni be...*	T	Our earth is b...
P(CH)	*...sar*	P(CH)	...big
T	*...besar. Bumi kita...*	T	...big. Our earth is...
P(CH)	*Besar*	P(CH)	Big
T	*...besar. Baik, yang ni contoh, contoh bu...*	T	...big. Good, this is a model, a model of...
P(CH)	*bulat*	P(CH)	Round*
T	*...mi. Contoh bumi, tapi bumi kita ni bukan lah besar ni, bukan la besar ni, besar. Yang ni cuma con...*	T	...the earth. A model of the earth, but our earth is not this size, it is not of this size, it is big This is only a mo...
P(CH)	*...toh*	P(CH)	...del
T	*...contoh dia, contoh dia saja.*	T	...its model, only its model

*   Note that error made by pupils was on the first syllable
of both words <u>bumi</u> (earth) and <u>bulat</u> (round) which was the same.

(4) T1F/Sc.2/12 (Our route to Alor Setar)

T	*Misalnya kita nak pi Alor Setar hari ni, kita pegi ke...Alor Setar. Kita start dari Sungai Tiang, kita ikut jalan ni, kita ikut jalan...Pendang... kemudian ikut jalan... jalan...*	T	For example we want to go to Alor Setar today, we go to...Alor Setar. We start from Sungai Tiang we follow this road, we follow the road through... Pendang...and then follow the road...the road...
P(1)	*Bawah*	P(1)	Below
T	*Ha, Kota, ikut sampai...*	T	Ha, Kota, follow until
P(2)	*Alor Setak*	P(2)	Alor Setak
T	*Jalan Kota...terus sampai Alor Setar*	T	Kota road...straight until we reach Alor Setar

Examples 1 and 2 were requests for information, examples 3 and
4 gave an explanation. Both objectives were kept separate in
classroom interactions.

Most classroom interactions used these quite rigid strategies.
Very few information-based episodes had the objective of sharing
information, or used discussion or problem-solving strategies.
Table 1 shows the distribution of objectives and strategies for
communication used by both teachers.

As interactions became less rigid and more flexible, i.e.,
in home and peer interactions, both objectives to request and give
information tended to be intermingled in a sequential exchange of
utterances. Strategies, such as discussion and problem-solving,
combined both objectives, and were geared toward sharing information.
These strategies were generally found in interactions outside the
classrooms, as in the following examples:

(5) PIF/AH/10   (Our hen, and their hen)

S	*Macam bunyi macam ayam kita nah?*	S	The sound is like the sound of our hen, isn't it?
M	*Ce mak pi tengok. Allah mak, ayam sapa ni bertelok kat rumah kita? Mai tengok*	M	Let me go and see. Oh my god, whose hen is this laying its egg in our house? Come and see it.
S	*Ayam kita bertelok rumah orang, ayam orang bertelok rumah kita*	S	Our hen goes and lays its egg in someone else's house, someone else's hen comes and lays its egg in our house

In this episode between a child and her mother, the child
initiated the interaction. The mother responded, posed another
question, and invited the child to go and see the hen. The child
made a comment about the hen laying eggs in other people's houses.

Table 1: Distribution of Strategies for Information-based

Episodes, in Classrooms by Objectives, and Teachers

Strategies Teacher	Request for Information	Giving Information	Sharing Information	Total
Teacher T	138	60	6	204
Teacher K	145	55	-	200
Total	283	115	6	404

Both the request for and giving of information were intermingled in a sharing of information and experiences about hens and eggs.

(6) P7M/AH/30 (How did they measure the nuts?)

OS	*Dia ni pakai genggam je tadi bukan pakai cawan kecik ni*	OS	They measure it out by their handfuls, they did not use small cups
I1	*Ya ke?*	I1	Really?
OS	*Hm*	OS	Hm
I1	*Kat kedai tadi macam mana, genggam? Cawan?*	I1	How was it at the store, just now? Handfuls? Cupfuls?
S	*Cawan*	S	Cupful
M	*Cawan*	M	Cupful
S	*Senang depa ambik dengan tangan, ambik dengan tangan banyak*	S	It's easier for them to do it with their hands, taking with their hands would be much more
GM	*Hm, genggam*	GM	Hm, handful
M	*Tak sukat pulak*	M	They did not measure it then
S	*Hat adik depa buh apa ni apa cawan setengah*	S	The one for younger brother they measure out half a cup

In this episode, the discussion was about the amount of nuts the child had bought at the store. The older sister (OS) suggested that the storekeeper would just measure the nuts out by the handful and not use the small measuring cup. The investigator (I1) asked the subject whether that was indeed true. The subject replied that the nuts were measured out by the cup. The subject explained that although it was easier to do it by hand, that way would give the buyer much more nuts, and the portion bought was indeed measured by the small cup, for it was not a large amount. Both grandmother (GM) and mother (M) commented on the subject's explanation. In portions of this episode participants requested and gave information, but both objectives were intermingled so that the episode was more a sharing of information, using the strategy of

discussion.

A similar strategy was used during the following episode. In
this instance, the child and her mother discussed who could fit into
an easy chair, in particular the size of the person considered.

(7) P5F/AH/11   (Who can sit in this chair?)

M	*Ha, ha tu dia, salah terkeluak. Ha, duk, duk*	M	Ha, ha, there you are, mistakenly out. Ha, sit down, sit down.
S	*Cikgu dua orang boleh duduk, ya?*	S	Can the two teachers sit down, ha?
M	*Ha*	M	Ha
S	*Dua dua orang boleh duduk ni?*	S	Both of them can sit down?
M	*Boleh duduk hai*	M	Yes, certainly they can
S	*Orang besak...*	S	A big person...
M	*Kan tak boleh duduk*	M	Why not?
S	*Gemok, orang gemok ni (gestures) orang gemok boleh dak?*	S	Fat, a person this fat (gestures), can a fat person sit down?
M	*Orang gemok patah lah, ha, patah dia punya kaki*	M	A fat person would break the chair, ha, it's legs would break.
S	*Gemok lah*	S	Really fat
M	*Ha, gemok langkah tak celuih lah*	M	Ha, if his thighs are big, he would not fit in
S	*Mula mula gemok takat tu ja (gestured)*	S	Firstly only this fat (gestured)
M	*Gemok takat mana?*	M	How fat?
S	*Gemok hat besar tu jah, besar tu, besar tu (gestured). Celuih dak? Besak ni ja, celuih dak?*	S	As fat as that only, as big as that, as big as that (gestured) Can he fit in? Only this big, can he fit in?
M	*Celuih lah*	M	He can fit in.

The strategy of discussion was also used during peer inter-
actions.

(8) PIF/Pr/57   (Humans and the rain)

S	*Tiap-tiap, malam hujan na?*	S	Every night it rains now, doesn't it?
OG2	*Saja a.Dah...kan... la kan ke...musim kemarau dah*	OG2	Yes, it's already..you know...it is dr..the dry season already
S	*Saja lah, hujan dah ni*	S	Yes lah, it's rain already
OG1	*Saja*	OG1	Yes
OG2	*Musim kemarau* (together)	OG2	The dry season (together)
S	*Dulu musim kemarau tak hujan pun ha?*	S	Before when it was the dry season, it didn't rain, ya?
OG1/2	*Hm*	OG1/2	Hm
S	*Bila musim kemarau kita hingak sangat. Bila musim hujan kita hingak sangat*	S	When it was the dry season we complained. When it is the rainy season we really complain (make much noise)
OG1	*Saja a*	OG1	Yes
S	*Kita hingak*	S	We complain
OG2	*Kata kut ni kata kut nun, kata kut ni*	OG2	Saying this and saying that, saying this
OG1	*Tu u, tak habih ha*	OG1	That's it, never finished
S	*Tak habih habih lagi, ai tak pa..tak kena kena pun*	S	Never over, it's not... not right, not right ever
OG2	*Semua nya tak kena*	OG2	Everything not right
S	*Hm*	S	Hm
OG1	*Macam hat ni...*	OG1	Like this...
S	*Bagi hat tu tak kena bagi hat ni tak kena*	S	Given that it was not right, given this and it's not right either
OG2	*Sekarang ni gini i, hujan sari dua berenti, dua, tiga, empat, lima hari, hujan pulak. Macam ni senang na?*	OG2	Now it's like this, let it rain for a day or two and stop for two, three, four, five days, and then it rains again. Isn't it better like that?
S	*Hm*	S	Hm

In this episode, three peers were discussing the weather, how it was the rainy season then, after the long dry season. But, they said, the ways of humans were such that they would complain when it was dry and complain when it was wet (rainy); nothing seemed to be right for them. A peer (OG2) then suggested that perhaps a way to

solve the sense of human dissatisfaction would be for a compromise, so that it should rain for a day or two; then be dry for two, three, four, or five days, and then rain again for a couple of days.

This sharing of information in a strategy that could be described as a discussion was also used in many other peer interactions. Another example was an episode between two peers (boys) who were playing with blocks.

(9) P3M/Pr/9 (Arranging blocks)

O	Hang buat menderai menderai macam tu, saya buat mula mula kuning, hijau, putih, putih. Ha, hat ni...aih	O	You arrange them on top of each other like that, I am doing it (differently) firstly yellow, green, white, white. Ha, this one...aih
S	Saja macam tu	S	That's the way it is
O	Ada nak boleh buh?	O	Can we really put it?
S	Boleh. Taroh putih la sama	S	Yes you can. Put the white one too.
O	Putih kalau kamu tak dan habih (laughs)	O	As for the white if you are not quick enough to take them, they would be finished (laughs)
S	La, la, la	S	La, la, la
O	Putih saja tak cukup ha. Kalau kamu tak dan habih. Putin. Kalau kamu tak dan la	O	It's only the whites that's not enough. If you're not quick enough they'd be finished. The whites. If you are not quick enough
S	Kurang sikit lagi	S	Only a few more to complete this
O	Ada. Tu dah buat banyak dah	O	There are more. There you have made a lot already.
S	Hmm, saja a. Putih tinggal sikit ja, aku kata	S	Hmm, that's it. There's only a few whites left, I said
O	Hm, ada lagi	O	Hm, there are more
S	Sajak putih dengan merah	S	The whites and the reds go really well together
O	Saya tak mau macam tu. Tu dia. Tengok ha	O	I don't want to make it like that. There you are. Look at that, ha
S	Saya sudah dah	S	I'm finished
O	Saya tak sudah lagi i. Al-lah putih	O	I'm not finished yet. Oh god, the whites!!

S	Hm	S	Hm
0	*Kamu duk cari putih saja*	0	You are searching for the whites only

Both peers (S and 0) discussed several things in this episode: whether the blocks would fit, that there were not many white blocks, that whites and reds went well together, and finally that the subject had taken most of the whites. There were no definite requests or giving of information. Both peers were sharing information and their activities. Such sharing of information was possible mainly between participants who were equal in status and amount of information brought to the interaction. In this episode, neither participant explicitly rejected or accepted the other's responses, both peers discussed the availability of white blocks, and other related topics.

Another strategy that involved more sharing of information was problem solving. In this process, the participants contributed pieces of information, to work toward solving a problem. The initiation of the strategy would be a problem the speaker faced. He began an episode and could not complete it because he could not find the appropriate word or label for an object or idea. All participants took the hesitation as the initiation of a problem-solving process, whereby all participants would pool their information and in the process reach the correct word. This strategy was particular to peer interactions, where the assumptions were that all participants were equal in social status and amount of information brought into the interaction.

Example (10) was an episode between three peers, who were talking about the previous night's performance on the field. The initiator

could not remember the name of the performance. All participants then

pooled their experiences and information and reached the correct word.

(10) PIF/Pr/57   (Was it hozain or wayang?)

OG2	Ni di sini tengok orang pe...apa orang Pahang menyanyi... lagu apa pun tak tau nak kata	OG2	Then here we saw the people from pe... people from Pahang singing...I don't know what song it was
S	Hozain ke wayang?	S	Was it hozain or wayang?
OG2	Bukan hozain	OG2	It was not hozain
S	Ha tu?	S	Then?
OG1	Bukan wayang	OG1	It was not wayang
S	Ha tu? Hozain?	S	Then? Hozain?
OG2	Dak, bukan dia hozain, bukan dia wayang	OG2	No, it was not hozain, it was not wayang
OG1	Apa dia la?	OG1	What is it then?
OG2	Apa tak tau...	OG2	I didn't know what it was..
S	Ada pelentas tak... pelantas tak dak, pelantas pulak, pelentas dak?	S	Was there or wasn't there a stage...there was no stage, did I say stage... was there a stage?
OG2	Ada	OG2	There was
OG1	Ha, tu la wayang	OG1	Ha, that was wayang
OG2	Kan wayang, Apa...apa dikiak. barat ke apa ka...	OG2	It was not wayang, it...it was dikiak. barat or whatever it was..
OG1	Hm, hai betul la	OG1	Hm, hai that's right la
S	Hm, dikiak barat	S	Hm, dikiak barat
OG2	Ya, ya, semalam ni	OG2	Yes, yes, last night

All three children went through the reasons why it was not

hozain or wayang, and reached the conclusion that it in actual fact

was a dikiak barat (a singing routine from the state of Pahang).

The participants took turns making suggestions, which were then

rejected or accepted by other participants. There was some cooper-

ation involved in reaching the correct word.

This process of problem-solving was also used during a peer

interaction between two teachers, who were attempting to remember

the word immigration. The initiator of the episode again hesitated

to indicate that he could not recall the correct word. The other

participant then offered suggestions to get at the right word, as in
the following example:

(11) T2M/Pr/18   (Immigration)

S	*Memang tak boleh masok di Jedah tu...*	S	They could not enter Jedah
A	*Ya*	A	Yes
S	*...tempat kita kata...*	S	...the place which we call...
A	*Tanah haram ya?*	A	The restricted land, ha?
S	*Ha, bukan lah...di Jedah tu tempat kita kata...kalau sini...*	S	Ha, not that lah...in Jedah what we call... here we call it...
A	*Port lah*	A	Port lah
S	*Ha, port pemereksaan lah...*	S	Ha, port of examination lah...
A	*Ha, immigration?*	A	Ha, immigration?
S	*Immigration la tu apa semua*	S	Immigration and all that

The subject (S), Teacher K, was narrating his experiences while
going to Mecca a few months previously. He informed the peer that
only Muslims could enter the Holy Land and that non-Muslims were
barred at the port of entry, by the immigration authorities. He
could not remember the exact word <u>immigration</u>, and so the peer (A)
helped him to think of the correct word. Again, both participants
put together their experiences and information to get the right word.

All subjects, teachers and pupils, used both varieties of
strategies of discussion and problem-solving during home and peer
interactions, in addition to explanations and narrations. These
more flexible strategies required much more time to reach their
objectives, and so were accessible to participants outside the class-
room situations, but not in the classroom.

Tables 2 and 3 show the distribution of objectives and strategies for communication used in information-based episodes by both teachers and pupils during home and peer interactions.

2. Activity-Based Episodes

During an interaction, a participant might make utterances and expect a response in the form of an activity. An utterance that required an activity as a response was defined as a directive. All three social situations-in classroom and home and with peers-had instances where directives were used. A directive may use any of four strategies: a command, a request, an indirect request, or a persuasion.

In a classroom, most directives used the strategy of command. The pupils were expected to comply with appropriate activities: be quiet, stand up, do written exercises, etc.

(12) T1F/RT/1   (Preparation for a Reading Class)

| T | *Bangun. Semua mesti ada buku bacaan di atas meja. Buka pelajaran lapan... Bacaan Bahasa Malaysia. Baik, cepat bawak keluak buku Bacaan Bahasa Malaysia. Norashikin, awak kongsi, share. Duk diam. Duduk, duduk, duduk atas kerusi.* | T | Stand up. All of you must have your reading book on your table. Open to lesson eight... Malaysian Language Reader. Well, quickly now bring out your Malaysian Language Reader. Norashikin, you share your friend's book. Sit quietly. Sit down, sit down, sit down on your chair. |

The command was also used by Teacher K, as in the following example:

Table 2: Distribution of objectives and strategies for communication used in information-based episodes by teachers and pupils during home interactions

Objectives/Strategies Subjects	Request e.g., questions	Giving e.g., statements, narration	Sharing e.g., discussion, problem solving	Total
Teachers				
T1F (female)	3	4	12	19
T2M (male)	12	4	8	24
Pupils				
Girls	12	21	40	73
Boys	7	30	41	148
Total	34	59	101	264

84a

Table 3: Distribution of objectives and strategies for communication used in information-based episodes by teachers and pupils during peer interactions

Objectives/Strategies Subjects	Request e.g., questions	Giving e.g., statements, narration	Sharing e.g., discussion, problem solving	Total
Teachers				
T1F (female)	-	3	20	23
T2M (male)	-	9	34	43
Pupils				
Girls	1	8	93	102
Boys	5	8	120	133
Total	6	28	267	301

(13) T2M/Sc.1/50   (Beginning Written Exercise in a Science Lesson)

T	*Baik, semua orang...* *semua orang keluarkan* *buku sains, nak tulih,* *nak buat latihan.* *Ha, bawak keluak buku* *sains.*	T	Good, all of you... all of you bring out your science book, we want to write in it, to do some exercises. Ha, bring out your science book.

or in another example:

(14) T2M/RT/1   (Preparation for a Reading Class)

T	Put all your books inside your desk. *Masokkan buku* *dalam meja tu.* Put all your books inside your desk. Look at the blackboard. Look at the blackboard. Now say: Balloon	T	 Put your books inside your desk
P(CH)	Balloon		

One feature of the commands used during classroom interactions was the repetition of the directive in the same sentence construction, and in this case (14) in both languages. It appeared as if the teacher expected that the pupils would be able to make the right response in activity if they understood the directives, and attempted to help pupils comprehend the response by repeating the directive.

In most classroom interactions like examples 12, 13 and 14, the teacher would initiate an episode using the formal language with some dialectal pronunciation of words. Most directives were commands, and all pupils were expected to comply. Very few other strategies, such as indirect requests or persuasions were used by either teacher in the classroom situations. Table 4 shows the number and distribution of strategies for activity-based episodes

Table 4:   Distribution of Activity-Based Episodes in
Classrooms by Strategies and Teachers

Strategies ╲ Teacher	Command	Request	Indirect Request	Persuasion	Total
Teacher T	102	2	-	3	107
Teacher K	98	3	-	-	101
Total	200	5	-	3	208

used by both teachers.

Other strategies for directives were used outside the class-
rooms in the form of requests, indirect requests, and persuasions.
These three strategies contain an element of choice, the partici-
pant may choose not to comply, but in all cases where there was a
one-to-one relationship between initiator and responder, compliance
was eventually achieved in various ways.

During home interactions, the status of parents or older
siblings gave them the prerogative to give directives, the pupil-
subjects, who were much younger, were expected to comply. A
directive would be given in the form of a request and broken down
into small steps so that the response of the pupil-subject could
be monitored at each stage. In this way the pupil-subject would
be able to make the appropriate response, as in the following
example:

(15) P6F/AH/4   (Putting the mat for guests to sit on)

| M | *Pi ambik tikak, bawak*
tikak mai, nun hat tu,
hat tu, bawak mai sini,
letak tikak situ,
bentang la | M | Go and take the mat,
bring the mat here,
there that one, that one,
bring it here, put the
mat there, spread it |

Most requests during home interactions were given with
justifications for the activity requested for, as in the following
example:

(16) P8M/AH/9   (Will you close the window?)

M	*Cik Zam, oi Zamzuri*	M	Cik Zam, oi Zamzuri
S	*Ya*	S	Yes
M	*Lekas tingkap tu tutup, ayam tu masok. Tutup tingkap ni, ayam masok*	M	That window now quickly close it, the hen is coming in. Close the window, the hen is coming in

In many instances, directives given in the home tended to be shorter and briefer than those in classrooms. This may be due to the vast amount of common experience and information that were assumed to be present between the participants. When a request like this was analyzed, there was a lot of unspoken information.

(17) P2F/AH/24   (Please take the plates)

M	*Ambik piring dalam ha*	M	Fetch the saucers from inside, ha
S	*Dalam mana dalam ha?*	S	Inside where inside ha?
M	*Dalam lemari ha*	M	Inside the cupboard ha
S	*Pinggan?*	S	Plates
M	*Ambik lah. Baik baik sikit*	M	Take them. Be a bit more careful
S	*Ni yang ni ka?*	S	These, are these the ones?
M	*Ha, ha. Ambik hat elok elok sikit, hat tu duk di atas tu, debu. Ambik piring sama*	M	Ha, ha. Fetch the better ones, those are on top, dusty. Fetch the saucers too.
S	*Ambik hat..hat hijau ka?*	S	Fetch the...the green?
M	*Ha?*	M	Ha? (What?)
S	*Hat hijau ka?*	S	The greens?
M	*Ambik la hat mana pun*	M	Fetch whichever ones

When a directive required the child to do a task that would involve more time and take him out of his way, the strategy used would be persuasion. A persuasion was a directive that allowed the potential responder to resist the task and operated only through reason and rationale. Both participants exchanged many utterances,

directives, and counter-directives.

(18) P3M/AH/3   (Could you deliver this message?)

F *Muka pi basoh nun,*
   muka tu. Ada kerja apa
   pasal ni. Tanya mak
   nun. Nak pi dak?

F Go and wash your face,
   your face. There's some-
   thing to be done. Go ask
   your mother there. Do
   you want to go?

M *Ha, pi habak ni, kata*
   mak nak pi khenduri,
   nak surah dia mai kut
   ni, nah?

M Ha, go and tell this, say
   that I want to go to the
   feast, that I want her
   to pass by this way,
   nah?

S *Ni tak pi la*

S I'm not able to go la

F *Awat tak pi hang nak*
   pi sekolah

F Why don't you go, you
   are going to school

M *Tak dan dah kut*

M He may not have the
   time, perhaps

F *Ha?*

F Ha?

S *Tak dan*

S There's not enough time

F *Petang sat ni, balek*
   nun, balek pi kona
   kut belah sekolah tu
   balek mai seteshen
   bas. Nak jauh mana?

F This evening, when you
   come back, take this
   turn beside the school
   and then return to the
   bus station. How much
   further could it be?

S *Tak dan a*

S There's no time

F *Ha?*

F Ha?

S *Jalan kut tu tak dan*

S I don't have time to
   go that way

F *Dan, boleh dan kut.*
   Tapi kalau dan pi,
   kalau tak dan tak usah
   pi la, kut lambat

F There's time, you can
   make it, I think. But if
   you have the time do it,
   if you don't have the
   time don't go, in case
   you should be late

M *Pi esok pulak*

M You can go tomorrow

F *Ha, esok pi na?*

F Ha, would you go
   tomorrow?

M *Ni pakai hanggok ni,*
   macam pok ko

M Why are you just nodding
   your head, like a puppet?

S *Hm*

S Hm (Yes)

In this example, the child was requested to go out of his way
to deliver a message. He said he might not be able to do so, because
it would take time, and as a result he might miss the bus on his way
home. Both his parents worked through the problem with him trying to

convince him to do it, and when it became clear that he might not
have the time to do so, he was given the option not to do the task
that day but to do it the next day.

The persuasion strategy was again used in the following
episode. In this interaction, a younger brother was in pain from
something in his eye. Both the subject and his mother persuaded
the younger brother to come to the mother so that the painful
task of taking it out could be accomplished:

(19) P4M/AH/3   (Let me take it out from your eye)

S	*Mata dia masok sampah*	S	There's something in his eyes
M	*Ha tu tak buang?*	M	Well, didn't you take it out?
S	*Tu dia tak mau, dia teriak, dia tak bagi*	S	He didn't want to, he cried, he wouldn't let me
I2	*Mai buang sini, ajak dia mai*	I2	Come and we'll take it out, ask him to come
M	*Mai mak tengok, mai mak tengok*	M	Let me look at it, let me look at it
S	*Dia tak mau*	S	He does not want to come
M	*Mai mak tengok*	M	Let me look at it
S	*Mak nak tengok. Dia ajak pi la*	S	Mother wants to look at it. She wants you to go, come on
M	*Mai kat mak, mai*	M	Come to mother, come

The persuasion strategy was also used by a child in order
to get her mother to take over a task. In the following episode,
Zulfazilah could not finish scraping the coconut, and attempted
to persuade her mother to finish the task for her.

(20) P2F/AH/11 (Mother, could you take over the task of scraping the coconut?)

S	*Mak kukur la hat tu*	S	Mother, please scrape that one.
M	*Hm*	M	Hm
S	*Ni hat tepi tak tau*	S	This edge, I don't know how to do it
M	*Awat?*	M	Why?
S	*Tak habis*	S	I can't finish it
M	*Tang mana tak boleh?*	M	Which part is it that you cannot do?
S	*Tepi nah*	S	The edge
M	*Al-lah, boleh hai*	M	Oh God, surely you can
YS1	*Nah*	YS1	Mother, here it is
M	*Tu hat tepi boleh tak?*	M	That edge, can you do it?
S	*Tak*	S	No
M	*Tu kakak kukur*	M	Give it to Kakak (elder sister) to scrape
S	*Hm*	S	Hm
M	*Hat tepi tu boleh tak tu? Al-lah*	M	Can you do the edge? God...
YS1	*Mak, cik nak ayer nyior*	YS1	Mother, I want some coconut water
M	*Ambik bekas mak bubuh*	M	Go and take a container. I'll put some in there
S	*Mak, ni*	S	Mother, this one
M	*Habis? Perhabis tu kut tepi tu, tak boleh?* *(S continues scraping coconut)*	M	Is it finished? Finish the edge, can't you? (S continues to scrape coconut)
M	*Bagi sikit*	M	Give (younger sister YS2) a little.
YS1	*Sikit*	YS1	A little
M	*Kakak makan dulu, kakak makan dulu. Bagi adik pulak. Jum, jum, pi duk di atas*	M	Let elder sister drink it first, your elder sister first. Now give it to your younger sister. Come, come, go and sit up there
YS1	*Adik*	YS1	Adik (younger sister)
M	*Makan sambil berderi tu. Hm, habis*	M	You're drinking while you're standing!! Hm, finish it. You are not able to scrape any more?
S	*Tak larat dah*	S	I am not able to do any more
M	*Tak larat. Tak larat, tinggai*	M	You can't do it any more. If you cannot, then leave it

Among peers, directives generally took the form of indirect requests or persuasions. Both these strategies allowed the potential responder to resist the directive without causing a social rift between them.

In an indirect request, the initiator would use another strategy for communication to elicit an activity. Other strategies would generally be information-based statements of the situation, that could either be taken as statements or be reinterpreted as directives. For example, in the following episode, when the subject and a peer were sitting down at a table drawing, and the peer (OG) stated that she had no pencil, her utterance could be interpreted as a directive that she be given a pencil or as a statement only.

(21) P2F/Pr/7   (I have no pencils)

S	*Hm, aku nak tulih ni...*	S	Hm, I want to write this..
OG	*Pensel tak dak*	OG	There is no pencil
S	*Nak tulih nama*	S	I want to write the names
OG	*Pensel tak dak*	OG	There is no pencil
S	*Pensel...ada satu ja*	S	Pencils...there is only one
OG	*Ha, satu u. Ha, tak tulih lagi ni*	OG	Ha, one u. Ha, I have not written this yet
S	*Sat lagi...Nak ambik pensel mak saya*	S	In a while...I want to take my mother's pencil
OG	(giggles) *Ha, pensel mak kamu kata*	OG	(giggles) Ha, your mother's pencil you said
S	*Mak saya gu...guna pen*	S	My mother u..uses a pen
OG	*Ambik tu la, tak pa la*	OG	Take that la, that's alright la

In this directive, the request was a statement. The subject (S) interpreted it as a request when it was repeated.

Most directives between peers took the form of persuasion. This strategy would be used when participants had the same social status, neither could issue a command or a request to the other.

The persuasion would contain components to provide rationale and reason for the activity, and the potential responder could resist the directive. The initiator would want the potential responder to do the task, while the potential responder would try to resist doing the task.

(22) P6F/Pr/39   (Let's eat on the steps)

S	*Ambik la, ha pi a* *ambik, pi ambik,* *pi ambik*	S	Take it la, ha, go and take it, go and take it, go and take it
OG	*Sat ni mak hang marah* *ha. Makan tang tangga* *ha*	OG	In a while your mother would be angry. Eating on the steps ha
S	*Tak masok pinggan lagi*	S	The food has not been put on plates yet

The subject (S) wanted to eat some food and asked the peer (OG) to fetch the food. The peer refused, for two reasons: the mother would be angry, and it would not be a good idea to eat on the steps of the house. The subject explained that eating the food would be all right, because the food was not yet served on plates for particular people or purposes. In this episode, the potential responder resisted the activity, but was given the reason why the activity would be acceptable.

This strategy of persuasion could contain many exchanges of directives and counter-directives, as in the following example:

(23) PIF/Pr/54   (Why won't you go to her house?)

OG1	Ce kamu pi dak lagi rumah makcik tu. Kamu kata nak pi hari ni, pi hari rabu, esok ka?	OG1	Have you been the lady's house yet, you said you're going today, going on Wednesday, or is it tomorrow?
S	Hm	S	Hm (Yes)
OG2	Esok la ha	OG2	It's tomorrow then
S	Esok kita pi berdua a	S	We'll go together tomorrow
OG2	Hm	OG2	Hm
S	Saya sat lagi...	S	In a while I'll...
OG2	Tak pi...	OG2	You're not going
S	...tak mau pi, saya segan, sat ni tak larat	S	...do not want to go, I am shy, in a while I will not have the energy to
OG2	Tak pi di rumah, kut dapat kamu kena pi jugak ha. Tak boleh lah, dah mak kamu mai habak	OG2	You won't go to the house, if you could you should go. You can't do that, your mother had informed you of it
OG1	Tak baik	OG1	It's not good
OG2	Dah mak kamu habak dah sat ni. Makcik nanti nanti sat ni tak pi	OG2	Your mother had informed you of it a while ago. The lady would wait and wait and you don't go
S	Mak...mak saya kan habak hari tu, malam tu	S	My...my mother didn't tell me that day, it was that night
OG2	Mak kamu kata pi. Tak habak mana boleh	OG2	Your mother said you should go. How could you say that she did not inform you.
S	Ha?	S	What?
OG2	Mana boleh tak habak pulak	OG2	How could you say that she did not inform you of it
S	Hm	S	Hm

In this episode, the subject (S) suggested that she might not want to go to the lady's house. Both peers tried to convince her to go, because (a) the lady would wait for the subject to come, and (b) the subject's mother had informed her about the matter and had said that she should go. The subject was convinced that she should comply and go to the lady's house.

Strategies of command and request were acceptable in classrooms and home interactions but were not used during peer interactions. There were instances in which a peer would use the command or request strategies, as in the following examples:

(24) PIF/Pr/10   (Is that your father coming home?)

OG1	Bapak kamu balek apa	OG1	Perhaps that's your father coming home
S	Ha?	S	What?
OG1	Bapak kamu balek dah tu, tak dengak mutu	OG1	Your father has come back, don't you hear the scooter
S	Ha?	S	What?
OG1	Tu, bapak kamu balek, ce tengok ha	OG1	There, your father's back, go and see
S	Tak tau la, pak saya balek kut (goes to window to look out) Dak, tak balek	S	I don't know, perhaps it is my father (goes to window to look out) No, he has not come back
OG1	Ha, boleh sakali!!	OG1	Ha, got you there!!

The peer (OG1) requested that the subject (S) go to the window to see her father coming home. This directive was followed by the subject, and she found that her father had not come back. All peers took it as a joke, and the inappropriate strategy was not misinterpreted as an attempt to violate the rules of appropriateness.

In the second example here, a child requested a peer to hand her a pencil. The subject (S) resisted the directive, until it was explained that the pencil was out of reach and S could help by handing the pencil to the peer (OG).

(25) P2F/Pr/11   (Do you have a pen?)

OG	*Kamu ada pen dak, pen?*	OG	Do you have a pen, a pen?
S	*Tak dak*	S	No I don't
OG	*Tu pen sapa ni?*	OG	Whose pen is that?
S	*Pen tak lekat*	S	That pen doesn't work
OG	*Ambik sat, ambik sat*	OG	Take it for me, take it for me
S	*Ambik a*	S	Take it yourself
OG	*Tak sampai...hm*	OG	I can't reach it...hm

The mismatching of the strategies of directive was realized by the subject. She then refused to comply and did so only when it was explained that there was a simple reason for the request, that the pencil was out of reach.

The above examples indicated that different strategies of directives were used in different social situations and were determined by the relation of social status between participants and the amount of time allotted to the directives. Strategies of command and request required minimal time for resolution, the initiator would have to be in the position of authority and higher than the potential responder in order to be able to use these strategies. Command and request would be optimal strategies for use in classroom interactions where a teacher would have to interact with forty or more pupils simultaneously. Pupils would not be allowed to resist the directive, and time would be better spent covering content and topics in the lesson.

An indirect request would require more time for the potential respo nder to interpret the directive embedded in the information-based episodes. Strategies of persuasion involved several exchanges of utterances, the initiator giving the directive and rationale for

it and the potential responder resisting the activity. Both these strategies were used more often and more suitably outside the classroom where there was less time constraint, and the equal social status of participants would not allow for the use of command or request strategies. Some amount of persuasion and requests were used during home interactions. The use of these other strategies for directives were found outside classroom interactions for all teachers and pupils in the sample. The pedagogical consequences of this difference between classroom and nonclassroom situations will be discussed in later relevant sections.

The distributions of strategies for directives used during home and peer interaction by both teachers and pupils are shown in Tables 5 and 6.

3. Negative Feedback

Data mainly from outside classroom interactions contained strategies for negative feedback that could be used for both information- and activity-based episodes. These strategies were requests for repetition or questions. Both strategies were normally used by a person who was higher in social status or age, and could be interpreted both on their first level meaning, as requests for repetition or questions, and on a second level as reprimands when uttered during certain contexts with certain paralinguistic cues. When interpreted as reprimands or as gentle rebukes, these requests or questions were treated as rhetorical and did not require a verbal response.

When questions were clearly requests for information, they were accepted and answered in the home and among peers. There were

Table 5:   Distribution of Strategies for directives used during
            home interactions by teachers and pupils

Strategies Subjects	Command	Request	Indirect Request	Persuasion	Total
Teachers					
T1F (female)	4	4	6	1	15
T2M (male)	1	4	-	5	10
Pupils					
Girls	1	27	4	14	46
Boys	3	25	21	12	61
Total	9	60	31	32	132

Table 6:   Distribution of strategies for directives used during
peer interactions by teachers and pupils

Strategies / Subjects	Command	Request	Indirect Request	Persuasion	Total
Teachers					
T1F (female)	-	-	7	3	10
T2F (male)	-	-	-	-	-
Pupils					
Girls	-	16	13	25	54
Boys	1	15	16	34	66
Total	1	31	36	62	130

several instances when questions were interpreted to carry other intents than just requests for information, and in such cases, there were indications that the questions were mismatches in the social situation and with the participants, as in the following example:

(26) Zi/AH/20   (Plans to plant vegetables when the rain falls)

M	*Zamri hujan nanti kena pi menyangkul. Menyang-kul menyangkul ni tanam, tanam sayok*	M	Zamri, when it begins to rain, you should go and dig. Dig and dig and then plant, plant vegetables
S	*Tanam betul ka herut?*	S	Plant them straight or crooked?
M	*Tanam betul la, tanam herut pasai apa pulak?*	M	Plant them properly la, why plant them crooked
S	*Bijik dia nah?*	S	Its seeds, nah?
M	*Hm*	M	Hm

In this episode between Zamri and his mother Zamri was playing on the word <u>betul</u>, which could mean "correctly" or "straight." The mother made a response that the planting should be done properly and asked a rhetorical question that was a negative feedback, "Why do you want to plant them crooked?"

The same element of slight annoyance and irritation at a question was again in episode 27, a peer interaction between three friends.

(27) Mh/Pr/1   (Why don't you want to buy anything today?)

S	*Saya nak beli kacang ni*	S	I want to buy these nuts
OG1	*Kamu?*	OG1	(what about) You?
OG2	*Tak beli aih*	OG2	Don't want to buy, aih
S	*Pasai?*	S	Why?
OG2	*Tak mau pulak*	OG2	Well, I don't want, (so what?)

In this example the mismatch occurred in the interpretation of intent attributed to the strategy used. A question was normally posed by a person higher in social status than the expected responder, and in many cases a question of information was posed as a strategy for negative feedback. In a strategy for negative feedback the question for information should be regarded as a rhetorical question requiring no reply, and it carries the information that the responder made an inappropriate response, and that inappropriate response brought the necessity for the negative feedback.

In this example, the subject (S) was asking why the peer (OG1) was not going to perform the task of buying the nuts. The peer (OG1) interpreted the question request for information as a reprimand, and did not give the required information. Instead she gave a terminal response that contained elements of counterreprimand, which could be verbalized as "I don't want to do it, what business is it of yours?", or other such remarks. There was a mismatch in strategies for expressing and interpreting the intent of the question.

B.   Ineffective Communication in Classrooms

An episode was judged ineffective when its objective was not attained. There were more instances of ineffective communication in the classrooms, for both teachers, than there were during home and peer interactions. A comparison of instances of such communication indicated that Teacher T had more instances of ineffective communication than Teacher K. (See Table 7.)

Table 7: Distribution of Ineffective Communication, by

Subject-Areas and Teachers

(Numbers indicate instances of ineffective communication.)

Subject-areas

Teacher	Language and Reading	Elementary Science	Total
Teacher T	140	74	214
Teacher K	78	88	166
Total	218	162	380

Teacher K was responsible for grade 2K, which was considered less able than grade 2T taught by Teacher T. During this stage of analysis, questions posed by both teachers were compared. Teacher K posed questions that mainly required one-word responses involving recall of specific object-names. Teacher T posed questions that required more elaborate responses, usually invovling relation of several things together. Thus, questions in grade 2T were relatively more demanding than those posed in grade 2K. The probability that ineffective communication would occur was higher for grade 2T than for grade 2K. The number of ineffective communications could not be used as an indicator of the general effectiveness of teaching and communication. Such a comparison could be made only by looking at the causes of ineffectiveness.

There were two sets of lessons in which both teachers taught the same content to both sets of pupils, English language for Teacher K, and Bahasa Malaysia for Teacher T. There were no appreciable differences in the teachers styles of teaching and there were about the same number of ineffective communications for both classes. This could be attributed to the fact that both classes, while different in "ability," were both similarly handicapped during classes conducted in English, which was equally unfamiliar to both sets of pupils. Teacher T taught Bahasa Malaysia to both grades. She used different sets of questions, questions for grade 2T were comparatively more demanding than those for grade 2K. However, the number of lessons was too small, and any differences in the level of questions used by the teacher in both classes, while dealing with

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similar content, could be indicative only of general trends; no definite generalizations about teacher style and effectiveness could be made on a small sample of two teachers.   .

Ineffective communications in classrooms were analyzed further, and causes for these instances were formulated after comparisons were made with interactions outside the classrooms. There were three main causes of ineffective communication in the classrooms:

1. Mismatches in strategies

2. Teachers' treatment of errors

3. Mismatches in contextual boundaries

The distribution of ineffective communication by kind and teacher, was tabulated in Table 8.

1. Mismatches in Strategies

Most instances of mismatches in strategies were found in information-based episodes, in particular requests for repetition and questions. A teacher would request a piece of information and then request a repetition of the response, for various reasons. Ineffective communication would occur when pupils were not able to interpret the request for repetition in the way that the teacher intended it. As a result, the appropriate responses were not elicited, not because the pupil did not know the information required, but because he was unable to retrieve the relevant information.

a. Request for Repetition

In classroom interactions, a request for repetition often followed a first response given by a pupil. Generally, this request

Table 8:   Distribution of Ineffective Communication, by

Types and Teachers

Type	Mismatches in strategies	Teacher's treatment of errors	Mismatches in contextual boundaries	Total
Teacher				
Teacher T	65	124	35	214
Teacher K	49	91	26	166
Total	104	215	61	380

indicated that the response given was appropriate but not loud enough, and the pupil was expected to repeat the response so that it would be more audible to the teacher and the class. This request could take one or a combination of the following forms:

(i)   Request: "Kuat sikit" (A little louder)

(28)   T2M/Sc.1/26   (Listing insects with feelers)

T	*Lagi?*	T	What else?
PA	*Tebuan*	PA	Wasps
T	*Ha, Zaitun, kuat sikit*	T	Ha, Zaitun, a little louder
PA	*Tebuan*	PA	Wasps
T	*Tebuan, tebuan ada sesungut*	T	Wasps, wasps have feelers

(ii)   Request: "Lagi sekali" (Again)

(29)   T2M/LK/5   (Repetition of drills)

T	These two rows. Who is sitting on the chair? *Dua dua barih ni kata*	T	Both these rows, say it
P(1)	Zamri is sitting on the chair		
T	Again		
P(CH)	Zamri is sitting on the chair		

(iii) Question: Apa?   (What?)
                  Apa dia?   (What is it?)

(30)   T1F/Sc.1/6   (Listing name of insects)

T	*Cuba sebut binatang yang kamu tau dalam gulungan serangga*	T	Mention living things which you know are insects
PA	*Kerengga*	PA	Red ants
T	*Apa?*	T	What?
PA	*Kerengga*	PA	Red ants
T	*Kerengga*	T	Red ants

(31)   T1F/Sc.2/3   (Examples of insects)

T	*Ni, Fatimah*	T	Yes, Fatimah
PA	*Kerengga*	PA	Red ants
T	*Kerengga. Apa dia?*	T	Red ants. What is it?
PA	*Kerengga*	PA	Red ants
T	*Kerengga*	T	Red ants

(iv) Use of particle "Ha?", with meaning "I can't hear you, can you say it again)

(32) T2M/Sc.1/31 (Examples of animals with hairy bodies)

T	A-a, Khir	T	A-a, Khir
PA	Orang	PA	People
T	Ha?	T	Ha?
PA	Orang	PA	People
T	Ha, orang	T	Ha, people

(v) Incomplete sentence, to be completed by repeating the response

(33) T1F/Sc.1/19 (What are butterflies?)

T	Jadi, rama-rama ni kita panggil dia binatang apa? Zulfazilah	T	So, butterflies are what kind of animals? Zulfazilah
PA	Serangga	PA	Insects
T	Binatang dalam gulungan...	T	Animals in the category of...
P(CH)	Serangga	P(CH)	Insects
T	...serangga	T	...insects

(vi) Repetition of question

(34) T2M/LK/1 (What is the day today?)

T	Ha, what is the day today?
P(CH)	What is the day today?
T	Yes, today is...
P(CH)	Monday
T	Today is Thursday
P(CH)	Today is Thursday
T	What is the day today?
P(CH)	Today is Thursday
T	Thursday
P(CH)	Thursday
T	Today is Thursday
P(CH)	Today is Thursday

In all cases above, the request for repetition implied that the first response was considered correct; the request was for the response to be repeated in a louder voice. In some cases (33) and (34), the repetition was for emphasis.

There were many instances when the request for repetition was used, but an interpretation that the request was for repetition only would be inappropriate to the teacher's intent.

Consider the following case:

(35) T2M/Sc.2/9   (Identifying the sea)

T	Nampak dak yang biru biru ni?	T	Do you see the blue parts?
P(CH)	Nampak	P(CH)	We see it
T	Apa dia?	T	What is it?
P(1)	Langit	P(1)	The sky
T	Ha?	T	Ha?
PA	Langit	PA	The sky
T	Bukan dia langit	T	It is not the sky
P(2)	Bumi, bumi	P(2)	The earth, the earth
T	Yang biru tu	T	That blue part
P(CH)	Bumi	P(CH)	The earth
T	Ha?	T	Ha?
P(CH)	Bumi	P(CH)	The earth
T	Yang biru ni laut	T	That blue part is the sea

In this episode, both pupils interpreted the teacher's "Ha?" as a request for repetition of the response. In both instances, the teacher's intent was to indicate that the response was inappropriate.

There were other instances where the form "Ha?" did not constitute a request for repetition of the first response but a request that the response should be modified so that the form would be appropriate for the classroom.

(36) T2M/Sc.2/3   (Who created the earth?)

T	Sapa...sapa yang menjadikan bumi ni?	T	Who...who made the earth?
P(CH)	Tuhan	P(CH)	God
T	Ha?	T	Ha?
P(CH)	Tuhan	P(CH)	God
T	Allah Ta'ala...Tuhan yang menjadikan...	T	Almighty God... God created...
P(CH)	Bumi	P(CH)	The earth
T	...bumi ni	T	...the earth

In this example, the teacher wanted to elicit the alternative form to the noun God, that is Almighty God, so he used the form "Ha?" as an indication that although the response was within the boundary of appropriate response, there was a more appropriate alternative.

Using the form "Ha?" as another means of asking the pupils to modify their response was used in the following example. In this case, the pupil had used the dialect form for the noun water; he used ayak instead of ayer, i.e., the last syllable was modified to fit the dialect:

(37) T2M/Sc.2/33   (What else does the sun do?)

T	Lagi?	T	What else?
P(1)	Hisap ayak	P(1)	Drink water
T	Ha?	T	Ha?
P(2)	Hisap ayak	P(2)	Drink water
P(1)	Menghisap ayak	P(1)	Drinking water
T	Matahari	T	The sun...
P(1)	Hisap ayak	P(1)	Drink water
T	Ha, matahari menghisap ayer, boleh juga	T	Ha, the sun drinks the water, that's possible

In this example the form "Ha?" indicated that the response should be modified. The pupil interpreted the teacher's intention correctly, but he was not able to select the proper word for modification. The pupil considered that the verb should be modified, so he added the proper prefix meng, but in fact the form that should have been modified was the noun, ayer/ayak.

A request for repetition that could carry another message was type (v), an incomplete sentence to be completed by the repetition of the first response. In many cases, this was used when the response was given in a single word or phrase, and the teacher would repeat the incomplete sentence to serve as a reminder to the

pupil that the complete response should be in a sentence. This was evidenced in the following example:

(38) T2M/sc.2/1   (Where do we live?)

T	*Kita duduk di atas apa, siapa tau?*	T	What do we live on, who knows?
P(CH)	*Bumi*	P(CH)	The earth
T	*Ha?*	T	Ha?
P(CH)	*Bumi*	P(CH)	The earth
T	*Kita duduk di atas...*	T	We live on...
P(CH)	*Bumi*	P(CH)	The earth
T	*...bumi. Kita duduk di atas...*	T	...the earth. We live on...
P(CH)	*Bumi*	P(CH)	The earth

An incomplete sentence could indicate that the information in the response was correct, but that the linguistic form should be modified. In most cases, the response was again given in the dialect, and the pupils were required to change it to the formal language, as in the following case:

(39) T2M/Sc.3/16   (What can you see on the sea-shore?)

T	*Ha, Azizan. Ada apa?*	T	Ha, Azizan. What can you find there?
PA	*Pokok nyok*	PA	<u>Coconut</u> trees
T	*Ada pokok...*	T	There are trees...
PA	*Nyior*	PA	Coconut
T	*Ada pokok nyior*	T	There are coconut trees

In this episode, the teacher indicated that the response to be modified was the form <u>coconut</u>. The noun phrase in the language is noun + adjective, so that the noun could be repeated by the teacher, indicating that it was the second part of the phrase that needed to be modified, which the pupil did accordingly.

The teacher could also use the incomplete sentence to indicate that the information in the response was not correct and should be modified.

(40) T1F/RT/4   (The location of Pak Tua's Orchard)

T	*Di mana letak dusun Pak Tua? Mat Fuad*	T	Where was Pak Tua's or- chard located? Mat Fuad
PA	*Dekat bukit*	PA	Near the hills
T	*Dusun Pak Tua letaknya di...*	T	Pak Tua's orchard was located be...
PA	*Tepi jalan*	PA	Beside the road
T	*Tepi...*	T	...beside...
P(1+2)	*Bukit*	P(1+2)	The hills
T	*...bukit*	T	...the hills

Again, the pupil picked up the cue that the response needed
to be modified but did not know which form to modify. The pupil
changed the response, but the appropriate response turned out to be
a combination of the first and second responses, "near the hills"
and "beside the road" to "beside the hills."

The incomplete sentence could also indicate that the response
was inappropriate in information.

(41) T1F/RT/25   (What animals like to eat rambutans?)

T	*Apa binatang yang suka makan buah rambutan? Zainuddin*	T	What animals like to eat rambutans? Zainuddin
PA	*Harimu*	PA	Tigers
T	*Binatang yang suka makan buah rambutan...*	T	Animals which like to eat rambutans...
P(CH)	*Harimu*	P(CH)	Tigers
P(2)	*Beruang*	P(2)	Bears
P(3)	*Keluang*	P(3)	Bats
T	*...ia lah...*	T	...are...
PA	*Keluang*	PA	Bats
T	*Keluang. Binatang yang suka makan buah rambutan ialah...*	T	...bats. Animals which like to eat rambutans are...
P(CH)	*Keluang*	P(CH)	Bats
T	*...keluang*	T	....bats

In instances 38, 39, 41 and 42 above the request for repetition
could carry an alternative intention, the need to modify the response
so that it could be appropriate in linguistic form or information.

An inappropriate matching of the teacher's intention and the pupils' interpretation could result in the modification of an already appropriate response, as in the following example:

(42) T1F/RT/2   (What is Ali's incle's name?)

T	Apa nama bapak saudara Ali? angkit tangan baik	T	What is Ali's uncle's name? Put up your hand
P(CH)	Saya, saya	P(CH)	I, I
T	Angkit tangan. Zainuddin	T	Put up your hand. Zainuddin
PA	Encik Baharin	PA	Mr. Baharin
T	Bapa saudara Ali bernama...	T	Ali's uncle's name is...
PA	Baharin	PA	Baharin
T	...Encik Baharin	T	Mr. Baharin

In this case, the first response was correct in information and form, but the teacher's repetition of the incomplete sentence gave the cue to the pupil that his response needed modification, when in fact the response should have been repeated in its entirety.

A request for repetition that could carry still another intention from the techer was the repetition of the question, either in its original form, or in a shorter, modified form.

(43) T2M/Sc.3/12   (Where do people live?)

T	Manusia, di mana kita dapat? Kita dapat... kita boleh tengok...di tem...di tanah tinggi, di bukit, di gunung, atau pun di tanah rata?	T	Where do we find people? We find them...we can see them...at...on high grounds, in the hills, or on the plains?
PA	Di bukit	PA	The hills
T	Di mana?	T	Where?
P(1)	bukit, bukit	P(1)	The hills, the hills
T	Di bukit?	T	At the hills?
P(1)	Di tanah rata	P(1)	On the plains
T	Di mana?	T	Where
PA	Di tanah rata	PA	On the plains
T	Di tanah bukit, ha, di tanah...	T	On the hills, ha, on the...
PA	Rata	PA	The plains
T	Tanah rata	T	The plains

Repetition of the question did indicate to the pupil that the first response was in fact inappropriate and that it should be changed or modified accordingly. As was also the case in the following episode:

(44) T1F/Sc.1/15   (How many pairs of wings do butterflies have?)

T	Berapa pasang, Fazli?	T	How many pairs, Fazli?
PA	Tiga	PA	Three
T	Ada berapa pasang? Kauser? Ada...	T	How many pairs are there? Kausar? There are...
PA	Dua	PA	Two
T	Sebenar nya dua pasang	T	Actually there are two pairs

The teacher could also indicate that the response was inappropriate by using the response in a question form, which carried the message that the response was not appropriate, or in the form of a question that required a yes/no answer, which meant that the response was a definite No.

(45) T2M/Sc.1/19   (What animals have sharp claws?)

T	Ha, Mat Tajuddin	T	Ha, Mat Tajuddin
PA	Burung belatuk	PA	Woodpeckers
T	Burung belatuk kuku tajam ka, burung belatuk?	T	Do woodpeckers have sharp claws, woodpeckers?
P(CH)	Dak, kaki dia...	P(CH)	No, their feet...
T	Kaki dia guna untuk apa, burung belatuk?	T	Their feet are for what, woodpeckers?
PA	Untuk memanjat	PA	To climb
T	Untuk memanjat saja tak kuku tajam	T	If its to climb only they do not need sharp claws

In some cases the repetition of the question was inappropriately interpreted by the pupils, as in the following example:

(46) T2M/Sc.1/14   (Why is it that chickens cannot swim?)

T	Ayam boleh bernang dak? Apa sebab ayam tak boleh bernang? Ha, apa sebab? Itu lah, apa sebab ayam tak boleh berenang, pasai apa? Apa sebab ayam tuk boleh berenang?	T	Can chickens swim? Why is it that chickens cannot swim? Ha, why? That's it, why is it that chickens cannot swim, why? Why is it that chickens cannot swim?
P(Z)	Pasai dia tak mau kena ayak.	P(Z)	Cause it doesn't want to touch water
T	Bukun sebab tu... sebab apa?	T	Not because of that... Why?
P(Z)	Dia takut kena ayak	P(Z)	It is afraid to touch water
P(M)	Dia mati	P(M)	It dies
T	Sapa boleh jawab? Apa sebab ayak tak boleh bernang?	T	Who can answer? Why is it that chickens cannot swim? Ducks can swim.
P(M)	Dia takut tenggelam	P(M)	It is afraid of going under
P(Z)	Sejuk, sejuk	P(Z)	Cold, cold.
T	Bukun pasai takut sejuk. Ha	T	Not 'cause of being afraid of cold. Ha
P(Z)	Takut tenggelam	P(Z)	Afraid of going under water
P(CH)	(laugh)	P(CH)	(laugh)
T	Sapa boleh jawab? Apa sebab ayam tidak boleh bernang, itek boleh bernang	T	Who can answer? Why is it that chickens cannot swim? Ducks can swim.
P(Z/M)	Lemas	P(Z/M)	Drowning
P(CH)	Lemas	P(CH)	Drowning

In this episode the pupils interpreted the teacher's repetition of the question to mean that their responses were inappropriate in form, but not in information. In fact the response was inappropriate in information, the teacher was trying to elicit the information that the chicken's and the duck's feet were different, and that was why ducks could swim and chickens could not.

Another explanation for the pupils' fixation on the theme of cold and drowning could be related to the home environment of the pupils. At home the mothers would ask the pupils to take at least two showers daily, because of the heat and perspiration from play.

A child who does not shower daily is likened to the chicken that is afraid of getting wet. In this instance, it was the inappropriate matching of information from the home and that required by the teacher that prevented the pupils from realizing that the teacher was indicating that the information, not the linguistic forms, should be modified.

In summary, a teacher's request for repetition of a response could indicate a variety of messages:

(i) The response was not audible, repeat first response.

(ii) The response was not in appropriate linguistic form, but informationally it was correct, so modify linguistic form (usually this was to change the dialect into the formal form).

(iii) The response was not appropriate informationally, and it should be changed accordingly.

Because the same forms could carry any of the above messages it was difficult for the pupil to identify the correct alternative and make the appropriate response the second time.

b. Questions

Questions were mainly information-based interactions. Most questions were asked in classrooms or home situations, mainly by teachers and parents. The assumption of this strategy to request information seemed to be that the person who posed the question was generally higher in the social hierarchy than the person who was expected to give the information.

In a classroom the questions were mainly asked by teachers, who were assumed to have more information than the pupils. Pupils were not expected to ask questions, and they were reluctant to do so. This could be seen in episodes where teachers would request pupils to raise questions on topics that they did not understand, as in the following examples:

(47) T1F/Sc.2/35   (Request for pupils to raise questions)

T	*Cikgu duk tanya kamu. Cuba kamu tanya balek. Apa yang kamu nak tanya? Semua kamu tau dah? Sapa nak tanya apa? Nak tanya pasal siang ka, malam ka, apa ka? Sanizar. Tak dak apa nak tanya? Faridah, tau dah? Cepat, Masharah*	T	I've been asking you. Why don't you ask me in return. What do you want to ask? Do you know everything? Is there anything anyone wants to ask about? Do you want to ask about the day, or the night, or anything? Sanizar. Nothing that you want to ask about? Faridah, do you know? Quickly, Masharah
PA(MH)	*Dah tau*	PA(MH)	I know (them) already
T	*Tau semua dah? Ha, yang tak tau tanya pulak. Ha, Sanizar*	T	Know everything already Ha, ask about what you do not know. Ha, Sanizar
PA(Sr)	*Pasai apa matahari ...matahari ikut kita?*	PA(Sr)	Why is it that the sun... the sun follows us?
T	*Ha.*	T	Ha.

In this episode, Teacher T requested pupils to raise questions about the day's lesson. She urged the pupils several times as if to assure them that it was all right for them to ask her questions, but the pupils did not ask any questions. When she called on three par-ticular pupils to ask questions, Sanizar did not respond verbally the first time but shook his head and only asked a question when he was called on again. Faridah, the second pupil, did not make any verbal

response either and only shook her head. Masharah, the third pupil, did not ask any questions, and her reason was that she "already knew about the day's lessons." This response could be interpreted as an assurance to the teacher that her explanations were adequate, so there was no need to ask any questions. When the first pupil, Sanizar, was called on again to ask a question, he did pose a question. Note that he bagan the question with a dialect pasai (why) instead of the formal pasal/fasal, and there was a hesitation and pause, and repetition of the noun matahari (the sun). Both these could be interpreted to indicate the unease with which he asked the question.

There were a few instances when pupils would volunteer a question to the teacher in the classroom. When this happened, the question would be repeated several times before the teacher would take notice of the question, as in the following example:

(48) T1F/Sc.3/3   (Is the earth the map too?)

T	Baik, bagaimana kamu tau bumi kita bulat? Ingat dak?	T	Good, how do you know that our earth is round? Do you remember?
P(Sr) T	Bumi tu peta ka, cikgu? Ish...duduk dulu,	P(Sr)	Is the earth the map, teacher?
T	duduk dulu. Aih, Sanizar tanya apa? Tanya lain	T	Ish...sit down first, sit down first. Aih, Sanizar what did you ask? Ask again
P(Ar)	Dia kata bumi ka peta?	P(Ar)	He said is it the earth or the map?
P(Sr)	Bumi ka, peta ka	P(Sr)	The earth, or the map?
T	Tanya lain, cikgu tak berapa dengar sat sat. Tanya lain	T	Ask again, I didn't quite hear you awhile ago. Ask again.
P(Ar)	Peta ka bumi dia kata	P(Ar)	The map or the earth, he said
P(2)	Bumi ka peta ka	P(2)	The earth or the map
P(Sr)	Bumi ada peta dak?	P(Sr)	Does the earth have the map?

P(Ar)	*Pasai apa bumi ada peta pulak?*	P(Ar)	How come the earth has the map now?
T	*Macam mana Sanizar tanya bumi ada peta?*	T	How can Sanizar ask whether the earth has a map?
P(CH)	(laugh)	P(CH)	(laugh)
T	*Peta tu kita lukis bentok...*	T	The map is what we get when we draw the shape of...
P(Ar)	*Bumi*	P(Ar)	the earth
T	*...bumi kita la*	T	...our earth la

The lesson was a continuation about the earth. On that day, Teacher T had brought in a globe to show the shape of the earth and its revolution. Pupils were excited to see the globe, and were not paying full attention to Teacher T's question about how they knew that the earth was round. At that point, a pupil, Sanizar (P(Sr)), volunteered a question. Teacher T ignored the question, dealt with pupils who were not seated in their chairs, and then asked Sanizar to repeat his question. Several other pupils (Ar, P(2)) attempted to rephrase the question so that Teacher T would be able to "understand" it.

In this episode most of the pupils' utterances used Kedah dialect, e.g., pasai (why), Ka (for kah, a question particle), dak (for tidak, not), pulak (for pula, also). As was indicated earlier, pupils were aware that Bahasa Malaysia should be used in classroom interactions and that Kedah dialect was for use in other social situations. But when some mismatches of situations and strategies took place, the unease with which the participants viewed the mismatches could be measured by the extent to which they resorted to Kedah dialect in a formal situation.

In some instances pupils were permitted to pose questions, particularly at the end of each lesson, when the teacher was explaining certain work that the pupils had to do as writing exercise or as homework. At this time, pupils would volunteer questions, as in the following example:

(49) T2M/Sc.3/41   (Directives to draw pictures in exercise book)

T	*Kamu lukis gambar empat.. Empat gambar menun_jukkan muka bumi. Ha, sat tanah rata, lagi satu...*	T	You draw four pictures ...four pictures showing the face of the earth. Ha, one on the plains, another one...
P(1)	*Tekap cikgu?*	P(1)	Trace, teacher?
T	*Tak usah tekap. Buat sendiri...tepi laut... Lepas tu di sini bukit dan lembah, disini gunung*	T	Do not trace. Draw it yourself...the sea shore. After that here is the hills and valleys, here the mountains
P(2)	*Cikgu, tekap boleh dak, cikgu?*	P(2)	Teacher, can we or can we not trace, teacher?
T	*Tak usah tekap*	T	There is no need to trace

Notice that the first pupil's question was brief, the second one was longer and clearer.

(50) T1F/LT/58   (Should "ber" be included (written) too?)

T	*Semua kena buat. Macam selalu selang selang sebaris. Tulis selang sebaris. Perkataan ber ni kamu garis*	T	All must be done. Like always, do it by leaving out a line. Write leaving out a line. The prefix ber must be underlined.
P(1)	*Cikgu, ber kena buat dak?*	P(1)	Teacher, do we or do we not do (write) ber?
T	*Ya, tulis macam ni, macam papan hitam*	T	Yes, write like this, like on the blackboard

As in example (49), the pupil's question was brief and contained some dialect, in this case dak (not).

These examples where pupils raise questions suggested that the manner in which the questions were raised, i.e., the use of Kedah dialect, indicated that pupils did not normally ask questions in class.

As had been indicated earlier, questions were usually raised by a participant who was higher in social hierarchy and had more information than others. The reluctance with which pupils posed questions in classrooms could be interpreted by the teacher as inattentiveness, lack of information, etc., whereas in actual fact the pupils were requested to use a strategy which they had been taught to be inappropriate in these situations.

Using a request for repetition and a question as a request for information or as a strategy for negative feedback could cause conflicting interpretations and intents on participants both inside and outside classroom situations. Pupils had to acquire the skill to interpret appropriately various and similar requests for repetition and also the understanding that in certain situations in the classroom pupils could ask questions. Thus, the pupils had to acquire a new set of behavior for operating in the classroom situation and yet keep the two sets of situations, inside and outside classroom, separate.

When such ineffective interactions occurred outside the classroom, they could be resolved almost immediately, because neither participant wanted an unresolved interaction marring a social relationship, and resolution was much easier when there was a one-to-one interaction in process. An ineffective interaction could easily be diagnosed and resolved before the next part of the interaction took place.

The situation was quite different in the classroom. The teacher had to interact with more than forty pupils at one time, so diagnosis of ineffective communication could not be. as easy or as urgent as between mother and child or between two peers. Even if the teacher was aware of an ineffective communication, it's cause might be misdiagnosed as pupils' inattentiveness or lack of information. As a result, the pupils could be increasingly perplexed and confused, because they did not know how to interpret the teacher's intent correctly or why their responses were rejected or accepted. Thus the way in which they deal with ineffective communication might be developed through random trial and error and not a system they understand.

2. Teachers' Treatment of Errors

An error was defined as a deviation from accuracy or correctness. It could be in the form of an activity, an information, or a language form. A response could be considered an error from various angles:

a. The initiator of the activity or question. The response given was not among those considered correct, and so was an error.

b. The responder to the directive or question. Although the response was considered correct by the initiator of the episode, it might not be among those considered correct by the responder.

c. The observer's point of view.

There may be a difference in the judgment of the response; it could be considered an error by the initiator but not by the responder, or vice versa. This conflicting view of what constituted error between participants in an interaction might be the bases for further ineffective communication between them.

When an error occurred in an interaction, i.e., a participant did an activity, made a statement, or used a language form that was considered "wrong" by other participants, one of the following followed:

a. The error was rejected.

b. The error was rejected and a correct response given.

c. The error was accepted with modification toward correctness.

d. The error was ignored, and other participants modified it toward correctness.

e. The error was avoided and participants cooperated to reach correctness.

Errors were found in all three social situations, but the treatment of these errors differed depending on the social situation and the participants involved.

Most errors in classrooms were treated in one of the first three ways listed, as in the following examples:

(51) T2M/Sc.2/9   (What are the blue parts?)

T	*Nampak dak yang biru-biru ni?*	T	Do you see these blue parts?
P(CH)	*Nampak*	P(CH)	(We) see
T	*Apa dia?*	T	What is it?
PA	*Langit*	PA	The sky
T	*Bukan dia langit*	T	It is not the sky

The class was looking at the globe, and the blue parts were the sea or ocean. The response "the sky" was an error and was rejected. However, the response could be interpreted as the relating of outside experiences to classroom learning. The response "the sky" would have been correct if the question had been posed outside the class and generally tossed out to cover the scenery. The sky was blue, too.

An error was again rejected in the following example:

(52) T1F/Sc.2/5   (How would you recognize insects?)

T	*Lagi macam mana lagi nak kenai dia? Ni, Mat Fuad*	T	How else can we recognize it? Yes, Mat Fuad
PA	*Semacam anak dia*	PA	It is like its young
T	*Dia atau dia macam mana? Lebah ni, takkan dia anak dia semacam. Mula dia...*	T	It is alike or how is it? This bee, surely it is not alike its young. At first it was...
P(Ar)	*Ulat*	P(Ar)	A slug
T	*Ha, belain*	T	Ha, they are different

The correct response was that the insect was not like its young and that they went through several stages of development and shapes. The response given was an error and was duly rejected by the teacher. This error could be explained by the previous lesson, in which the class talked about the characteristics of mammals and in which one piece of information was that the mammal was like its young.

Rejecting errors without giving an explanation of why these were errors could be viewed as a time-saving device used by the teacher, so that no time was wasted on explaining error but was spent eliciting correct responses. But from the point of view of the pupils,

they were not able to comprehend or explain their errors, because these pieces of information would have been accepted in previous classes or lessons.

There were instances when errors in classrooms were followed by response c, i.e., the error was accepted with modifications toward correctness.

(52) T1F/Sc.2/30   (Day changing into night, night into day)

T	*Sekarang ni waktu apa?*	T	What time is it now?
P(CH)	*Petang*	P(CH)	Evening
T	*Petang dia hampir dengan...*	T	Evening is almost...
P(1+2)	*Malam*	P(1+2)	Night
T	*Malam dah. Kemudian? Besok Nya?*	T	It is already night And then? The next day?
P(CH)	*Pagi*	P(CH)	Morning
T	*Pagi, tu siang pulak*	T	Morning, it is day again

In this example, Teacher T posed a question; the pupils were to identify "night and day." In both instances the pupils responded with the words: evening and morning. In each case Teacher T modified their responses and elicited and later gave the responses which were correct. Both responses the pupils gave were not totally errors, they simply had to be modified to get at the correct responses.

Most errors that happened in home interactions were dealt with with strategies b or c.

(54) P3M/AH/7   (This is Japanese, not Chinese, writing)

S	*Tulih Cina ni, ha*	S	This is Chinese writing, ha
M	*Bukan Cina, Jepun. Ni Jepun*	M	It is not Chinese, it is Japanese. This is Japanese
S	*Jepun? Tu la ekok, Macam Cina*	S	Japanese? It's the tail, it is like Chinese writing

In this episode, a pupil-subject, Azhar, had incorrectly identified the writing as Chinese, his statement was rejected by the mother, and the correct information was given. The child had made an error, the child did not know the right answer, and the mother took it as her duty as a parent to give the information so that the child will not make further similar errors.

This strategy could also be used by a child when interacting with his mother. If an incorrect information was given, then it should be corrected as in the following example:

(55) P1M/AH/4   (Who is that boy?)

M	*Budak mana ni?*	M	Who is that boy?
	Tu budak mana?		Who is that boy?
S	*Jah*	S	Jah
M	*Hm. Anak Mak Yah la ne?*	M	Hm. He is Mak Yah's son, isn't he?
S	*Bukan anak Mak Yah, anak Baharum*	S	Not Mak Yah's son, he is Baharum's son
M	*Ha, anak Baharum, bukan anak Mak Yah*	M	Ha, Baharum's son, not Mak Yah's son

Strategy c was used in the following episode. The subject was relaying his grandmother's request to his mother. The information was correct, but vague. The mother wanted it to be more precise and did modify it towards that end.

(56) P4M/AH/7   (What did your grandmother say?)

M	*Ha?*	M	Ha?
YB	*Ayak nasi*	YB	Water and rice
M	*Apa?*	M	What?
S	*Ayer dengan nasik duk endak*	S	Water and rice she wants
M	*Tok kata...*	M	Grand mother says...
S	*Ha, dia kata apa... ayer nasi tak dak masak ni ka?*	S	Ha, she says what's this...isn't there any water and rice cooking?

In instances where the child used a word, and the mother was not sure if he really understood it, the mother would provide additional information to ensure total understanding of the word, as in the following example:

(57) P3M/AH/6 (The meaning of a word)

S	*Ayah melilau, ha*	S		Father is wandering, ha
M	*Melilau, pi sana,*	M		Wandering, go here, go
	pi sini, cari			there, looking (for
				something)

In treatment d, often used in peer interactions, an error was ignored and modified towards correctness.

(58) P3M/Pr/22 (Measure of wealth and poverty)

OB	*Dekat rumah kamu orang kaya, Azhar nah?*	OB	When you are at home, you are rich, aren't you, Azhar?
S	*Kaya*	S	Rich
OB	*Kaya*	OB	Rich
S	*Rumah saya robek robek jah*	S	My house is all tumbling down
OB	*Rumah saya lagi terok*	OB	My house is worse than that
S	*Rumah saya lagi terok*	S	My house is worse than that
OB	*Rumah saya lagi terok*	OB	My house is worse than that
S	*Dinding buluh jah*	S	The walls are made from bamboo only
OB	*Rumah hang todak hai Jangan nak membohong*	OB	No, not your house. Don't kid me
S	*Ha?*	S	Ha?
OB	*Kamu bohong a, tak dinding buluh*	OB	You are kidding me a, its wall is not made from bamboo
S	*Ha, tangkap gambak kat dinding buluh jah*	S	Ha, when we took the photos, it was beside the bamboo walls

In this episode, two friends were comparing their levels of wealth and poverty. The peer (OB) made a statement that Azhar was a rich boy, which was considered an error by Azhar. The error was

ignored; Azhar tried to convince OB that in fact he was not wealthy, his house was tumbling down, and the walls were made from bamboo. At no point did Azhar explicitly state that the peer had made an error; instead he tried to correct the error.

Strategy d was used again in the following episode, when one of the peers made some errors in trying to determine what a model house was made of.

(59) P1F/Pr/46   (This model house was made from grass)

OG1	*Hat tu...hat tu depa tu depa buat dengan buluh Masharah nah?*	OG1	That one...that one, they made it from bamboo, isn't it so, Masharah?
S	*Mana?*	S	Which one?
OG1	*Tu, tu*	OG1	That one, that one
OG2	*Ai dengan buluh, dengan lidi*	OG2	Ai with bamboo, it is with lidi*
OG1	*Bukan dengan lidi*	OG1	Not with lidi
OG2	*Dengan lidi*	OG2	With lidi
OG1	*Dengan beruih ha*	OG1	With brush ha
S	*Dengan beruih ha*	S	With brush ha
OG2	*Dengan lidi*	OG2	With lidi
OG1	*Depa buat dengan beruih tu, dengan beruih tu*	OG1	They made it with brush, that's with brush
S	*Eh, bukan buat, beli*	S	Eh, we did not make it, we bought it
OG2	*Lidi nah*	OG2	With lidi, nah
S	*Hm, depa buat tu ha nampak ha rumput tu*	S	Hm, they made it with ha can't you see it that's grass
OG1	*Hm, saja a*	OG1	Hm, that's right a

* Lidi is the hard part of a coconut leaf, it is thin and long.

Both peers (OG1 and OG2) had made incorrect and correct statements about the model house, that it was made from bamboo, lidi, brush. (It was really made from bamboo). However, the pupil-subject, Masharah, did not want to point out the error. Instead she offered two alternatives, that the model house was not made but bought, and, when that strategy did not work, that the model house was made from

grass. Both peers apparently accepted the neutral response.

The last two examples had a common element. Both episodes could have caused some rift between the friends, if one participant had persisted in believing the error. However, to reject the error could be a risk, as it could also cause a rift in the relationship. So, a participant took another strategy, which was apparently aimed at preserving closeness between the participants. In both cases the errors were ignored, and alternative responses geared toward correctness or resolution of the error was suggested.

In alternative e the error was avoided, and participants cooperated to reach correctness. This strategy was often used during peer interactions, whether for pupil- or teacher-subjects. In these episodes the participants faced a problem situation; there was a possible error that might affect social relations. The error was anticipated and avoided, and all participants worked together to change the predicted error into a correct response. This was illustrated in the following example, when none of the participants could think of the right word berteh jagong (popcorn), and all participants contributed piece of information to get the word.

(60) T1F/Pr/15 (Popcorn)

A	Saya tang tu jangan, jagong tu saya jadi beli	A	Whenever I am there, I would buy even the corn
U	Hm	U	Hm
A	Jagong tu kan depan tu suka...jagong dalam paket, dalam...	A	That corn which they place in front, I like them, the corn in the packet, in...
S	Empat segi, empat segi tu ka?	S	The square, is it the square?
A	Bukan, jagong...	A	No, the corn...
U	Hat buh mesen tu?	U	The one prepared by machine?
A	Hat mesen tu...	A	The machined ones...
S	Yang sebijik sebijik tu ya?	S	Are they separately, seed by seed?
U	Saya jarang beli jagong, tak beli	U	I seldom buy the corn, I don't buy them
A	Saya suka, saya selalu	A	I like them, I often buy them
U	Budak budak a lalu lalu tak lepaih	U	When my children pass by there, they never miss the corn
I1	Jagong yang depa masak apa ni depa goreng tu yang meletup meletup tu ya?	I1	Is it the corn which when cooked would come popping up?
U/S/A	Ha, ha,	U/S/A	Yes, yes
I1	Apa nama dia?	I1	What is it called?
A/U	Tak tau a	A/U	I don't know
I1	Hm-m, tak tau	I1	Hm-m, don't know
U	Hat yang...hat yang beras pulut tu orang panggil bepang kan?	U	The one...the one from glutinous rice is called bepang, kan?
A	Ha, yang tu bepang	A	Ha, that one is bepang
U	Ni hat pulut dia buh gula	U	This one from glutinous rice, they add sugar to it
S	Ni macam dengan beraih yang kita rendang, beraih pulut kan?	S	This is like rice which we fry, glutinous rice, isn't it?
U	Macam beraih yang tu kita goreng	U	Like the rice which we fry
A	Ha, yang tu la, bepang	A	Ha, that one la, is bepang
S	Dak, yang tu kita panggil berteh kut?	S	No, that one we call berteh, perhaps?
U	Hm?	U	Hm?
A	Ha, yang macam berteh tapi hat ni jagong	A	Ha, it is like berteh, but this is from corn
S	Berteh jagong	S	Corn berteh (popcorn)
U	Berteh	U	Berteh
I1	Berteh jagong	I1	Corn berteh (popcorn)
S	berteh jagong a	S	Corn berteh a

(For rows "Berteh jagong / Berteh / Berteh jagong / berteh jagong a" — noted: almost simultaneously)

S : Subject, teacher T, female
A,U : peers, all female teachers in the school
I1 : Investigator, who at that time was a participant observer

In this episode of problem solving, all participants cooperated to get the right response to what A was trying to talk about, i.e., "the corn in the packet," the name of which was not remembered. It was as if all participants interacted on the assumption that together they could get to the right response. The following information was gathered:

a. It was made from corn.

b. It was not in the shape of a square.

c. It was prepared by machine.

d. It was separated, corn by corn, not held compressed together.

e. It was fried-popped.

f. If it was made from glutinous/sweet rice, it was called bepang.

g. If it was made from rice, and not have sugar added to it, it was berteh.

h. If it was made from corn, it was corn berteh (popcorn).

All subjects, pupils and teachers, had instances during peer interactions when the problem-solving strategy was used to get the correct response while maintaining the social closeness between participants.

The selection of alternative strategies to deal with errors or predicted errors differed in the three situations, in ways that may have depended on the time allotment, social closeness between participants, and the effect of the errors. These alternative strategies were to some extent mutually exclusive, as shown in the following table:

	Inside classroom	Outside classroom	
		Home	Peers
Alternative a: The error was rejected	X		
Alternative b: The error was rejected, and a correct response given	X	X	
Alternative c: The error was accepted with modification towards correctness	X	X	X
Alternative d: The error was ignored, other participants modified it towards correctness			X
Alternative e: The error was avoided and participants cooperated to reach correctness			X

A teacher's treatment of errors in classrooms with strategies of rejection and correction could be due to one of the following causes:

a. To elicit the correct information for pupils. If a pupil was not able to give it, the teacher called on another pupil to do so. A correct response would mean that previous materials were understood and could be recalled by pupils. Thus, such questions for information could be viewed as testing questions for pupils.

b. To give correct information to pupils. When a pupil gave an incorrect response, the teacher could gradually lead the pupils to the correct response. This could be viewed as a teaching strategy, so that pupils could learn the

information while modifying their information and
knowledge about the topic.

When the teacher rejected an error, it could mean that he or
she was going to give another pupil the opportunity to display his or
her information. Thus, the rejection was confined only to the
incorrect response and did not mean the rejection of the pupil as
an individual. The situation may be different in outside classroom
interactions. An error in the home was immediately corrected. It
was as if parents took it as their obligation to provide children
with correct information and viewed errors as a basis for teaching
children relevant information. Among peers, errors were ignored or
avoided, and participants would work towards the correct response,
as in the process of problem solving.

The use of indirect rejection strategies during home and
peer interactions could be related to the issue of close social
relationships between participants. Rejection of a response could
be interpreted as a rejection of the person and could mar the social
closeness between participants.

Pupils would come to classrooms with the assumption that
rejection of errors was rejection of the self too. There was no
certainty that the rejection of errors as errors was understood by
pupils. Pupils who were used to treating rejection of errors as
rejection of self may have viewed the rejection of responses in
classrooms in the same manner, i.e., that they were being rejected
by teachers. Teachers did not use any cues to let pupils know that
only errors were rejected and that the social relations between
teachers and pupils were not affected by this strategy of rejection.

3. Mismatches in Contextual Boundaries

An inappropriate response to a teacher's question or directive in a classroom might initially be diagnosed as an error. However, when the "error" was set against two or more consecutive or isolated episodes, it might be rediagnosed as a mismatch of contextual boundaries. The topic of the episode had changed, but a particpant had not taken account of the change and gave or made a response which would have been appropriate in a previous epissdoe but was inappropriate for the present episode. In a sense, most errors could be rediagnosed as belonging to this category, but in some cases one might have to go far afield to find the relevant context. In a classroom situation, for example, one might have to refer to contexts and episodes of previous lessons, days, weeks, or even terms before.

For the purpose of this analysis, errors spanning no more than two or three consecutive episodes were redefined as errors due to mismatches of contextual boundaries.

In interactions outside the classroom, the initiations and closures of episode were jointly decided on by most participants. This was particularly so in the peer interactions, where all partici- pants were given equal authority and capacity to make such decisions, and a topic or activity would be closed on joint consent. In the classroom, because of limited time and amount of curriculum content that had to be covered, most decisions on initiation and closure of episodes were taken over by the teacher. Thus, there may be cases when a topic was initiated, the teacher decided that enough had been said about it, closed it, and moved on to another topic. The decision

to close the episode and initiate a new one may not be fully compre-
hended or realized by all pupils, so that when teachers pose new
questions, some pupils may still be thinking of and giving responses
appropriate for the previous episodes but inappropriate for the
current episode. This ineffective communication was caused by the
setting of context and boundary of episodes, understood by some
participants but not by all participants.

An example of ineffective communication caused by contextual
boundary follows.

(61) T2M/Sc.1/4   (Four-legged and two-legged animals)

T	*Habis. Habis binatang yang kaki...kaki empat. Ha, sudah, ha. Ada lagi lah, tapi nak ambil contoh saja. Baik. Lain daripada kaki empat, ada kaki berapa binatang? Yang tu Kebanyakan...*	T	The end. We've finished those which had...had four legs. Ha, that's it, ha. There are more, but we only want to get exam- ples of,good, other than with four legs,how many legs do other animals have? There are many with...
P(CH)	*Dua, dua dua*	P(CH)	Two, two, two
T	*Ha, dua. Ha,ha, Huzaidah*	T	Ha, two. Ha, ha, Huzaidah
PA	*Burung*	PA	Birds
T	*Burung*	T	Birds
PA	*Ayam*	PA	Chickens
T	*Ayam. Ha, ni...ha?*	T	Chickens. Ha, you...ha?
PA	*Orang*	PA	People
T	*Tak dengak*	T	I can't hear you
PA	*Orang*	PA	People
T	*Orang, ha orang boleh, kaki...kaki dua. Ha, ni Juriah*	T	People, ha people can be accepted, two...two Ha, you, Juriah
PA	*Itek*	PA	Ducks
T	*Itek, ha. Apa dia? Ha, apa dia?*	T	Ducks, ha. What is it? Ha, what is it?
PA	*Kuda*	PA	Horses
T	*Kuda kaki dua ka?*	T	Do horses have two legs?
P(CH)	*Empat*	P(CH)	Four
T	*Kuda kaki...*	T	Horses have...
P(CH)	*Empat*	P(CH)	Four
T	*...kaki empat. Kuda kaki...empat*	T	...four legs. Horses have four...legs

The pupil who made the response "horse" could be still responding to the previous episode of "What animals have four legs?" A rediagnosis of the error could reveal that not all pupils had moved to a new topic when the teacher decided to. Several more pupils may be on previous episodes, and these pupils would not be able to follow all the teacher's instruction.

The same diagnosis could be applied to the following episode:

(62) T1F/LK/21 (Make sentences using these words)

T	*Baik. Habis dah pasal perkataan tu. Kita buat ayat pulak. Ayat bercakap.*	T	Good. Now let's finish with the words. Let's make sentences now. Sentence with the word <u>bercakap</u> (talking)
P(Z)	*Cikgu, berkebun cikgu, berkebun*	P(Z)	Teacher, <u>berkebun</u> (gardening) teacher, <u>berkebun</u>.
T	*Fazil*	T	Fazil
P(M)	*Berhujan, berkebun*	P(M)	<u>Berhujan</u> (raining), <u>berkebun</u> (gardening.
P(2)	*Saya, saya*	P(2)	I, I
T	*Kamu faham dak buat ayat? Faham dak? A-a, cuba Zamri*	T	Do you all understand about making sentences? Do you understand? A-a, try Zamri
P(Z)	*Berkebun*	P(Z)	<u>Berkebun</u> (gardening)
T	*Ha, faham tu? Betul berkebun, tapi cikgu mau buat ayat. Contoh nya...misalnya...misal... misalnya...<u>Ali bercakap perlahan</u>.*	T	Ha, is that understanding? The word <u>berkebun</u> is correct, but I want you to make sentences. For instance...for example... for example...for example ...<u>Ali bercakap perlahan</u>. (Ali is talking softly.)

Teacher T was eliciting instances of verbs with the prefix <u>ber</u> (equivalent -ing), and later moved to a new task, making sentences. Pupils were still responding to the previous task and gave more word examples.

The pupils' apparent resistance to the teacher's decision to close the episode and move to a new one may be caused by one or several of the following factors:

a. Pupils were not satisfied with what had been said about the episode, there was still more to be said.

b. Pupils did not fully comprehend what was said in the episode, and they might need more time to sort out the information in that episode.

c. Pupils were not prepared to have all episodes closed by teachers, some of them wanted the option to close some episodes themselves.

d. Pupils were not attending to the teacher's closing of the episode.

This resistance could be explained to some degree by analyzing some interaction in the home. As was said earlier, most episodes in home and peer interactions were jointly initiated and closed by all participants. Only when all participants were satisfied that the objectives of the interaction had been achieved could the episode be closed.

Another feature of interactions in the home was what is called parallel interaction. In this kind of communication, several episodes proceeded simultaneously, but each episode was closed satisfactorily for all participants. An example was an interaction in the home of Zulfazilah, a female pupil-subject.

(63) P2F/AH/1 (Mother disciplining younger sisters, and
requesting subject to shut off the stove)

M	*Duk lah elok elok, takkan duk lagu tu tu*	M	Sit properly now. You can't sit like that
YS2	*Mak, mak ni*	YS2	Mother, mother this
M	*Nanti kakak taroh. Pi taroh. Ha, adik koyak, pelastik ni*	M	Let kakak keep it. Go and keep it. He adik will tear it. That plastic thing
YS1	*Nak buku. Nak keriau dah, nak keriau dah*	YS1	I want the book. She wants to cry now, wants to cry now
S	*Lo, mak, api, api deraih*	S	Lo, mother, the fire, the fire is so big
YS2	(cries)	YS2	(cries)
YS1	*Bak, bak bagi ha. Saya, saya*	YS1	Give me, give me, give me ha. Me, me
OG	*Jum la*	OG	Come let's go
M	*Jum, jum. Pi dalam, pi dalam, pi ajak depa pi main dalam. Pi, pi. Pegi lah sana. Cuba tengok Besak sangat api. Katup sikit kakak*	M	Let's go, let's go. Go inside, go inside, go and ask them to play inside. Go, go, go lah. Just look at that. The fire is so big. Shut it a little kakak
S	*Nak katup kat mana?*	S	Where do I shut it?
M	*Kut ni, kut ni, kut ni Ha, tak pa a. Sudah*	M	This way, this way, this way. Ha, that's alright. That's it
S	*Ni deraih ni*	S	This is so big
M	*Biak pi, biak pi la, sat ni dia ni lah*	M	Let it be, let it be la, in a while it will be all right

Two parallel episodes were being conducted in this interaction, the mother was disciplining two younger sisters (YS1 and YS2) to sit properly, go inside the living room, and not disturb the company; and at the same time she asked the subject to take care of the stove. Notice that the subject realized that some of the utterances were not directed at her, but she was able to isolate the ones that were.

A pupil who was used to such parallel episodes where episodes were seemingly closed but were still in progress would not be able to handle final closure of episodes in the classroom when there was still information the pupils wanted to add.

Although fewer ineffective communications resulted from mismatches in contextual boundaries than from mismatched strategies and treatment of errors, the critical issue was the effect of such an ineffective communication on the pupils concerned. The pupils would not know why an information that would have been accepted a little while ago was considered an error. The teacher did not realize that pupils did not in fact give erroneous information but were only in different episodes and parts of the classroom proceedings. But both teachers and pupils would consider ineffective communication as a negative reflection on the pupils' ability and performance. This, like the other kinds of ineffective communication, would affect the pupils' motivation and interest in the classroom proceedings, making it difficult for teachers to develop the pupils' full potential and intellectual capacity.

C. Pupils' Volunteered Utterances

One effect of ineffective communication on pupils was inadequate comprehension of classroom activity and content. This seemed to cause some sense of dissatisfaction, a desire to get clarification of what was going on at the same time. In some cases, the pupils had additional information on the topic under discussion, and wanted to contribute and participate in interactions as they would normally do during home and peer interactions. This state of nonunderstanding, need for clarification, and additional information was reflected, in some cases, in pupils' volunteered utterances.

A volunteered utterance was an utterance that was not elicited. It was not a response to any questions or directives, but it could be a comment on the current episode.   .

The sample volunteered utterances in both sets of classrooms were limited to two types of pupils:

1. those who were sitting near a microphone that was attached to the tape recorder

2. those whose voices were loud enough to be picked up by either microphone

As it turned out, most of these utterances were made by male pupils; not many female pupils volunteered utterances. This may be cultural. Girls were brought up to "be seen and nor heard", so raising their voices in classrooms would not be acceptable behavior for girls but would be permissible for boys.

Altogether forty instances of volunteered utterances were found spread over twelve lessons and all subject areas. The distribution of these utterances, by teachers, is show in Table 9.

Many volunteered utterances by pupils were found to be episodes giving information to clarify some teachers' directives. Most of this type was found for Teacher K's language lessons.

Teacher K gave directives for pupils to do activities that would be the basis for language drills. The directives were not fully comprehended by pupils, which was evidenced by pupils' hesitations or errors in performing them. These pupils needed additional information before they could comply with the directives. The episodes proceeded as follows:

Table 7:   Distribution of Pupils' Volunteered

Utterances by Teachers

No. of Volunteered Utterances / Teacher	Boys	Girls	Total
Teacher T	17	2	19
Teacher K	18	3	21
Total	35	5	40

(64) T2M/LT/2   (Take two bottles)

T	Ha, Mazlan, go and take two bottles. Two bottles		
P(1)	*Dua, dua*	P(1)	Two, two.
T	Two		
P(1)	*Ha, satu lagi*	P(1)	Ha, one more
T	Keep quiet		
P(2)	*Satu saja*	P(2)	One only
P(3)	*Dua, dua*	P(3)	Two, two
T	*Ha*		
P(1)	*Satu saja*	P(1)	One only
P(2)	*Dua*	P(2)	Two
T	Ha, put on the desk, Put on the desk		

(65) T2M/LK/9   (Come and sit down)

T	Yes, come here, sit down. Zamri Hamid...Kasni... Kasni, sit down		
P(1)	*La, Kasni,* sit down *duduk*	P(1)	La, Kasni, sit down, sit down
P(Zi)	Sit down		
T	Now, Sobar, come here		
P(Zi)	*Pi, pi pi sana la*	P(Zi)	Go, go, go there la
P(2)	Come here...*pi la, pi la*	P(2)	Come here...go la, go la

Particular pupils could not comprehend directives, because Teacher K used only English. Thus, pupils who could comprehend the directives helped the pupils in difficulty by giving the additional information in Bahasa Malaysia. The teacher's directives went through several stages before the pupils could comply:

Step 1: Directive proper in English

Step 2: Pupil's hesitation or error in complying

Step 3: Another pupil's volunteered utterance to explain directives, given in Bahasa Malaysia

Step 4: Pupil's complying with proper activity

Some pupil's volunteered utterances were to monitor particular pupils' performance, so that the appropriate activity could be obtained:

(66) T2M/LK/6

T	Siti Zariah, go and stand near the cupboard, go and stand near the cupboard		
P(1)	Tak, tak, tak, tak	P(1)	No, no, no, no
T	Keep quiet. Norina, go and stand near the cupboard. Go and stand near the cupboard. Yes		
P(1)	Betul, betul, betul	P(1)	Right, right, right (correct)

Some volunteered utterances were also an explanation about the directive, and could be viewed as a verification for the children, as in the following example:

(67) T2M/LK/5

T	Fauzi, who is sitting on the chair?		
PA	Zamri is sitting on the chair.		
T	Louder, louder		
P(1)	Kuat	P(1)	Loud
T	Who is sitting on the chair?		
P(1)	Kuat, kuat	P(1)	Loud, loud
P(2)	Louder tu kuat tu	P(2)	Louder means loud

There were two instances of volunteered information in order to clarify questions for Teacher T, both instances were in 2K, for a language class. Teacher T asked pupils to give verbs that could take the prefix ber, and she wrote those examples that were accepted. The volunteered requests from the pupils were the following:

(68) T1F/LK/10

T	Zamauri	T	Zamzuri
Pa(Zu)	Berjalan	PA(Zu)	Berjalan
T	Berjalan. Berjalan (writes on blackboard)	T	Berjalan. Berjalan (writes on blackboard)
P(1)	Berjalan ada dak lagi?	P(1)	Berjalan is it on the board or not yet?

(69) T1F/LK/7

T	*Cuba cari yang kawan tak pernah kata dan tak ada di sini*	T	Try look for a word which your friends have not mentioned and which are not there
P(1)	*Berkawan*	P(1)	Berkawan
P(2)	*Berkawan ada?*	P(2)	Is berkawan there?
P(3)	*Berkawan dah ada?*	P(3)	Berkawan is there?
P(4)	*Ada*	P(4)	It's there

In both instances pupils asked peers whether certain words were on the blackboard or not. Teacher T's writing on the blackboard was clear, and it was suggested that the pupils who asked those questions were not able to read what was written. Actually, they were working from memory, and that was why several words were repeated again and again.

For all the above examples, it was clear that pupils did not have the skills basic to the class procedures, in Teacher K's case, he was using English words that the pupils did not understand, and in Teacher T's case, she was writing, and pupils were not able to read what she had written.

A diagnosis of these volunteered utterances suggested that pupils had not mastered the basic skills required for effective functioning in some lessons. Pupils were sensitive to their, or peers', inadequate information, and would give the information required.

Pupils were also quite sensitive to errors made by other pupils or the teacher, and they volunteered utterances that attempted to correct such errors. As has been mentioned above, the formal Bahasa Malaysia was used for classroom interactions as much as possible. Sometimes a teacher would use the dialect. The pupils found this inappropriate and would correct it.

(70) T1F/RT/1   (Restate the directive in Bahasa Malaysia)

T	*Jangan tengok rata rata, tengok di buku. Mat Fuad, macam mana letak buku? Tak atas meja semua*	T	Don't look all around you look at your books. Mat Fuad, how do you place your book? Place on table all
P(1)	*Letak elok-elok buku ni*	P(1)	Place the book carefully on the table

Teacher T had used the dialect to direct how the books were supposed to be placed on the table and had used the dialect in the last sentence, with changes in word length and sentence construction. Notice that P(1) repeated the sentence directive and inserted the correct sentence construction using the full word for letak instead of tak which had been used by Teacher T.

During a language lesson, pupils were able to make self-correction on errors, for example, which root verbs could take the prefix ber and which verbs could not.

(71) T1F/LT/13   (Can jatoh take the prefix ber?)

T	*Lagi*	T	What else
PA	*Berlawan*	PA	Berlawan
T	*Lawan, berlawan*	T	Lawan, berlawan
P(Ar)	*Terjatoh*	P(Ar)	Terjatoh
P(2)	*Berjatoh*	P(2)	Berjatoh
P(3)	*Berjatoh tak boleh, cikgu*	P(3)	You can't have berjatoh, teacher
P(Ar)	*Terjatoh boleh lah*	P(Ar)	You can have terjatoh

(72) T1F/LT/17   (Can curi take the prefix ber?)

T	*Lagi apa?*	T	What else?
P(1)	*Ber, ber, ber*	P(1)	Ber, ber, ber
P(2)	*Bercuri*	P(2)	Bercuri
P(3)	*Hat tu mencuri*	P(3)	That is mencuri
T	*Ber, ber apa? Bercuri boleh dak bercuri?*	T	Ber, what with ber? Can you have bercuri, bercuri?
P(CH)	*Tak boleh*	P(CH)	No, we can't

Pupils were sensitive to correct and incorrect language.

They were able to reject incorrect language forms.

Some volunteered utterances were pupils' strategy to

clarify new materials to themselves. In the following example,

Teacher T had corrected pupils' use of incorrect language form,

menyusu (to milk) rather than menyusui (to give milk, to breast-

feed). After several pupils had made the error again and again,

and the correction had been made after every error, a pupil

verbalized the meaning of the correct form, as if to indicate

finally the understanding of the new form.

(73) T1F/Sc.1/4   (It gives milk to its young)

T	Kemudian dia buat apa lagi masa anak dia tu... dia bela anak dia? Apa lagi yang dia buat?	T	And then what else does it do when its young... when it looks after its young? What else does it do?
P(CH)	Dia meyusu	P(CH)	It milks
T	Dia menyusui anak dia	T	It gives milk to its young
P(1)	Dia bagi anak dia makan susu	P(1)	It gives milk to its young

This need to verbalize the correct answer or explanation was

again seen in this example.

(74) T1F/Sc.1/31   (Pairs and singulars)

T	Ada berapa kaki lipas?	T	How many legs do cockroaches have?
P(CH)	Tiga	P(CH)	Three
P(1)	Enam, enam, enam	P(1)	Six, six, six
T	Ada...	T	There are...
P(CH)	Enam	P(CH)	Six
T	Ada berapa kaki, Juridah?	T	How many legs are there, Juridah?
PA	Ada enam kaki	PA	There are six legs
P(Ar)	Enam, tiga pasang	P(Ar)	Six, three pairs

Teacher T had attempted to explain the concept pairs and

singular, through examples such as "How many legs do birds have?",

"How many pairs of wings do butterflies have?". At different points, pupils showed that they had not grasped the concept well. At this point, it seemed as if pupils were able to differentiate between pairs and singulars, and one pupil (PAr) verbalized the understanding, that three pairs were equal to six singulars.

Pupils also volunteered utterances about personal experiences that seemed relevant to the topic under discussion, as in the following example:

(75) T1F/Sc.2/29   (When the earth revolves, do we get a headache?)

T	*Macam mana kita tau kata bumi kita beredar?*	T	How do we know that the earth revolves?
P(F)	*Pening*	P(F)	We get a headache
P(S)	*Tu dia, pening*	P(S)	There you are, a headache
P(Ar)	*Cikgu, Fazli kata dia peneng*	P(Ar)	Teacher, Fazli says he has a headache
T	*Dia rasa pening? Pening bukan sebab bumi beredar*	T	He has a headache? The headache is not caused by the revolution of earth
P(Ar)	*Pusing*	P(Ar)	The movement
P(2)	*Dia memusing*	P(2)	It moves
T	*Sekarang ni pening ni?*	T	Are you having a headache now?
P(S)	*Dak*	P(S)	No.
P(F)	*Kalau bumi bergerak ha*	P(F)	When the earth revolves, yes
T	*Ha, kadang kadang kita pening la. Ada la, kita tak sehat, pening la*	T	Ha, sometimes we would get headaches. Yes, when we are not feeling well, we get headaches

Teacher T accepted this utterance and explained that the headache was not because of the movement or revolution of the earth but because we do not feel well.

In another instance, pupils brought some personal experiences from outside the classroom to a topic in the classroom.

(76) T1F/Sc.1/36   (Bees sting)

T	Tengok lebah pulak. Lebah. Macam mana lebah? Sapa besa pegang lebah? Tengok di lebah tu sendiri?	T	Let's look at bees now. Bees. How about the bees? Who had ever held bees? Who had ever looked at the bee itself?
P(1)	Ha, ketit, ha, ha, ketit	P(1)	Ha, it stings, ha, ha, it stings
T	Macam mana badan dia?	T	How about it's body?
P(1)	Ketit ha	P(1)	It stings, ha
P(2)	Dia ketit tu	P(2)	It stings
T	Sapa besa kena ketit lebah? Macam mana kena ketit lebah? Hang pi kacau sarang dia?	T	Who has ever been stung by bees? How did you get the bees' stings? You went and distrubed its nest?
P(1)	Dak	P(1)	No

Topics about birds, insects, and mammals were treated as academic topics in classrooms. However, rural children were closer to nature and had had personal experiences with these animals during their childhood. This episode could be seen as a pupil's attempt to bring his outside experiences into classroom discussion. In this way, the gap between the two worlds could be bridged.

These volunteered utterances served as an outlet for the pupils' relevant experiences and thoughts about the lesson. A small sample of these volunteered utterances indicates that they could be a resource for the teachers to draw on, because utterances reflected the understanding and information pupils gained during the process of the lesson. If these utterances were dealt with and accepted in the classroom proceedings, the gap between classroom content and pupils' experiences might be bridged, and pupils could relate what happened in their two different social situations.

D.   Supplementary Data

There were two kinds of supplementary data:

1. A simulated teaching-learning situation, the
    nested boxes

2. Interviews with mothers of pupils and teachers in
    the sample.

Both kinds of data were used to bridge the differences found in the
kinds of communication strategies used in inside and outside class-
room interactions.

The simulated teaching-learning situation was administered
mainly to get samples of interactions from pupils who were forced
to play the roles of teacher and pupil. Materials from the informal
interviews with mothers and teachers contained their impressions
and attitudes towards pupils' effectiveness as learners inside and
outside the classroom situation.

1. A Simulated Teaching-Learning Situation, The Nested Boxes

All eight pupil-subjects were given the task. The procedure
consisted of three steps:

Step 1: The investigator showed the nested box to the pupil.
         The pupil was asked to open the boxes, and count
         them. There were twelve boxes altogether. The
         pupil was then asked to arrange the boxes to be
         a train, a road, a drain, a tree, and a house or
         pagoda. Each pupil was able to make two to four
         arrangements and then was asked to rearrange the

boxes into one again. (5 minutes)

Step 2: The pupil showed the boxes to a friend. Both peers

were left in the room, and the investigator went

out for a while. (10 minutes)

Step 3: The investigator returned to the room and asked

both pupils to recall and explain what had

transpired during the time that she was away.

(5 minutes)

All procedures were audiotaped.

In this task, each pupil-subject played both roles, a pupil

when the investigator was explaining the nested box to him or her,

and a teacher when she or he explained the nested box to a friend.

The data were analyzed to answer the following questions:

a. To what extent did the pupil-subject assume the role of

a teacher with regard to language behavior?

b. To what extent did the peer assume the role of a

pupil with regard to language behavior?

A comparison of interactions in the classroom, the home, and

among peers indicated that different strategies were used in different

social situations. In matters of directives, teachers in classrooms

tended to use commands, parents used requests, and peers used indi-

rect requests or persuasions. The selection of a particular strategy was

determined by the objectives of the interaction, the assumptions of

knowledge and social relations between participants, and the time

available to complete the interaction.

During the nested box task, the pupil-subjects were in a

situation of conflicts. When they were teaching their peers, the

assumption of social equality remained, but they possessed unequal information. There was a limitation of time in which both peers were to complete the task. The objective was to give information, rather than to share it among peers. Thus, the pupil-teacher would have to use different strategies of communication.

The data indicated that pupil-subjects were able to assume the role of teacher, and the peer did assume the role of the pupil, but there were some modifications and compensations.

The subject-pupil was to teach the peer about the nested box, he or she had more information than the peer, so he or she was able to evaluate the peer's responses and either reject or accept them. The role of teacher allowed her or him to initiate rigid episodes, in the form of commands or requests, but often this would be followed by a strategy peculiar to peer interactions, as if to nullify the teacher's strategy, as in the following example:

(77) P1F/NB/10

S	Buh lagi	S	Put more
OG	Sampai habih la ni?	OG	Until they are all used up?
S	Ha, lagi buat.	S	Ha, do it more.
	Jangan dok kasak		Don't be so rough.
	sangat. Lo, tak		Lo, that's alright,
	pa dah, tak pa		that's alright

In this episode, the subject (S) used the teacher's strategy to handle errors, that is, a reprimand when the peer (OG) so mishandled the boxes that some were almost torn. There were two teacher's strategies, the command "Put more," and the reprimand. Both were followed by "softeners", i.e., the particle "Ha", and the comforting phrase "That's alright, that's alright."

There were instances when the pupil would use a strategy peculiar to peer interactions, i.e., the persuasion:

(78) P1F/NB/8

S	*Zakiah reti atok macam mana nak buat... nat main main la, la*	S	Zakiah, do you know how you could arrange... say if you want to play
OC	*Dah start tu*	OC	I've started it already
S	*La, nanti sat la. La buka, tak usah buka la...*	S	La, please wait a minute la. La you opened it, please don't open it yet

In this example the subject began to give another directive, but the peer began the task before the directive was completed. A teacher would have commanded the peer to stop and pay attention to what she was saying. But in this situation, the pupil-teacher used the persuasion strategy rather than a reprimand. Again the particles <u>la</u> and <u>lo</u> were used to soften the interactions.

In some instances the subject-pupil would use persuasion, with some elements of cooperative problem-solving strategies, as in the following example:

(79) P2F/NB/10

S	*Kamu...lekas tengok lah, lekas tengok. Tu hat ni kan. Mula-mula hat besak sekali. Hm. Tengok tu sudah lah. Hat besak dulu. Hm.*	S	You...look lah quickly, look quickly. This is the thing. Firstly the biggest one. Hm. Look at it now. The big one first. Hm.
OC	*Hat ni ni besak*	OC	This one is big
S	*Tengok la*	S	Look at it
OC	*Besak ha. Besak dulu ha*	OC	It's big. The big one first.
S	*Lepaih tu hat mana? Tengok la. Hat besar... hat besar kemudian hat kecik...ait! Buat lah hat ni ha? Lepas tu hat ni*	S	After that which one? Look at it. The big one..the big one and then the small one... ait! Do it with this one alright? And then this one
OC	*Hat ni*	OC	This one
S	*Lepas tu hat ni, ni. Ha*	S	And then this one, this, Ha
OC	*Lepas tu hat kecik sekali*	OC	And then the smallest one

Pupil-teachers would use classroom strategies, but, because of the one-to-one relationship, the peer's performance was monitored at each step, which minimized the probability of errors.

(80) P2F/NB/7

S	*Sat lagi hang kira, ada berapa?*	S	In a while you count, how many are there?
OC	*Kira semua ni?*	OC	Count all of these?
S	*Ha a*	S	Ha a
OC	*Dua puluh empat*	OC	Twenty-four
S	*Dak ai. Tu hat ni tudung dia, hat ni tudung, hat ni tudung, hat ni tudung, hat ni tudung dia. Tu ha. Hang bilang ni*	S	No. This is its cover, this is a cover, this is a cover, this is its cover. There. Count these
OC	*Ha, carek...*	OC	Ha, it's torn
S	*Carek tak pa. Ce bilang hat ni. Tengok*	S	It's alright. Try and count these. See
OC	*Ha la, aku kata dua puluh empat*	OC	Ha la, I said twenty-four
S	*Ha la. Kira elok elok*	S	Ha la. Count properly
OC	*Dua puluh empat la*	OC	Twenty-four la
S	*Ha?*	S	Ha?
OC	*Hat ni a?*	OC	These ones a?
S	*Bilang*	S	Count
OC	*Satu, dua, tiga, empat, lima, enam, tujuh, lapan, sembilan, sepuluh, sebelas, dua belas*	OC	One, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve
S	*Dua belas*	S	Twelve

In this episode, the peer made several errors. The first time the error was made, the subject-pupil rejected it and explained why the response was not correct. When the error happened again, the subject-pupil repeated the directive. On the third error, the subject-pupil used the request for repetition normally used in a classroom, "Ha?", which in this case was a strategy to indicate that the response was incorrect and should be modified. This interpretation was taken up by the peer, who then requested clarification of the specifics of

the task. At the closure of the episode, the pupil-subject repeated the correct responses in the same way the teacher in a classroom would.

The data from the nested box task indicated that pupils could assume and use the language and communicative strategies used by teachers in the classroom. However, the episodes in the nested box task were more effective than those found in classroom interactions. This could be because of the one-to-one relationship that was available between teacher and pupil; any ambiguities and inappropriate responses were monitored and corrected before the pupil moved on to the next step of the task. Thus, there was no accumulation of ineffective episodes that would result in incorrect performance by pupils.

2. Interviews with Mothers of Pupil-Subjects and Teachers

These informal interviews were conducted during the last week of data collection. By that time, the investigator knew the mothers and teachers quite well, and they were not reluctant to respond to questions about their children and pupils.

a. Mothers of Pupil-Subjects

All mothers were interviewed, and each responded to questions about their families, levels of education, and children.

Most parents had some education, mainly five to six years in the vernacular or religious schools. Three mothers and one father had not attended school at all. But most families had older children who had finished secondary school (nine years of school) and were at home. So all pupil-subjects had access to adults, whether parents or older siblings, who could help them do their homework. All mothers

wanted their child to finish the highest level of school. When they were pressed to be more specific, each mother indicated that the highest level would be the university level. Children themselves had apparently expressed the desire to have enough education that they would not have to work at the kinds of occupations held by their parents and older siblings, i.e., tapping rubber or domestic work.

Four of the children were the youngest or second youngest child in a family of seven to ten children, the age difference between them and their parents was quite big, and their parents were those who did not go to school at all. But these children had their older sisters at home to assume the role of caretaker. The other four children's parents were in their late twenties and early thirties. All children therefore had adults to relate with and assist them in their homework.

All parents agreed that they did teach their child to do some tasks, such as going to the stores and preparing land for planting. They expressed the views that the child was to be taught the correct procedure for the task and that any reprimands would be towards the child's learning the task. Each child could learn a task if he or she were taught.

b. Teachers

Both teachers agreed to the importance of education for their pupils, children, or younger siblings. They would like the pupils to succeed in school, so that they would have more opportunities in society as adults.

When they were asked about the teaching-learning process in
the classroom, both teachers considered that their role was to teach
the pupils about things that children did not know. Thus, the teachers
began with the assumption that the pupils did not know anything about
the content and that the teachers were to give the necessary informa-
tion and skills.

All interviews were informative. But the small sample of
teachers and mothers would not allow broad generalizations about
the children's environment for learning either inside or outside the
classroom. But it was clear that all mothers and teachers were
concerned about education for children and pupils.

E.   Instances of More Effective Communication in Classrooms

Ineffective communication in classroom interactions was caused
by different expectations and use of strategies inside and outside of
classrooms. Classroom interactions tended to be rigid in structure,
teachers were in control of objectives, episodes, and directions of
interactions. Pupils who were able to participate in interactions
with peers and members of thier family had to acquire an alternative
set of strategies for use in this new social situation. This was
their second year of attending school and so they were still using
their outside strategies to deal with classroom interactions.

The strategies used in classrooms were determined by the assump-
tion that the teacher had more information than pupils and so was
given the prerogative to direct interactions. What would happen if
this assumption was proved invalid? There were three long episodes

in which this assumption was proved invalid: The structure of the interaction became less rigid, and teachers could neither direct the interaction, nor accept or reject pupils' responses. Pupils were able to volunteer information that they considered relevant to the discussion. All in all, these interactions allowed pupils to relate their inside and outside classroom experiences.

In the first episode, Teacher K was conducting a review lesson on insects, animals, and birds. He requested pupils to list names of insects with feelers, and a pupil mentioned "ketegak misai", a name that was local to the area. Teacher K made statements to the effect that he did not know that particular insect, that he had never heard of it, and that he did not know whether it was an incorrect or correct response. This statement was contrary to the pupils' assumptions about the role of the teacher. At this point it was clear that the pupils had more information about the topic than the teacher did. Teacher K attempted to find out from the pupils the characteristics of this unfamiliar insect. During that time Teacher K assumed the role of "pupil" and the pupils assumed the role of "teacher," because they had more information to give.

Further interactions indicated that the pupils were taking the role of evaluator of utterances; they could accept or reject Teacher K's utterances. Pupils then gave information about the color, shape, and living conditions of the insects, as in the following episode:

T	*Ha-a*
PA	*Ketegak misai*
T	*Ha?*
PA	*Ketegak misai*
T	*Macam mana ketegak misai? Macam mana? Sapa...*
P(1)	*Hat ketit orang*
T	*Yang gigit orang tu?*
P(2)	*Dak*
T	*Yang tu cikgu tak besa tengok. Yang tu...sapa besa tengok? Binatang...ha? Di mana duduk dimana binatang tu?*
P(1)	*Atas pokok pun ada*
T	*Duk atas pokok, orang panggil apa?*
PA	*Ketegak misai*
T	*Ha?*
PA	*Ketegak misai*
P(CH)	(laugh)
T	*Ada ka? Ada ka?*
P(1)	*Malam malam dia mai la, ketegak misai*
T	*Yang tu cikgu yang tu cikgu tak pernah dengak*
P(1)	*Saya cikgu, saya*
T	*Nanti sat, nanti, nanti. Baik, sapa besa tengok binatang ketegak misai yang Fazli kata ni. Cikgu tak pernah tengok*
P(1)	*Saya tak tengok*
T	*Dimana? Sapa besa tengok? Ha, dimana?*
P(1)	*Atas rumah saya*
T	*Ada atas rumah?*
P(1)	*Hm, dia masok dalam kain saya*
P(CH)	(laugh)
T	*Ha, kamu besa tengok, Cik Soba, besa tengok?*
P(CH)	(much noise)
T	*Di mana...baik, sh-sh... Fazli, duk tempat, duk tempat. Di mana?*
PA	*Di pokok kabu*
T	*Di pokok...*
PA	*...Kabu*

T	Ha-a
PA	Ketegak misai
T	Ha?
PA	Ketegak misai
T	How come ketegak misai? How come? Who...
P(1)	It bites people
T	That one which bites people?
P(2)	No
T	I have never seen that one. That one...who has ever seen it? The animal...ha? Where does that animal live?
P(1)	You can find it on a tree too
T	It lives on a tree, what do people call it?
PA	Ketegak misai
T	Ha?
PA	Ketegak misai
P(CH)	(laugh)
T	Do you find it? Do you find it?
P(1)	It comes out at night, this ketegak misai
T	That one..that one.., I have never heard about it
P(1)	I teacher, I
T	Wait a while, wait, wait. Good, who has ever seen this animal which Fazli talks about, ketegak misai. I have never seen it
P(1)	I have not seen it
T	Where? Who ever saw it? Ha, where?
P(1)	On the top of my house
T	It is there on the top of the house?
P(1)	Hm, it comes into my clothes
P(CH)	(laugh)
T	Ha, you have seen it, Cik Soba, you have seen it?
P(CH)	(much noise)
T	Where...good, sh-sh... Fazli, sit on your chair, sit on your chair. Where?
PA	On cotton plants
T	On...
PA	...cotton plants

T	Pokok kabu? Macam mana rupa dia Cik Soba? Cuba... bagi tau	T	Cotton plants? What does it look like, Cik Soba? Try...give information
P(CH)	(laugh)	P(CH)	(laugh)
T	Baik, besar mana dia?	T	Well, how big is it?
PA	Besar	PA	It's big
T	Besar mana?	T	How big?
PA	Tupai	PA	Squirrel
T	Ni ketegak misai ni, besak mana?	T	This ketegak misai, how big?
P(1)	Besak ni, besak ni cikgu	P(1)	This big, this big, teacher
T	Besar kelingking. Besar kelingking ni ka? Dia gigit orang sakit dak?	T	As big as a little finger. Is it as big as this little finger? When it bites, is it painful?
P(CH)	Sakit	P(CH)	Painful
T	Ha	T	Ha
P(CH)	Sakit	P(CH)	Painful
T	Sakit. Warna dia..apa warna dia?	T	Painful. It's color,... what is it's color?
P(CH)	Koko, koko	P(CH)	Brown, brown
T	Ha?	T	Ha?
P(CH)	Koko	P(CH)	Brown
T	Koko? Ha-a-a, baik. A-a, bagus. Kalau-kalau kamu tengok..dia ada misai ka?	T	Brown? Ha-a-a, good. A-a, good. Suppose you were to see it..does it have feelers?
P(CH)	Ada	P(CH)	Yes
T	A-a, pasai apa yang orang panggil ketegak misai tu?	T	A-a, why is it that people call it ketegak misai?
P(1)	Dah dia ada misai	P(1)	Because it has misai (feelers)
T	Pasai dia ada misai. Ha, pasai apa? Zainuddin	T	Because it has misai. Ha, why? Zainuddin
PA	Dia ketegak	PA	It is ketegak
T	Baik. Sapa pernah di gigit oleh binatang tu? Sapa pernah? Kamu pernah dah? Lagi?	T	Good (well). Who has ever been bitten? Who was ever? Have you ever? Any more?
P(1)	Dia duk dalam kain	P(1)	It stays in clothes
T	Kamu pernah gigit dak? Sikit dak?	T	Have you ever been bitten? Was it painful?
PA	Gigit	PA	It bites
T	Sakit? Mat Saman. Ha	T	Painful? Mat Saman. Ha
PA	Sikit	PA	It's painful
P(2)	Sakit, sakit	P(2)	Painful, painful
T	Ha apan, Mat Saman? Baik. Boleh jadi binatang ketegak misai tu a-a...di tempat ni, di tempat lain orang panggil nama lain. Cikgu tak tau nama ketegak misai, tak pernah dengak. Di Sungai Tiang banyak ka?	T	Ha, what, Mat Saman? Well. Maybe this animal the ketegak misai a-a...in this area, in other regions people call it by another name. I do not know the name ketegak misai, I have never heard it. Are there a lot of them in Sungai Tiang?

P(1)	*Banyak*	P(1)	Lots	
P(2)	*Banyak*	P(2)	Lots	
T	*Warna dia koko?*	T	It's color is brown?	
P(1)	*Koko*	P(1)	Brown	
T	*Dia besar dia...*	T	It's as big as...	
P(1)	*Besar kelingking*	P(1)	A little finger	
T	*Besar kelingking. Ada lagi yang yang besar daripada tu?*	T	...a little finger. Are there any which are bigger than that?	
P(1)	*Besar ni pun ada*	P(1)	There are some as big as this	
T	*Besar ibu jari pun ada jugak?*	T	There are some as big as a thumb?	
P(1)	*Ada*	P(1)	Yes	
T	*Ha? Dia duduk...dia duduk di dalam...di tempat g...cerah atau pun di tempat gelap?*	T	Ha? It lives...it lives in ...in a place that is bright or in a place that is dark?	
P(1)	*Tempat cerah*	P(1)	Bright places	
P(2)	*Cerah*	P(2)	Bright	
T	*Ha? Fazli duk tempat, Fazli, duk tempat*	T	Ha? Fazli sit down, Fazli, sit down	
P(3)	*Gelap*	P(3)	Dark	
T	*Di mana kamu tengok yang tu? Dia duduk tempat gelap*	T	Where do you see that one? It lives in dark places	
P(1)	*Hm*	P(1)	Hm	
T	*Jadi dia duk tempat gelap, dia cari makan waktu malam lah, waktu siang dia...dia tidur. Ha*	T	So it lives in dark places, it looks for food at night lah, during the day it sleeps. Ha	
PA	*Binatang lain tak boleh makan dia*	PA	Other animals cannot eat it	

There were two similar episodes for Teacher T. In both instances Teacher T had requested that pupils raise questions about the day's lesson. Pupils reluctantly raised questions, which were then used to initiate episodes. In both episodes, Teacher T did not make judgments on pupils' information. Instead she attempted to encourage pupils to give information from their own personal experiences.

In the episode about the sun a subject (Sanizar) asked whether it was true that the sun follows them during the day. Teacher T did not make evaluative judgments of pupils' responses, so pupils were able to freely draw on their experiences to formulate reasons for the

pheonomenon of the sun seeming to follow them. Pupils made many

utterances freely.

At the end of the episode, Teacher T did make the statement

that the sun did not follow people, but it seemed as if it did because

of the size of the sun. The flexibility of the interaction drew many

interesting comments from pupils.

T	*Ha, yang tak tau tanya pulak. Ha, Sanizar*	T	Ha, (ask) what you do not know about now.Ha, Sanizar
PA	*Pasai apa matahar...matahari ikut kita?*	PA	Why is it that the sun... the sun follows us?
T	*Ha, Sanizar kata dia nampak... matahari ikut dia. Betul ka matahari tu ikut kita?*	T	Ha, Sanizar says he sees... the sun follow him. Is it true that the sun follows us?
P(CH)	*Betul*	P(CH)	Right
P(CH2)	*Dak*	P(CH2)	No
P(3)	*Ikut*	P(3)	It follows
P(4)	*Dia ikut*	P(4)	It does not follow
T	*Dalau sama-sama berjalan misal nya Azhar, jalan jauh sikit daripada Sanizar, Azhar nampak ikut dak?*	T	If we are all walking together for example Azhar walks a little further away from Sanizar, does Azhar see that the sun follows him?
P(1)	*Saya naik bas pun ikut jugak*	P(1)	It follows me even when I go on a bus
P(2)	*Saya nampak ikut*	P(2)	I see that it follows me
T	*Nampak ikut. Kalau banyak orang berjalan pun nampak dia ikut kita. Betul ka dia ikut kita?*	T	You see that it follows you. Suppose many people are walking too we see that it follows us. Is it true that it follows us?
P(CH)	*Dak*	P(CH)	No
P(2)	*Dia ikut*	P(2)	It follows
P(3)	*Bulan dia ikut kita*	P(3)	The moon follows us
P(4)	*Bukan dia ikut, kamu tengok tang tu*	P(4)	It does not follow, you see it up there
P(5)	*Bila tengok atas dia ikut*	P(5)	When you look up, it follows us
P(Ar)	*Dia tak ikut*	P(Ar)	It does not follow
P(6)	*Ikut*	P(6)	It follows
T	*Sapa kata dia ikut? Baik. Matahari tu ada satu*	T	Who says it follows? Good There is only one sun
P(Ar)	*Dia tak ikut*	P(Ar)	It does not follow
T	*Matahari kamu tau ada berapa?*	T	Do you know how many suns there are?
P(CH)	*Satu*	P(CH)	One

P(2)	*Kalau banyak matahari kan senang la ikut*	P(2)	If there are many suns, then it will be easier for it to follow us
T	*Ada berapa, satu, satu kan saja Matahari. Kita berjalan tiap-tiap hari banyak orang dak?*	T	How many, one, there is only one sun. When we walk every day, are there many people?
P(Ar)	*Banyak. Macam mana nak ikut?*	P(Ar)	Many. How could it follow us?
T	*Banyak orang. Kalau Sanizar kata ikut dia, orang lain...*	T	Many people. If Sanizar says it follow us, what about the other people...
P(1)	*Dia ikut ka?*	P(1)	Does it follow?
T	*...dia ikut dak?*	T	...does it follow them?
P(CH)	*Dak*	P(CH)	No
T	*Dia ikut la, dia ikut Sanizar*	T	It follows la, it follows Sanizar
P(1)	*Dak, kan matahari besak*	P(1)	No, the sun is big, isn't it
T	*Ha, dia ikut dak. Betui dak dia ikut ni...*	T	Ha, does it or doesn't follow. Does it really follow..
P(CH)	*Dak*	P(CH)	No
P(2)	*Aku dak ternampak dia duk di atas*	P(2)	I keep seeing it above
T	*Macam mana ni Masharah?*	T	How is this, Masharah?
P(Mh)	*Cik nampak jah dia ikut tu*	P(Mh)	I just see that it follows
T	*Padahal dia ikut dak?*	T	Whereas, does it follow?
P(1)	*Dak*	P(1)	No
P(Mh)	*Dia tak boleh ikut*	P(Mh)	It cannot follow
P(3)	*Kita nampak aja*	P(3)	We just see (as if it does)
P(4)	*Dia besak*	P(4)	It's big
T	*Dia tak boleh ikut. Kadang-kadang cikgu pun nampak macam dia ikut jugak*	T	It cannot follow. Sometimes even I see as if it is following too
P(1)	*Pasai dia atas nampak kecik, bawah nampak besak?*	P(1)	Because it is above it looks small, from below it looks big
T	*Macam mana ni, ataih nampak kecik, bawah nampak besak?*	T	How is this, above it looks small, below it looks big?
P(CH)	*Ha, ha* (laugh)	P(CH)	Ha, ha (laugh)
P(2)	*Atai nampak kecik la, dah bawah*	P(2)	Above it looks small la, because (we're) below
T	*Sebenar nya matahari tu dia tak ikut kita, tapa dia sentiasa...*	T	Actually the sun does not follow us, but it is constantly...
P(1)	*Berputak*	P(1)	Revolving
T	*Dia sentiasa apa?*	T	It constantly what?
P(1+2)	*Berputar*	P(1+2)	Revolves
T	*Dia sentiasa...*	T	It constantly...
P(1+2)	*Berputar*	P(1+2)	Revolves
T	*Sapa tau? Tadi kita kata... ha...dia tak ikut kita, apa yang bergerak mengelilingi dia?*	T	Who knows? Just now we said...ha...it does not follow us, what is it that moves around it?

P(1)	Bumi		P(1)	The earth
T	Bumi yang bergerak...		T	The earth moves...
P(1)	Mengelilingi		P(1)	Around
T	mengelilingi...		T	around...
P(1)	Matahari		P(1)	The sun
P(Ar)	Kita duk bumi nampak matahari ikut		P(Ar)	We live on earth and we see as if the sun follows us
T	matahari		T	...the sun

Another episode was initiated by the questions Azhar raised about where the sun went after dark and where the moon came from. Again, Teacher T encouraged pupils to draw on their own personal experiences to explain the occurrence. Again, Teacher T did not make evaluative judgments of pupils' responses.

T	Azhar, Azhar apa nak tanya?		T	Azhar, Azhar, what do you want to ask?
P(Ar)	Siang ada matahar, sebab apa malam naik bulan, matahari tu pi mana?		P(Ar)	In the day there is the sun, why is it that at night the moon rises, where does the sun go to?
T	Ha, bagus tu. Azhar tanya siang ada matahari Azhar kata. Betul dak sekarang ada matahari?		T	Ha, that's good. Azhar asked that during the day there is the sun. Is it true that there is sun now?
P(CH)	Betul		P(CH)	Yes
T	Betul. Kemudian...malam nya Azhar tanya pasai apa bulan, matahari pergi kemana? Semua orang tau dak tu? Tu bagui tu soalan tu		T	Yes. And then...at night Azhar asked why the moon, where does the sun go to? Do all of you know that? That is a good question.
P(CH)	Dak, dak		P(CH)	No, no
P(2)	Tak tau		P(2)	I don't know
P(3)	Tak tau		P(3)	I don't know
P(4)	Matahari jadi bulan		P(4)	The sun becomes the moon
T	Pi...mana agaknya matahari ni?		T	It goes...where does the sun go to?
P(1)	Matahari lindong bukit		P(1)	The sun is hidden by hills
P(2)	Lindong bukit		P(2)	The hills hide (it)
T	Ada orang kata dia lindong bukit. Masharah kata macam mana?		T	Some people say it is hidden by the hills. What do you say, Masharah?
P(Mh)	Dia lindong bukit		P(Mh)	It is hidden by the hills
T	Masharah kata dia lindong bukit. Zakiah pulak?		T	Masharah says it is hidden by the hills. What about Zakiah
P(1)	Dia mati		P(1)	It dies
P(2)	Tak tau a		P(2)	I don't know

PA(Z)	Bumi berpusing		PA(Z)	The earth revolves
T	Zakiah kata...fasal bumi ni berpusing. Yang tu salah satunya betul jugak. Malam ni ada dak matahari?		T	Zakiah says...because the earth revolves. One of those two is right. Tonight will there be a sun?
P(CH)	Tak dak		P(CH)	No
T	Tak da matahari. Zakiah kata jadinya malam sebab bumi ni ber...beredar. Tapi Azhar kata sebab apa ni timbulnya bulan diwaktu malam?		T	No sun. Zakiah says that is because the earth revolves. But Azhar asks why is it that the moon rises at night?
P(1)	Ha, ha		P(1)	Ha, ha
T	Sebab apa? Ha, Masharah		T	Why? Ha, Masharah
P(Mh)	Tak tau		P(Mh)	I don't know
T	Masharah kata dia tak tau. Tapi agak agak dia tau la		T	Masharah says she does not know. But I think she does know la
P(1)	Saya tak tau		P(1)	I don't know
P(2)	Saya tak tau		P(2)	I don't know
P(3)	Saya tak tau		P(3)	I don't know
T	Duduk masing-masing di kerusi. Bila malam pulak ada bulan. Ada kah tiap-tiap malam nampak bulan?		T	All of you sit on your chair. At night there is the moon. Do we see the moon every night?
P(CH)	Tidak		P(CH)	No
P(2)	Bulan...bulan gelap		P(2)	The moon...the moon is dark
T	Bila yang ni nampak bulan ni?		T	When do we see the moon?
P(CH)	Malam		P(CH)	At night
T	Semalam ada bulan dak semalam?		T	Was there a moon last night?
P(CH)	Dak		P(CH)	No
P(2)	Gelap		P(2)	It was dark
P(3)	Hujan		P(3)	It rained
P(4)	Pasai hujan		P(4)	Because of the rain
T	Semalam...kadang-kadang ada hari tak ujan pun ada dak nampak bulan selalu?		T	Last night...sometimes there are days when it does not rain do we see the moon then?
P(1)	Nampak		P(1)	I see
P(2)	Ada		P(2)	It's there
P(Mh)	Tekoh-tekoh tak dak, tekoh-tekoh ada		P(Mh)	Sometimes it's not there, sometimes it is there
P(Ar)	Tekoh-tekoh ada bintang		P(Ar)	Sometimes there are stars
T	Kadang-kadang, bintang takkan tekoh-tekoh, takkan kadang-kadang		T	Sometimes, the stars are not, sometimes they can't be
P(Ar)	Dak, bintang tiap-tiap hari		P(Ar)	No, the stars are every day
P(2)	Bintang tiap-tiap hari		P(2)	The stars are every day
T	Bintang ada tiap-tiap malam Tapi bulan ni Azhar tengok waktu malam macam mana a nampak bulan?		T	The stars are there every night. But the moon, Azhar sees it at night, how do you see the moon?
P(1)	Waktu malam dan siang		P(1)	At night and during the day

T	Waktu mana?		T	When?
P(Ar)	Malam		P(Ar)	At night
P(2)	Malam		P(2)	At night
T	Waktu malam la...selalu nya ada bulan dak waktu malam ni?		T	At night la...do you always see the moon at night?
P(1)	Dak		P(1)	No
T	Selalu hari malam ni?		T	Always at night?
P(1)	Ada		P(1)	Yes
P(Ar)	Tekoh-tekoh di lindong pokok hujan		P(Ar)	Sometimes it is hidden by the rain tree
T	Ha Azhar kata kadang-kadang di lindong pokok hujan. Dia ada		T	Ha, Azhar says sometimes it is hidden by the rain tree. It is there
P(1)	Pokok hujan		P(1)	Rain tree
T	Sapa tengok masa pokok hujan pun tak dak?		T	Who sees (the moon) even when the rain tree was not there?
P(1)	Pokok hujan ada		P(1)	The rain tree is there
T	Ha, satu...malam pokok hujan...pun tak dak...		T	Ha, one...night the rain tree...is not there...
P(1)	Hujan pun tak mai		P(1)	The rain does not come
T	Hujan pun tak mai...hujan tak dak la hari tun, cuaca elok, tapi mala tu, tak dak bulan?		T	The rain does not come... the rain does not come la that day, the day is fine, but that night, was there moon?
P(CH)	Ada		P(CH)	Yes
P(2)	Bulan cerah		P(2)	The moon was bright
T	Malam bulan cerah. Azizan kata bulan cerah...masa bulan cerah. Masa dia gelap ada dak bulan?		T	A moonlight night. Azizan says the moon was bright, when the moon is bright. When it's dark is moon there?
P(CH)	Tak dak		P(CH)	No
P(2)	Ada		P(2)	Yes
T	Masa dia gelap ada dak bulan waktu malam?		T	When it's dark, is there a moon at night?
P(CH)	Ada		P(CH)	Yes
P(2)	Tak		P(2)	No
P(Ar)	Masa gelap sat ni		P(Ar)	When it gets dark
T	Sapa besa turun tanah waktu gelap?		T	Who has ever come down to the ground when it is dark?
P(1)	He-e-e, takut		P(1)	He-e-e, (I'm afraid)
T	Masa tu gelap. Kamu tengok di langit ada dak bulan?		T	When it was dark. You look at the sky, was there a moon?
P(CH)	Tak dak		P(CH)	No
P(2)	Ada		P(2)	Yes
T	Siapa tengok waktu gelap tu ada bulan?		T	Who sees the dark nights and sees that there is a moon?
P(1)	Saya		P(1)	I
P(2)	Saya tak besa tenggok		P(2)	I never saw it
P(3)	Dia u tengok tu		P(3)	You saw it, eh? (You're kidding)

T	Malam ni...ada...ada kadang-kadang malam bulan...malam bulan terang. Ada kadang-kadang gelap. Ni gelap. Ada dak bulan?	T	Tonight...there...there is sometimes when there is the moon at night...moonlight nights. Sometimes it is dark. It is dark right now. Is there a moon?
P(CH)	Tak dak	P(CH)	No
P(2)	Saya tidok tak dak	P(2)	Even when I sleep it is not there
P(3)	Tak dak bulan	P(3)	There is no moon
T	Baik semua tengok dak?	T	Well do you all see it?
P(CH)	Tengok	P(CH)	(we) see
P(2)	Tengok apa dia?	P(2)	See what?
T	Ha, ni Zainuddin. Zainuddin bagi tau apa dekat Roslan? Masa malam gelap ada bulan dak?	T	Ha, Zainuddin. Zainuddin, what did you tell Roslan? When the night is dark, is there a moon?
PA	Ada	PA	Yes
T	Zainuddin kata ada. Tengok dak?	T	Zainuddin says there is a moon. Do you see it?
PA	Tengok	PA	(I) saw
P(2)	Tengok cikgu	P(2)	I saw, teacher
T	Ini yang Azhar tanya ni	T	What about what Azhar asked
P(1)	Tinggal sekerat ja bulan	P(1)	There is only a half of a moon left
T	Masa malam ada bulan Azhar kata. Cuba kamu balek pi tanya mak kamu pulak pasai apa waktu malam ada...	T	When it is night Azhar says there is the moon. When you go home go and ask your mother why is it that at nights there is...
P(CH)	Bulan	P(CH)	The moon
T	...bulan	T	...the moon

These three episodes could be judged effective communication in the sense that all participants could contribute equally and understand the interaction. Pupils volunteered much information, and in the process of doing so were able to bring into the classroom proceedings some of the experiences they had outside of the class-rooms. Teachers did not directly reject pupils' utterances, so that it seemed as if pupils were not inhibited by social forms and rules of politeness from participation in the interactions.

The episodes were longer than most other episodes between teacher and pupils in classroom lessons, which were rigid in structure and in which the teacher controlled and directed the objective, evaluation, initiation and closure of the episode.

F.   Situational Factors Affecting Selection of Strategies

The above analysis of the data suggested three basic differences between classroom and outside classroom situations. These were:

1. Objectives of interactions

2. Time factors affecting interactions

3. Assumptions underlying interactions.

Each of the above factors determine the selection of strategies of communication in the different social situations.

1. Objectives of Interactions

Interactions in classrooms were conducted with specific objectives so that pupils could acquire some content and develop certain skills. These objectives were set by the national curriculum and monitored by nationally conducted examinations held at the ends of grades five, nine, eleven, and thirteen. Classroom objectives could be divided into two major categories: short-term objectives, such as development of reading, drawing, etc., which form chains for long-term objectives, such as employment as adults in society. Pupils were to be prepared for future livelihood through education. Parents and teachers viewed going to school as a long-term investment

of time, the profits and gains of which would be tangible many years in the future. These objectives were imposed on the classrooms by society, the curriculum, and the teachers.

The situation was different outside the classroom. In the home and among peers, objectives of interactions were decided by participants. Most of these objectives were short term and directly relevant to all participants and could be resolved within the time of the interactions.

2. Time Factors Affecting Interaction

Interactions in the classroom proceeded under limitation of time. The school day was five to five and one-half hours long, from 1:00 through 6:00 or 6:30 p.m. daily. Thirty minutes were alloted for recess, during which time pupils were on the playground. During the time allotment of four and one-half to five hours in the classroom each day, each class faced six to eight different subjects, each lesson lasting thirty or sixty minutes.

The limitation of time was compounded by the structure of the classroom. Each class had at least forty pupils. There was limited time to cover content and related activities, and this was made more difficult because of the large number of pupils each teacher had to deal with. As a result, the teacher had to select from among possible alternatives of communication the strategies that appeared to be quickest and most efficient for achieving these objectives.

This was not the case with interactions outside the classrooms. Interactions in the homes and with peers were conducted without conscious or urgent time limitations. Interactions were within small groups, often there was a one-to-one relationship. Under such circumstances, the participants were not limited to strategies of communication geared toward brevity of time and utterances but were able to select the strategies that would be most effective.

3. Assumptions Underlying Interactions

Most interactions proceeded with several assumptions about the social relationships between participants and the amount of information each participant brought to the interactions. These assumptions affected and determined the objectives of interaction and the selection of strategies for communication.

Social closeness or distance between participants was an important factor underlying the selection of strategies. When the participants were socially close, they would work toward maximum effectiveness and satisfactory closure of the interaction. Distance between participants could impede communication, because participants would not consider social closeness at stake and therefore would feel no need to work jointly towards resolution of the interactions.

The amount of information a participant brought to an interaction could also affect the selection of strategies. If a participant was assumed to have more information than other participants, he or she would be able to evaluate and accept or reject responses to questions or directives. If all participants had about the same amount of information, all would then be sharing information rather

than either giving or requesting it.

Classroom interactions were basically a process of communication between distant participants, and since the teachers had more information than the pupils, they assumed the role of evaluator of responses, giving or"testing" for information. There was a definite hierarchy between the participants, the teacher was on a much higher plane than the pupils. The composition of the classroom, i.e., a single teacher with forty or more pupils, made it difficult for a teacher to develop the same degree of closeness with all pupils. It was more efficient to maintain a certain social distance for purposes of discipline.

The assumptions were different in other social situations. At home there was a physical and social closeness between all participants, although there was a hierarchy based on age and amount of knowledge brought into the interaction. The pupils were younger and so were lower in social hierarchy, but this was balanced by the fact that they were members of the same family. Each interaction could be regarded as a means to foster and preserve closeness between all participants.

Interactions among peers were based on assumptions of equality of social status and amount of information brought to the interactions. All interactions then were directed towards maximum effectiveness and satisfactory closure of the interactions.

The three factors affecting the contexts of interactions discussed above meant that communicative contexts inside and outside the classrooms differ. During the first seven years, a pupil would have acquired a set of strategies to communicate in the home and

among peers. Classroom interactions were different enough in objectives, time allotment, and assumptions that the child would have to develop an alternative set of strategies to help him function effectively in the new situation. A comparison of interactions inside and outside the classroom would identify the strategies the pupil would have to develop for classroom situations and predict points of conflict created by the new set of strategies in and out of classroom situations.

4. Synthesis

During the preliminary analysis stage it seemed appropriate to compare the selection of communication strategies between groups of teachers and pupils, and to consider the sex variable. Further analysis indicated that the problems of communication identified were not particular to any groups, but cut across the board and applied similarly to all groups. Broad generalizations of the findings, however, could be done only with caution, as the pupil-subjects were not really representative of the total population. Only more verbal children were considered as possible subjects. Thus a group of seemingly reticent children were eliminated from consideration. This group of children may have different and additional sets of communication problems and patterns of interactions that were not represented in the data collected.

The analysis based on Gumperz's approach of conversational framework provided an adequte description of the communication problems faced by teachers and pupils during classroom interactions. The data, however, revealed three paradoxes.

First, although there were many instances of ineffective communication in classrooms, there were also many instances of effective communication. Thus, teachers were able to communicate with pupils some of the time, and pupils could communicate with teachers some of the time, too, but at other times there was ineffective communication, when one or both of the could not fully comprehend the other. Thus, within the same situation, i.e., the same participants, the same objectives, and possibly similar topics of instruction, both effective and ineffective communication occurred. Given that the overt utterances seemed similar and yet either effective or ineffective, then a possible explanation of the difference might be contained in the cognitive manipulations, which determined the responses made during a communication event. An analysis of the factors that would explain this variation would require a more detailed analysis of each episode, i.e., a moment-to-moment account of what went into each utterance. The task analysis proposed by Pascual-Leone is most relevant to this process.

Second, ineffective communication in the classroom was attributed to the different strategies for communication that were used in the classroom. The teachers and pupils all had access to similar strategies for communication when outside the classroom, but when they were in the classroom environment, they used another set. The teachers were more familiar with the alternative strategies, but pupils had to acquire and develop these other strategies. Much of the ineffective communication in the classrooms was caused by pupils' failure to acquire the new strategies. However, the supplementary data showed

that this was not really the case. Given a similar situation, i.e., when a participant had more information and was assuming the role of a teacher, even pupils aged eight years old at second grade level could use teacher strategies. Thus, on the one hand the thesis was that pupils had to acquire another set of strategies, but on the other hand, these same children did know the strategies but apparently also knew that they could not use them in certain situations, i.e., the classrooms, but only among friends, and even then under particular conditions. What caused or motivated the children to make the decision when to use or not to use these strategies? Certainly situational factors and other elements would combine to direct the children's choices.

Third, just as pupils could use teacher strategies when they played the teacher role, so did the teachers know and could use alternative strategies when they were with peers, as evidenced in several problem-solving episodes. Thus a similar question could be asked: what caused or motivated the teacher to make the decision when to use or not to use these strategies? Again, it would be necessary to analyze some episode in great detail to account for these various decisions on adoption of particular strategies . How do children and teachers develop the sensitivity to make such decisions? What are the situational, cognitive, or other cues that directed the decisions? Here, the task analysis developed by Pascual-Leone would be helpful in analyzing episodes to attempt some explanation of the event.

Thus, as has been indicated earlier, Gumperz's scheme for analysis described, and identified the problem areas. To get at the causes of the phenomena, and possibly speculate on more detailed development of the behavior, further analysis of the same set of data on the model developed by Pascual-Leone would provide more information and insight into the psychological basis of the interaction. This will be done in the next chapter.

CHAPTER IV   RESULTS II: A PSYCHOLOGICAL APPROACH

Instances of effective and ineffective communication inside and outside classroom interactions indicated that participants in interactions were sensitive to the role assigned to each person: equal participant, teacher-pupil, or child-mother, which was determined by objectives, assumptions of social status and amount of information, and time constraints. Each participant would play their role accordingly, selecting the strategies judged suitable to achieve the objective of the particular interaction.

There were more instances of ineffective communication during classroom interactions than there were in those outside classrooms. This could be caused by the different strategies used by teachers during classroom lessons. When ineffective communication in class-rooms was due to pupils' lack of information on the topic at hand, the situation was remedied by either the teacher's giving the necessary information, or the necessary information was elicited from or given by another pupil. Ineffective communication that was caused by the use of different strategies for communication resulted in some inappropriate interpretation of the intent of the speaker or responder.

As had been discussed in Chapter III, there are three paradoxes in daily teacher-pupil interactions. First, within the same situation involving the same participants, some interactions were effective and others ineffective. An important question here is: what factors determined the outcome of an interaction, whether effective or ineffec-tive? Second, although pupils seemed to have difficulty comprehending

some of the teacher's strategies in the classroom, they were able to adopt these same strategies when they assumed the role of teacher in the Nested Boxes task. Third, the teachers also had more appropriate strategies in their repertoire, but failed to use them in classroom interactions. What factors determined the selection and rejection of strategies considered suitable for a particular social situation and social role?

An analysis of two ineffective episodes based on Pascual-Leone's framework, and speculations on how some factors could be changed to allow for more effective communication in classrooms is presented in this chapter. Each episode unfolded through several steps or exchanges. Thus, an episode was composed of several tasks within tasks, as each exchange was considered a separate task, an input to the following tasks, and a component of the overall task of attaining the goal of the episode. This analysis is considered very sketchy, and is presented here for illustrative purposes, mainly. A more complete analysis based on this framework would require further information and data to identify the schemes involved and to explain how these schemes and scheme boosters are constructed from experience and activated in the immediate situation. Such a detailed analysis would require independed assessment of the repertoire, coordinating capacity, and so on, and is considered beyond the scope of this study.

An analysis of an episode was essentially done in two stages: (a) analysis of the pupil's initial response, and (b) an analysis of the teacher's responses to pupil's inappropriate responses. It was found that the factors leading to the pupil's initial response was

one kind of problem, and the teacher's subsequent response to it another set of problems, involving different kinds of schemes and scheme-boosters.

Analysis of Selected Episodes

Episode 1:   Reciting the Mantis Jingle

This episode was part of a review lesson in elementary science; the teacher required pupils to list names and characteristics of insects.   In this particular episode, the class was looking at a picture of a mantis.   The insect has two names, formal-mentadak, dialect-tenun.   Pupils had given the formal name, and Teacher T had emphasized that the form tenun was used when the pupils were outside the classroom.

A mantis is a common plaything to rural children.   Groups of children would tease each other with it.   Movements of a mantis were taken to indicate positions and movements of a particular child when he sleeps.   A "good" child was supposed to sleep quietly and calmly on his side; specific superstitions prevent him from sleeping on his back or his stomach or in any other positions.

The game consists of children teasing each other on the position and movements during their sleep.   When a mantis was caught, the children would take turns holding its long body by two fingers, thumb and forefinger.   At this time, the child holding the mantis would recite a jingle "Tenun oh tenun, macam mana....(name of peer to be teased) tidok?"   (Mantis oh mantis, how does....(name of peer to be

teased) sleep?). At this point the mantis would move (possibly because the child would loosen his hold on the mantis' body). The resulting position of the mantis would then be the way the peer sleeps nightly. The more awkward the mantis' movements and positions, the more fun the game was to children.

In this episode it was hypothesized that ineffective communication was caused by differences in Bahasa Malaysia and Kedah dialect forms. The relevant information is presented below.

Kedah Dialect	Bahasa Malaysia		Notes
Tenun	Mentadak	(Mantis)	
macam lagu	bagai	(how)	Forms could be interchanged
kamu	awak	(you)	"kamu" when used in a formal context, or used to an acquaintance or stranger, is considered an impolite form; "awak" is preferred. The reverse meaning would be interpreted if words were used between close, familiar participants.
tidok	tidor	(sleep)	Similar word used for both formal and dialect contexts, change occurs on last syllable. "r" changed to "k"

(81) TlF/Sc.1/20   (Reciting the Mantis Jingle)

Exchange 1:

T	Kamu tangkap tenun nanti kamu kata...kamu pegang dia, apa yang kamu selalu kamu buat dia?	T	After you've caught the mantis, you would say... you would hold it, what do you normally do to it?
PA(ZA)	(whispers) Dia tunjuk orang tidok	PA(ZA)	(whispers) It shows us how people sleep

Exchange 2:

T	Kuat-kuat sikit, kuat kuat. Apa kamu cakap? kuat kuat sikit	T	A little louder, louder, louder. What would you say?
PA(ZA)	(whispers) Tenun, tenun, macam mana orang...	PA(ZA)	(whispers) Mantis, mantis, how do people...

Exchange 3:

T	Kuat lagi. Shafaruddin dengak dak belakang?	T	Louder still. Shafaruddin can you hear from back there?
P(CH1)	Saya dengar	P(CH1)	I can hear
P(CH2)	Tak dengar	P(CH2)	Can't hear
T	Sapa pun tak dengak. Bangun lain. Cakap kuat sangat sorang-sorang	T	Nobody heard you. Stand again. You are all talking too loudly
PA(ZA)	(whispers) Tenun, tenun, macam mana orang tidok?	PA(ZA)	(whispers) Mantis, mantis, how do people sleep?

Exchange 4:

P(1)	Tak dengar	P(1)	Can't hear
P(2)	Saya dengar	P(2)	I heard
P(3)	Saya tak dengar	P(3)	I can't hear
T	Kuat lagi	T	Louder still
P(4)	Saya dengar	P(4)	I heard
P(5)	Saya tak dengar	P(5)	I can't hear
T	Bangun sekali lagi, sekali aja lagi	T	Stand again, just once more
P(F)	Sekali sa ja	P(F)	Once again only
PA(ZA)	Tenun oh tenun, macam mana awak tidok?	PA(ZA)	Mantis oh mantis, how do you sleep?

Exchange 5:

T	Ha, semua orano denoak dak?	T	Ha, did all of you hear that?
P(CH)	Dengak	P(CH)	(we) Heard
T	Dia kata apa?	T	What did he say?
P(CH)	Tenun oh tenun, bagai/lagu mana awak tidok?	P(CH)	Mantis oh mantis, how do you sleep?
T	Ha, selalu nya	T	Ha, often times (you'd say that)

Participants

T   -   Teacher T, female
PA(ZA)   -   Pupil called upon to answer, pupil-subject Zakaria
P(CH1), P(CH2)   -   Groups of pupils giving choral responses
P(1)-P(5), P(F)   -   Individual pupils who called out randomly

The objective of this episode was for the subject P(A) to repeat a jingle normally recited during a game played outside the classroom. The jingle is as follows:

Kedah Dialect: Tenun oh tenun, macam mana...(name of peer)/kamu tidok?

Bahasa Malaysia: Mentadak oh mentadak, bagai mana.../awak tidor?

English Equivalent: Mantis oh mantis, how does.../you sleep?

In exchange 1 of this episode, the subject P(A) had several inputs, mainly the directive by the teacher to repeat the jingle and contextual cues accompanying the exchange. These contextual cues were the social relation between the teacher and the pupil, that the pupil was on a lower hierarchy than the teacher, the physical situation of the classroom in that it was a formal situation, and classroom disciplinarian and procedural requirement were such that a pupil should make appropriate response to a teacher's question at all times.

When the above inputs were processed by the subject, it is reasonable to speculate that several schemes were activated. Among them are: the teacher's request that the subject repeat a jingle normally recited during an informal situation, that the informal language - Kedah dialect - is not normally used during classroom interactions, that during such a game the mantis would be held in a certain way and then it would make such and such movements. The schemes on language are in conflict, the subject could recite the jingle in

Kedah dialect but Kedah dialect is nor normally used in classrooms.
The executive scheme governing the task required that the pupil
should comply with the teacher's request in a way which would be
acceptable and approved.

When the schemes are activated, then the decision as to
which scheme was applied to the task was determined by the strength
of each scheme with various boosters acting upon it. In this
situation, it is speculated that several scheme boosters would be
in play: the learning booster would strengthen the language
conflict, and strengthen the conflict between the two language forms;
an affective scheme would strengthen the executive scheme that the
pupil should make an appropriate response. But an appropriate
response in the pupil's experience would be against the norms
acceptable in the classroom. In this particular task, it seemed that
the subject considered all three schemes were activated, the execu-
tive scheme was strengthened to such a point that the subject made
a response which could be relevant and appropriate, and yet not
violate the rules of language appropriateness, and so he chose the
third scheme, and that was to respond about the movements of the
mantis. This scheme seemed to be the most neutral, and yet quite
relevant to the objective of the task.

Further exchanges in this episode were basically on the
decisions the subject had to make to resolve the language conflict.
An important fact here is that the jingle was normally never recited
in the formal language, but in order to comply with the teacher's
request, the subject gradually developed a new scheme which was a

translation of the dialect form of the jingle into the formal form. This was considered to be an innovation, a novel construction on the part of the pupil, and it was perhaps made possible by. the M space which the subject had available to him. Thus, the resolution to the conflict was the translation of the Kedah dialect in the the formal Bahasa Malaysia.

An analysis of this episode from the teacher's point of view also indicates some points of conflict between the teacher's objective and the pupil's responses. The teacher's objective was to elicit the jingle from the pupil. She knew that all pupils could recite the jingle, and so could make the appropriate responses. However, the form that the directive was given in did not seem to be successful. The teacher's executive scheme was to elicit the jingle from the pupils, and when the pupil seemed to have problems in doing so, she repeated the request, and insisted that the subject should speak louder for all other pupils to hear. At each step of the episode, the teacher seemed to have activated the scheme that the pupil would be able to make the appropriate responses if he was to be asked again and again to repeat it. Thus, the teacher was focusing on the volume of the response, while the subject was focusing on the content and language of the response.

To recapitulate, the classroom procedures stated that Kedah dialect was used outside the classroom, during informal interactions, i.e., in the home and among peers; Bahasa Malaysia was used during classroom interactions. When the analysis was done from the subject's point of view, it could be seen that the subject faced a conflicting

situation: the teacher wanted him to repeat a jingle, but the jingle could only be repeated in its dialect form, and dialect forms cannot be used in classrooms. The subject then went through various steps to accommodate both situations, and gradually changed the dialect form of the jingle into the formal form. The subject interpreted the teacher's request as a requirement that the jingle be modified towards the formal form.

From the teacher's point of view, she was unable to elicit the response which she knew the subject was capable of making. In this episode, the teacher attempted to get the pupil to bring into the classroom some of his experiences from outside the classroom. However, the teacher seemed to forget an important point, that her request posed a conflict to the pupil because of the different language forms. Although the pupil could make the response from the point of view of the content and substance, he was faced with a conflict about the language form. The teacher might indeed have required the pupil to repeat the jingle in the dialect form, but failed to inform the pupil of that specific request. If the teacher had informed the pupil that he could repeat the jingle in its dialect form, then the pupil would not have had to go through the problem as he did.

In this particular task, the pupil took it upon himself to make the necessary changes to conform to what he thought was required by the teacher, but it was a difficult task; he had to construct a new scheme, it took him four steps before he could repeat it loudly enough for the class. The last exchange in this episode showed that the

language conflict was not only a problem for the particular pupil,
as the rest of the pupils were also adopting the formal form during
the last response.

Episode 2: Why is it that Chickens Cannot Swim?

This was part of a review lesson on names and characteristics
of animals, insects, and birds. Teacher K had elicited the following
information:

    a.   Some birds have webs on their feet.

    b.   These webs allow birds to swim in water.

    c.   Ducks have webbed feet and could swim in water.

At this point of the lesson, Teacher K asked further questions
to test pupils' comprehension of c. above.

Question: Why can ducks swim?

A pupil made the response that it was "Because ducks have wings."
Teacher K attempted to draw the distinction between chickens which
also have wings but cannot swim and ducks which can by asking:
Why can't chickens swim?"

(82) T2M/Sc.1/14 (Why is it that chickens cannot swim?)

Exchange 1:

T	Apa sebab ayam tak boleh bernang?	T	Why is it that chickens cannot swim?
P(Z)	Pasai dia tak mau kena ayak.	P(Z)	Cause it doesn't want to touch water

Exchange 2:

T	Bukan sebab tu... sebab apa?	T	Not because of that... why?
P(Z)	Dia takut kena ayak	P(Z)	It is afraid to touch water
P(M)	Dia mati	P(M)	It dies

Exchange 3:

T	Sapa boleh jawab? Apa sebab ayak tak boleh bernang? Itek boleh bernang	T	Who can answer? Why is it that chickens cannot swim? Ducks can swim
P(M)	Dia takut tenggelam	P(M)	It is afraid of going under
P(Z)	Sejuk, sejuk	P(Z)	Cold, cold

Exchange 4:

T	Bukan pasai takut sejuk. Ha.	T	Not 'cause of being afraid of cold. Ha
P(Z)	Takut tenggelam	P(Z)	Afraid of going under water
P(CH)	(laughs)	P(CH)	(laughs)

Exchange 5:

T	Sapa boleh jawab? Apa sebab ayam tidak boleh bernang? Itek boleh bernang	T	Who can answer? Why is it that chickens cannot swim? Ducks can swim
P(Z/M)	Lemas	P(Z/M)	Drowning
P(CH)	Lemas	P(CH)	Drowning

Participants

Teacher K - (male), teaches 2K)
Pupils - Zamri (a pupil-subject in sample)
   Mahazir (M, not in sample, sits near Zamri in classroom)
   (CH) all pupils in chorus

The teacher's objective in this interaction was to elicit
the following response from the pupils:

Chickens cannot swim because they do not have webbed feet.

The pupils were required to relate two known facts:

a. that chickens cannot swim because they do not have
webbed feet; and

b. that ducks can swim because they do have webbed feet.

For this task, two pupils (Z) and (M) made responses to the teacher's
question. Each subject adapted his responses to the teacher's and
each other's responses, but all responses were inappropriate to
the question, from the teacher's point of view.

At each exchange of this episode, the inputs to the pupils
were the teacher's question, and later repetitions of his question,
and the social and physical set-up of the classroom. As in episode
1, the pupils would possibly have activated some of the following
schemes: that the teacher requested a response, that chickens do
not like water, that chickens cannot swim and so would drown if they
try. These schemes were boosted by learning which they acquired
during their experiences outside of the classroom, and by affect
which boosted the scheme that pupils should always make a response
which is appropriate to the teacher's question or request. At a
later exchange, there is another scheme booster which could have
strengthened the pupils' comprehension of the teacher's repetition of
the question as an indicator that their responses should be modified
either in content or language, or in volume (loudness). The scheme
that chickens are afraid of the water and so would drown in water was

strengthened by their learning from outside the classroom which indeed gave evidences that chickens were afraid of water, and so the alternative scheme that the teacher's request for repetition was indeed an indication that the content of the response was erroneous was weakened by the other learning constructs about chickens. As a result, the pupils persisted in making similar errors of substance.

From the point of view of the teacher, he made a request for information which he knew the pupils would be able to give. First, the relevant information was given just before this episode, second the pupils' experiences with chickens and ducks would have given them the relevant information required. When the pupils continued to make similar errors of substance, the teacher repeated the question. It was as if the teacher had the scheme that if a question was repeated, then pupils would be able to comprehend it better in order to give a more appropriate response.

Throughout this episode, both pupils were faced with a conflicting situation: the classroom discussion on chickens' and ducks' feet being webbed or not, and outside classroom experiences that chickens were afraid of getting near water. During the preceeding episode, the teacher had established the fact that ducks have webbed feet and so could swim. At no time did he establish the fact that chickens do not have webbed feet. However, from pupils' experiences outside of the classroom they knew that chickens cannot swim, and that chickens do not have webbed feet, and that chickens do not like water. During this episode they were required to make the connection that chickens do not have webbed feet and so cannot swim.

Both subjects knew that their information about the chickens'
inability to swim was correct, and so the scheme that any errors
that they had to correct were linguistic, was strengthened. Thus,
they made linguistic corrections, ranging from changing dialect to
formal form, to alternative words. Both pupils had no cues from the
teacher to indicate that in fact they were applying a wrong scheme.
Thus, with no other definite and precise cues, both pupils continued
to follow the inappropriate scheme. Both subjects made responses
based on these miscues so their responses were always incorrect.

The analysis of this episode indicated that the subjects
were single-minded in their concentration on the chickens and their
relation to water, drowning, and going under water. The teacher should
have recognized the fact that both subjects were using their outside
classroom experiences and given some clues to the fact that they
should look at the physical characteristics of the chickens rather than
their "emotional" relation to water. At all steps, the teacher merely
repeated the question, without making any changes in its form. Thus,
the pupils knew that they were making errors but they did not know
what kind of errors, informational or linguistic. Pupils were resort-
ing to outside classroom experiences, and they knew that the informa-
tion they had on chickens was correct, so they kept on making
linguistic changes. The teacher did not give them any clues to
indicate that their information about the chickens and ducks should
be related to bring them to the expected response. The teacher
should have let the pupils know the kinds of errors they were making,
that is, let them know the basis for the teacher's judgments, whether

language or informational, so that they could make the appropriate correction.

Here again, the ultimate question is how the teacher could change the ways he diagnoses pupils' errors, so that he could modify his questions in a way which would be helpful to pupils.

Both episodes above were judged ineffective communication between teachers and pupils. In the main, the pupils knew the responses in both tasks, but due to conflicting situations, i.e., dialect vs. formal form, and teacher's intent (information) vs. pupils' interpretation (language), they did not make the appropriate responses.

In both situations, the teacher could see that the subjects knew the responses, but could not make the correct responses. In both situations the teacher repeated the question or requested that the response be repeated. In both cases, too, the subjects misunderstood the requests and questions and made more incorrect responses.

The teacher seemed to conclude that the pupils actually knew or were capable of generating the correct responses, as they persisted in trying to get the pupils to produce them without telling the correct answer. They also indicated their conclusion that the pupils' inability to make the correct responses was the subjects' fault and they indicated their disapproval in the way that they repeated the questions and requested repetition. In actual fact, the pupils simply did not clearly understand the tasks that they were to perform.

This sketchy analysis of the two episodes pointed out the problems involved in ineffective interactions. The pupils were not able to make the appropriate responses, not because they did not know the content, but because inappropriate schemes (from the teacher's point of view) were activated more strongly than appropriate ones. Thus, in the Mantis jingle, the pupil knew the jingle, but was not sure what language form to use. In the second episode, "Why is it that chickens cannot swim?", the pupils knew the response but they went off on a tangent because they were responding to a different cue about the teacher's intent when he repeated the question.

Second, the pupils would have been able to make the appropriate responses if they had asked for clarification from the teacher. In both episodes, the problem the pupils faced was caused by their trying to guess at what it was the teacher's question meant. Instances of communication in homes and with peers indicate that pupil-subjects do have the schemes to seek clarification from other participants during an interaction and pose questions outside of classrooms. But it was as if the inside and outside classroom situations were kept separate and schemes from another situation, which could be helpful, were not allowed to be activated during particular interactions. Thus, pupils did not activate schemes specific to asking for clarification during classroom interactions, nor did teachers activate schemes to give clarification during most classroom interactions.

It would seem that this ineffectiveness could have been avoided if the teachers and pupils could develop the following schemes:

First, the teacher should develop an alternative scheme to diagnose pupils' problems in responding to questions. If the teacher knew that pupils knew the responses, but could not make them, then she should be able to diagnose the problem, whether it is inadequate comprehension of the question, a conflict about the appropriate language to use, or possibly a misunderstanding of the teacher's intent. So a question to be taken up is how to make teacher's better diagnosticians. When this problem could be diagnosed properly, then the teacher could modify questions or requests so that the expected response cold be elicited.

One of the first steps to resolve ineffective communication caused by inactivation of relevant schemes would be to assure both teachers and pupils that they could bring some strategies from outside the classroom into classroom interactions, provided that these strategies would make teacher-pupil interactions more effective. Thus, pupils should be encouraged to elicit clarifications from teachers whenever they face a situation they cannot really understand. Also, the teachers should be able to accept requests for clarification from pupils and not regard such requests and questions as a breach of discipline or an attempt to interrupt the classroom procedures.

CHAPTER V   DISCUSSION

This study investigated the problem of teacher-pupil communication in classrooms as it could affect learning. Communication strategies used by teachers and pupils in classrooms, at home, and with peers were identified and formulated. Instances of ineffective communication between teachers and pupils in classrooms were identified, analyzed, and compared with instances of communicative episodes outside classrooms.

The data indicated that the number and kinds of ineffective communication episodes, and the ways they were handled in the classrooms, were different from those in the home and among peers. The time-units of audiotapings of the data in different social situations were not the same, and the number of participants involved in these interactions were quite different, so that it was a problem to determine a common baseline for quantitave comparisons of patterns of communication in classrooms, at home, and among peers. Generally, however, the number of instances of ineffective communication was greater in classrooms than in the other two social situations.

Speculations on the causes and effects of ineffective communication could only be hypothetical. The small sample of teachers, pupils, and classrooms limits the generalizability of the findings. But the comparison of natural, spontaneous communication in several social situations strengthened the design of the study and not only allows the development of a general picture of the problem of commun-

ication as found in rural classrooms, but also indicates areas for further investigation as it relates to learning.

This chapter review the occurrence, causes, and effects of ineffective communications as they may have affected learning. Communication was viewed as an ongoing process, and several variables were seen to be at play during the process. In addition, some rules on the uses of strategies for communication were recognized. Such variables as topic, participant, context, and experiences of partici- pants all interacted during the process to determine the selection of strategies for interpreting and expressing messages.

The results are discussed under the following main headings:

A. Pedagogical implications of ineffective communication for pupil-teacher performance in classrooms
B. Issues on methods to study the process of communication
C. Possible cross-cultural research

A. Pedagogical Implications of Ineffective Communication on Teacher-Pupil Performance in Classrooms

This section focuses on ineffective communication in classrooms and the effects such episodes would have on classroom proceedings and in turn on teacher-pupil performances in classrooms.

1. Transitions Children Make When They Enter School

During the first six years of life, children grow within family and peer circles. The communicative skills they develop during these years function mainly to acquire basic necessities

of food and comfort. They also serve social and affective needs and are instrumental in developing and fostering close relationships with peers and members of the family to share immediate experiences and support. In both situations, children are accepted members who contribute and participate in verbal interactions in some way or other. They participate in decision making on such matters as topic, direction and development of interactions.

When at home, children are often given attention and the time to verbalize. Age differences, the resulting social hierarchy, and differing amounts of knowledge brought by parents and older siblings do not create a rigid structure for interactions. Closeness between members of the family creates a vast amount of knowledge that is shared by all participants and need not be verbalized. This situation creates particular strategies for communication, which use short utterances, and details are understood without being mentioned.

Interactions among peers foster closeness between participants too. Peers are equal in age and amount of information, and there is some shared information among peers who are close or who share the same cultural and social values. Strategies developed in the home to foster social closeness are generally adapted for use between friends.

In both situations, at home and among peers, the one-to-one relationship and the closeness that is preserved usually lead and direct communication toward effectiveness.

The classroom situation is very different from the situation at home or among peers. The teachers assume that they have more

information than the pupils. The teachers direct the objectives
and development of interactions, and pupils, who are able to make
independent decisions about content and strategies for communication
outside the classroom, must wait for the teachers' decisions on them.

In many instances of ineffective communication, pupils were
totally unable to understand the content and intent of the teacher's
utterances. Such episodes were illustrated in teacher's requests
for repetition, which could be interpreted as a request for a louder
repetition of the response, a request to modify the language forms,
or a request to correct the information and content of the response.
Pupils were left to guess the meaning intended by teachers and
select appropriate responses to deal with the situation. But at
all times the judgment of the suitability of the selection was the
responsibility and prerogative of the teacher and was not verbalized
for the pupils to understand. Feedback on the use of these strate-
gies was inadequate, and often pupils had to guess again about
whether they had been correct or what errors they had made. The
guesses were essentially trial and error, so no framework was devel-
oped or formulated for the interpretation and later selection of
suitable strategies.

Another difference between classroom and nonclassroom situa-
tions was the limitation of alternatives in the classrooms. At
home and among peers, each participant could contribute equally and
make decisions on the objective and direction of the episodes. In
classrooms, however, the child related with a teacher who dealt
with forty or more pupils simultaneously. The skills and sophisticated

strategies for communication such as problem solving and persuasion,
that the child had acquired in home and peer interactions, and the
amount of knowledge they had accumulated during these interactions
seemed quite unsuitable for use in classroom interactions. Thus, on
most accounts, children had to acquire a new set of strategies and
information to deal with classrooms. The transitions they made
were not only social, but also cognitive.

2. Cognitive versus Socio-affective Components of Communication

The meaning of a communication contains two main components
- cognition/content and socio-affect - both of which are conveyed
in the utterances, through language forms, selection of strategies,
paralinguistic cues, and so on. Both components interact to
determine the final meaning of the communication, whether information,
attitudes, or values.

Ineffective communication frequently occurred in the class-
rooms when one component of the message was not understood as the
speaker had intended it to be. The teacher would pose a question,
request a repetition, or issue a directive, and the pupils could
not make the appropriate responses. This failure on the part of
the pupils could be due to a misunderstanding of one component.
Thus, they may have understood the cognitive content, i.e., the
request for information, but took the strategy as a reprimand, i.e.,
socio-affective, so there was a conflict between the two components,
between what the teacher meant and what the pupils understood. This
separation of cognition and socio-affect components is illustrated in

the treatment of errors and in episodes in which teachers asked pupils
to raise questions .

a. Treatment of Errors

Errors were defined as incorrect activities or information
in response to directives or requests for information. Some errors
were found in all social situations: in classrooms, at home, and
among peers. In home situations, an error was resolved immediately;
if a child made an error, the mother would give the correct informa-
tion. If it happened during peer interactions, the error was either
ignored or avoided, and all participants would work toward the
correct response. Errors were not rejected in either social situation.
It was as if in a close social relationship, the rejection of an error
could also imply the rejection of the participant who had made the
error. Thus, there were many instances when all participants would
resolve an error quickly so that the social relationship would be
preserved.

The case was quite different in a classroom setting. Because
of the constraint of time, when a pupil made an error in a lesson the
teacher would reject it and move on to another pupil to get the approp-
riate response. The pupil was given the information that the response
was an error. But from the other experiences of the pupil, this
rejection could be interpreted as a rejection of the pupil as a person
too. The teacher did not have time to assure the pupil that the rejec-
tion of the response did not carry with it the rejection of the pupil
as a person too.

The effects of this conflict of interpretation could be viewed from the angle of either the teacher or the pupil. The pupil may take the rejection negatively, and view it as a reflection on his ability; it would affect his self-image and self-confidence. An accumulation of negative conclusions could result in decreasing motivation and interest in classroom proceedings. On the other hand, the teacher may take the error to be an indication that the pupil had not assimilated the information dealt with previously. Thus, the teacher's expectation of the pupil may decrease. In both cases, the treatment of errors in classrooms, which was essentially cognitive and based on constraints of time, resulted in negative socio-affective conclusions by both teachers and pupils.

b. Teacher's Requests that Pupils Raise Questions

When a teacher requested that pupils raise questions about previous lessons or current topics, there could be a conflict of interpretation. The pupils would understand the requirement of the directive, and indeed they might have questions they would like to raise. But such behavior would conflict with their behavior at home, especially in this rural area, where values of respect and subservience to elders are still predominant and prevalent.

When pupils interacted with parents or older siblings, there were cases when questions were used as a means to reprimand. Asking questions of the elders might also imply that the narrations or statements previously made by the elders had not been adequate. In such cases a question could be regarded as a critique of the other participant. Thus it would be very difficult for a pupil to

raise a question in the classrooms, for it might imply a reprimand of an older person or a critique of the person's ability, both of which are symbols of bad upbringing.

Teachers might take the pupils' silence in response to a request to mean that pupils had not understood the request. They might conclude further that the pupils did not have the ability to understand and perform in classrooms. Thus their expectations of the pupils would be affected.

After spending more time in classrooms, the pupils might be made to understand that raising questions in classrooms would be a means to increase learning. If they adopted this new behavior and raised questions in classrooms, they would have to remember to confine that behavior to classrooms, because the use of such a strategy in the home might imply rudeness. In fulfilling the requirements of the school, the pupil had to keep the two social situations separate. Thus, the pupil would have to develop and maintain two sets of behavior. As a result, they may not realize fully the relevance and connection between topics and skills learnt in school and at home. They would develop in two separate situations, not as whole individuals with home and school complementing each other to foster their growth.

Most times, it seemed that the teacher was not aware that ineffective communication had occurred. When the teacher knew that something had gone wrong, more often than not it was taken to mean that the pupils had not understood the question, statement, or directive. One of the strategies teachers often used to deal with such problems was a combination of rejection of the response and a

request that the pupil repeat the response. Another strategy was
to repeat the question. It almost seemed that teachers felt if they
repeated the question the pupils would understand it. This could be
interpreted to mean that teachers viewed such instances of ineffective
communication as the fault of the pupils.

An analysis of ineffective communication indicated that the
ineffectiveness was not only the fault of the pupils, but also the
fault of the teachers because they did not realize that their utter-
ances could convey conflicting cognitive and socio-affective messages
to pupils. There was a conflict in interpretation and expression of
cognitive and socio-affective components of the utterances. More
often than not, both pupils and teachers ended up with negative
attitudes and value judgments. An accumulation of such situations
might affect the teaching-learning situation so adversely that teaching
could not proceed efficiently.

3. Constraints of Time, Objectives, and Assumptions

The data indicated that pupils had developed quite sophisticated
strategies for communication, either to request, give, or share infor-
mation or to issue directives in the home and with peers. Teachers
also used these strategies during those social situations, but the
situation was different in classrooms.

Because of time constraints, teachers had to select from
among available strategies those that would take the least time and
yet attain maximum objectives of the interactions. Such strategies
were necessarily as short as possible and did not allow exchanges of

information or reflection on the question or task. These strategies were rigid in structure and included command, questions, and statements. At all times the teacher was interested in the correct response, whether information or activity, so the strategies created testing situations in classrooms. As a result, the pupils could not make known or use the vast amount of information they had acquired outside the classrooms, and they could not use the alternative communication strategies they had developed such as persuasion, problem solving, and discussion.

The teachers' use of briefer, shorter episodes for communication had negative effects mainly on the self-confidence and self-image of the pupils. The issue that should be resolved by both teachers and the curriculum is: would it be better to cover less material and assure more comprehension through more effective communication?

The curriculum and the school administration specified the topics and skills that were to be dealt with in classrooms. At home and with peers, pupils were able to join in decisions on the topic and the direction of the interaction, but in the classrooms such decisions were made by teachers and the curriculum. Coming from a situation where they were active participants, pupils had to alter their behavior to assume a passive role in classroom interactions. This created a separation between the classroom and outside classroom situations.

The teacher was assumed to have more information than the pupils. The topics in the curriculum were selected in such a way that most of the topics were relevant to the pupils' life outside of classrooms. Thus pupils sometimes had more information about the topic than they

were given credit for. Although the assumption that the teacher had
more information than the pupils was not always true, for easy
discipline and ego-involvement, the teacher might be more effective
if this situation were maintained.

However, the fact that the pupils' amount of information was
not acknowledged in classrooms could have several negative effects
on the pupils. They might not consider their information correct
or relevant and might wait for the teacher to make the judgment.
Thus, they may not learn to make judgments independently. This would
affect their growth as independent individuals, and their self-
concepts and self-confidence. Outside of classrooms, their informa-
tion was valued, in classrooms, their information was not considered.

4. Resolution of Ineffectiveness

As has been stated earlier in this chapter and previous
chapters there were few instances of ineffective communication in
situations outside the classroom. But there were some instances when
the participants did not totally interpret the message as intended,
and the objective of the interaction could not be achieved. In such
situations, the ineffective communication was resolved. The social
relationship between participants in these interactions was close,
and everyone wanted to maintain closeness. It was important to
minimize the ineffectiveness and possible misunderstandings that could
occur from it so that cordial social relationships would be maintained.
Everyone would work toward minimizing ineffectiveness and expediting
effective communication.

Interactions outside classrooms were normally in small groups - one-to-one or at most three to five participants who were all concerned about maintaining effective communication and harmony between them. The diagnosis of an ineffective communication was easy, and when detected it was easily corrected because there were only a few people involved. Thus, there was not much loss of face involved, and the small group of mutually concerned people usually resolved the situation quickly and easily.

The situation was different in classrooms. A single teacher usually taught at least forty pupils. It was not possible to diagnose an ineffective communication for all pupils simultaneously. If the ineffectiveness happened to all the pupils, the teacher would be aware of it. But if the ineffectiveness occurred for only a few children, it might not be detected and those pupils would not be able to resolve the problem alone.

The detection of ineffective communication would be possible through several channels. For example, pupils could make or give some facial or gestural cues to indicate that they did not understand what was going on. Such cues would be picked up only if the teacher were able to interact with all pupils simultaneously and make decisions not only about whether forty or more different contextual, facial, or gestural cues indicated that an ineffective communication had occurred, but also about what caused the ineffectiveness.

The best way to detect ineffectiveness in communication would be through feedback, whether verbal and face-to-face or written. In a classroom of forty or more pupils, not all pupils would be able

to make verbal responses to indicate whether they had misunderstood. If a teacher asked all pupils to make a verbal response, it would be an inefficient way to use time and would not allow for much coverage of the topics in the curriculum.

Inappropriate responses could be detected from the pupil's written work, but there are a lot of problems in this way of detecting the problem. For one thing, detection and correction of ineffectiveness would be separated by a long time gap. The pupil may not remember the episode or may not be able to make the right corrections. Also, the written work may not be the true reflection of the problem. It could be a skill problem, that is the pupil could not read or write well enough to do the work, but in fact no ineffectiveness occurred. Moreover, the written work may not be the pupil's own work, in which case the detection would be erroneous.

When detected, ineffectiveness may not mean the same thing to participants inside or outside classrooms. When outside of the classroom, everyone in the interaction has a stake in the preservation of goodwill and harmony in the communication and works towards that end. In the classroom effective communication is necessary for under-standing cognitive and content of the message. The teacher would say that there was also some concern for self-development and growth of the pupil as a whole child, and that this would mean the development of a positive self-concept, self-confidence, and so on. But this concern is quite secondary to the cognitive aspect of communication. The consideration of self-development of each child may be within the teachers' framework but the fact that a single teacher felt that he/she

had to deal with forty or more pupils at one time would limit oppor-
tunities for minimizing ineffective communication and fostering growth
of each child as an individual.   .

5. The Role of Teacher

The classroom was a formal situation with a rigid structure
of interactions, interactions at home were less rigid, and inter-
actions between peers were the most flexible. During a flexible
interaction, each participant could initiate, make responses, and
close the interaction. There was no fixed role assigned to any
participant in any part of the interaction. Such a situation was
normal for peer interactions and some home interactions. In a rigid
structure, one participant assumes and controls some parts of the
interaction, so that one participant can initiate and close, and
other participants can only make responses. This was the normal
situation in classrooms, where the teacher would control the
interaction.

The administration of a simulated teaching-learning task,
the nested boxes, showed that children were quite sensitive to the
role requirements and functions assigned to each participant in a
situation. Thus, if the role was one of teacher, the age variable
was subsumed under the different objectives that were particular to
a teacher-pupil relationship. Episodes in this task showed that
pupils who were given the role of teacher were able to pattern their
strategies after those normally used by a teacher, so that persuasions
became commands, and discussions became statements. But sometimes

when the objective of the strategy was not attained, the alternative strategy normally used during peer interactions, such as persuasion or problem solving, was used.

A question that must be raised here is: if children could imitate teacher-strategies, why could they not understand them in classroom situations? Indeed, pupils could imitate teacher strategies quite well, but performance of those strategies need not be accompanied by total comprehension of their meaning and implications. It could be that when pupils used these teacher strategies during the task, they were using a formula they had become familiar with during daily classroom interactions but had not totally understood.

Also, there is a distinction between having a scheme and applying it where appropriate. In this case, pupils were able to distinguish between appropriate schemes and suitable social situations where such strategies could be used. Thus, although they did know these teacher strategies and could use them when they assumed the teacher role, they were not able to quite understand them all the time when they were assuming the role of a pupil.

One major difference between the simulated teaching-learning situation and actual classroom teaching was that although the simulated task was a teaching situation, it still had the characteristics of a peer, informal interaction, that is, it was a one-to-one relationship, so that the "teacher" could resort to less formal strategies to attain objectives that were not achieved through the imitated teacher strategies. Instances of ineffective communication could be detected by pupils, diagnosed, and resolved.

The resolution of ineffective communication in these situations was successful. It would be interesting to see how the "teachers" would try to resolve such problems if they were put into a situation in which they had to interact with forty or more pupils, as in a normal classroom.

The frequent instances of ineffective communication in the classroom seem to be a function of the pupil-teacher ratio. Analysis of the teacher's interactions with peers and at home showed that they used the same strategies that pupils used in the same social situations. The issue seemed to be that the teachers had developed an alternative set of strategies to use during classroom instruction.

The issue was not so much the social hierarchy in the class-room as a combination of the various constraints that have been discussed and most of all the physical layout and composition of the class, in particular the teacher-pupil ratio. The teachers had to select from the available strategies the most suitable strategy to deal with the situation, including disciplinary problems, curricular demands, and the constraints of examinations at the end of the year. Although they knew that pupils had access to more sophisticated strategies and sometimes more information, they had to manipulate the situation and limit and constrain the use of strategies in classrooms.

The final question is: what success was achieved through using the alternative set of strategies in classrooms? The data indicated that although teachers could cover more content and skills, the pupils did not assimilate all the information because of misunderstandings
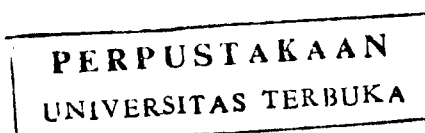
that prevented effective learning. Indeed, if teachers were to use other more flexible strategies and allow pupil participation in a more spontaneous manner, less material could be covered, but there would be more assimilation and learning of materials and skills. This is a question of a trade-off; maximal understanding and learning, minimal materials and skills; or maximal materials and skills, minimal understanding and learning.

6. Effect of Classroom on Promotion of Learning

A comparison of interactions in the three social situations indicated that the essence of each situation was different.

The teacher in classrooms questioned, made statements, or issued directives to pupils. If a pupil did not make the appropriate response, the teacher would move on to another pupil to get the appropriate response. In this way, the teacher's ultimate objective might be to teach pupils information and develop skills, but the particular techniques used made the teaching situation more of a testing situation. If pupils gave the right answers, the teacher had taught them well, or they had learned the lesson adequately, or, sometimes, they had been taught well outside of classrooms. Thus, although classrooms were generally for teaching, the character- istics of a testing situation were sometimes used, and they influenced the teacher's style of giving information and developing skills.

Data on interactions in the homes indicated that interactions there served several purposes. Sometimes the purpose was to give information to the children. If the children showed though verbaliza-

tion that some of their information was wrong, mothers or other members of the family would immediately remedy the situation by giving the correct information. Often interactions were used by older members, such as mothers or fathers, to give information on social rules to the child. If what the children were doing was not socially correct, such as the sitting position, posture, or way of speaking, the right social rule was told to them. Thus, the interactions could be seen as a socialization process to develop the child as an acceptable adult in society. Whatever the purpose of these interactions in the home, they took place in a teaching atmosphere, never the testing situation that often prevailed in classrooms.

Teaching and testing seemed to be tasks that could be performed only when participants in the interactions were of a different social level. A person who was considered higher in the hierarchy could assume the role of a teacher or tester. What would happen when the participants were equal in age and social status, i.e., peers? The participants in the peer groups had almost equal amounts of information, close social relationship, and cordial relationships. Interactions in these situations were flexible, and exchanges were longer.

There were times when some peers had more information than others, or when a participant would make an error. An analysis of these interactions indicated that the equality of participants in such interactions did not allow for teaching or testing, as that seemed to violate a social rule that equals could not overly question or test each other except in jest.

When such problem situations occurred, peers used another process of imparting information, problem solving. During one episode some participants did not know some of the answers, and all partici- pants pooled their information to reach the correct response. It was a process of group learning, or cooperative teaching-learning, and involved an exchange of information rather than the pure giving of or requesting information. This kind of problem-solving was widely used during peer interactions of either teachers or pupil- subjects.

Ironically the data indicated that the school which was designed for teachers to teach and pupils to learn, did not always perform that function. In fact, it created a different situation altogether, more testing than teaching or learning. The homes, were in fact performing the function of teaching, and in peer situations children and teachers were learning together.

Of course, not all interactions in classrooms were testing situations, but there were many instances of testing for both teachers in the sample. An analysis of testing situations indicated that such a situation could accomplish the tasks of teaching and learning, but under situations with high risk, particularly for pupils. During a testing situation, the person giving the test had more information than the pupils. The pupils would be asked questions, and their responses would be measured against criteria to judge for correctness, completeness, and adequacy. A response that was judged adequate would be a positive point on the evaluation scale, failure to make the right response in turn would be a negative point.

The problem of testing in the classroom was made worse by the fact that evaluation was instantaneous and was made publicly in front of all other pupils. Thus, during such a situation, the ego of the pupil concerned would always be on the line. And a pupil who was not able to perform positively was judged negatively, not only by the teacher, but perhaps also by other pupils.

But the teachers were not conscious of the testing situation that existed in the classroom. Interviews with both teachers indicated that they operated on the assumption that pupils need to be given information about certain portions of the curriculum. Questions were used to involve pupils in lessons and to encourage them to participate in the procedures. But the teacher measured the involvement of pupils by the degree of correctness the pupils reached in verbalization. While both teachers emphasized that questions were not testing instruments, they were in fact an informal test of pupils' concentration, attention, and sometimes knowledge brought in from outside classrooms. Because the teachers were unaware of the testing component of their lessons, they were also unaware of the ego involvement that pupils had to deal with every day.

The teachers had to involve their pupils within a short period of time: thirty minutes for each lesson. During that time they also had to cover a certain amount of material. They would always have to search for the right answer from among forty or more pupils so that the lesson could proceed. If one pupil did not give the correct response, another pupil should be given the opportunity to make the right response. So the first pupil was left, the answer was not given

or if given was rejected, and another pupil was asked to make a response. Because the first pupil's inadequate response was not satisfactorily resolved, his or her ego might be negatively affected. The second pupil was then on the line, and so the circle continued.

In some instances a pupil might give the right response, but the teacher, possibly in an attempt to give more pupils the chance to make responses and participate in the lesson, did not give any feedback to the response, but moved on to another pupil for another response. When this happened the pupils would get conflicting signals. Pupil A may know for certain that his or her response was correct but was not given the reinforcement that it was. Pupil B, who knew that the previous response was correct, then had to make a quick decision: why did the teacher ask the question again? There were two possibilities: either the response was correct, and the teacher wanted the pupil to repeat it; or the response was incorrect, and the teacher wanted an alternative response. As has been indicated earlier, classroom situations did not seem to promote development of the pupils' positive self-image and self-confidence. It would not be at all surprising if the pupil decided that the second alternative was the appropriate strategy, and made an alternative response. Thus the response would be incorrect and unsuitable. In any case both Pupil A and Pupil B were less confident in their cognition. An accumulation of these situations would not result in an optimum situation for learning but would create learning problems.

7. Recommendations for Teaching Techniques and Curriculum

From the diagnosis, analysis, and comparisons with interactions outside of classrooms it could be seen that classroom interactions constrained and inhibited the pupil's selection of strategies, sense of evaluation, and judgment, and generally did not develop what could be defined as independent thinking in children. Most of what was done in classrooms depended on the teacher's approval and evaluation. Pupils could not develop their own criteria to evaluate when to use what strategies in classrooms; all interactions were "controlled" by the teacher. Because of time constraints the teacher could not allow more flexibility in classroom interactions.

This technique of instruction may seem most efficient in dealing with a group of forty or more pupils and the vast amount of materials the teacher had to impart during the limited period of time allotted. But this efficiency may be more apparent than real. More material was covered, but it may not be fully comprehended by pupils.

Such a situation did not foster the independent thinking the child would need in adult life. If school is to fullfil its function of educating the child, teachers must restructure and build into classroom situations more flexible interactions and allow pupils to make evaluations and judgments sometimes so that they can develop independently.

Classroom situations seemed to be kept separate from situations at home and among peers. This could be seen not only in the use of different strategies, but also in the way teachers dealt with materials. The testing situation created by teachers inhibited children from

volunteering answers even when they knew the correct responses. Also, the time limitation did not allow teachers to use the wealth of information the children had acquired during their childhood outside the classroom. The materials learned in classrooms were kept separate from outside classroom experiences, even when the similarities were clear. This gap could cause children to compartmentalize their knowledge, and ultimately they would not be able to see the relevance of school experience to their daily lives.

The imposition of the gap caused some frustration in children. This could be seen in their attempt to bring information from outside to bear on the classroom proceedings. Use of this additional information would increase pupil interest and motivation in what was taught in classrooms. The teacher should incorporate materials from the children's own experiences to make the classroom situation closer to their daily lives.

There were a few instances when pupils were allowed to participate actively in classroom proceedings. In these situations the teacher did not perform the role of evaluator or judge of the pupils' utterances. It was clear that children were freer to volunteer information, particularly from their own experiences, on the topic being discussed. There were few instances of ineffective communication, and children volunteered much interesting and relevant information. The structure was flexible, and pupils participated actively.

There are several conclusions that can be drawn from these situations:

a. Children do have information and skills that can be used in classrooms, and recognition of their skills and information would go a long way to strengthen their self-concepts and confidence.

b. The inclusion of children's contribution adds variety to the lessons.

c. It makes sense to allow children more participation in classrooms without the threat of the testing situation. In the end, the advantages in growth and development of independent thinking and judgment would outweigh the limited amount of material that could be covered.

The classroom interactions should be restructured to allow more pupil participation and involvement in the process of teaching and learning. The following forms are suggested, based on the evidence of more effective communication at home and among peers:

a. Small group interactions

b. One-to-one interactions

a. <u>Small Group Interactions</u>

In this kind of grouping, each participant would be given attention and the time to verbalize and participate in the exchanges. Such an interaction could be patterned after the interactions at home between children and older members of the family, where teaching was carried on successfully. Correction and information might be given more effectively in a small group where feedback is facilitated.

This form of interaction could be done with the assistance of additonal adults from the community who could be brought in to assist

the teacher. Thus, the more successful pattern of communication of the home interactions could be duplicated in the classroom. The class could be divided into smaller groups, with each group handled by an adult, supervised by the teacher.

This small group interaction could also be organized among pupils only. The smaller groups could be managed by a selected pupil who has shown more skills in certain areas of the content, or the role of the pupil-leader could be rotated to give all pupils the opportunity of assuming the role of leader. In this way, the pupils' self-confidence could be fostered while their learning increased.

b. One-to-one Interaction

This form of interaction could be patterned after peer interactions, where both participants could contribute and participate equally in the interaction. The situation would be one of peer tutoring, a one-to-one interaction.

In this situation, the pupils could be paired off, and each pair given a particular area of content to learn and organize together. Ideally the pair would include one pupil who could act as a teacher at first, and later the roles could be reversed so that both pupils assumed both roles at different times. Such a situation could promote learning through cooperative problem solving, which was found to be widely and effectively used among peers. The teacher could identify especially weak pupils and deal with them separately.

Both these alternative forms of interactions would allow for more flexible interactions and the active participation of all pupils. They

would incorporate some of the more effective components from home and peer interactions and thus help make classroom communications more effective, within the constraints of time, physical layout, and teacher-pupil ratio. Since these alternative forms would be new to most teachers, they should be properly and carefully thought through, piloted, and tested, before they are implemented in classrooms.

The volunteered information from children through their utterances shed light on the kinds of things children had information about and found interesting. The information pupils volunteered indicated areas and topics that would be of interest to the pupils. Task analysis of the episodes of interactions with children would indicate the schemes children could use during this particular period. This information could be combined to design a program to plan and organize the materials and gradation that would be most effective in the classrooms.

B.   A Methodology to Study the Process of Communication

Research in the development of communicative competence in a natural setting is a developing research tradition, This section relates the findings from this study to the following problematic issues on methods of research:

1. A definition of "communication"

2. Collection of data

3. Analysis of data

1.   A Definition of Communication

For this study communication was defined as a verbal interaction between two or more participants. The direction and development of the interaction changed from moment to moment, according to the response made by each participant. Each response determined the following responses and the selection of strategies, including linguistic forms to convey both cognitive and socio-affective messages. When an ineffective communication occurred, an explanation could be obtained by analyzing it and its various components and stage of development, against the physical and social contexts before and after the particular episode of ineffectiveness.

This alternative definition of communication was more revealing of the process. Data collected supported the emphasis on both physical and social contexts, and how these determined selection of strategies for communication and the resulting direction and development of the communication.

Physical contexts included seating arrangements and physical distances between participants. A classroom where forty or more pupils sat in a room facing the teacher and the blackboard gave a formal context to the interaction. Pupils were to remain seated, discipline was enforced, and the strategies selected were those that preserved discipline. Constraints of time and objectives made it necessary to select strategies that were minimal in length of time but maximal in exchanges of information or issuance of directives.

The social context of the interaction was determined by the social relationship between participants and included variables of age and of social distance. Close and equal social relations, such as

between members of a family, developed a set of strategies designed primarily to preserve social relations, promote the child's social growth, and at the same time attain the objective of the communication.

The data also delineated two message components: cognitive and socio-affective. The diagnosis of ineffective communication requires the ability to identify and isolate both components and the ways they interact and are maintained during various kinds of communication.

A cognitive message was the information or knowledge that was conveyed through the first level of the utterance. A second level of message, identified as socio-affective and generally more subtle than the cognitive message, was unconsciously conveyed through the cognition and other contextual and linguistic cues.

Objectives based on information and directives or activities were cognitive. Thus, strategies to request, give, or share information were meant to attain cognitive objectives, as were directives to command, request, or persuade other participants to do some activities or other. These were easier to understand and obey because they were mainly conveyed through language forms governed by grammatical rules.

The second level message of socio-affect indicated the general attitude, value, and feelings that formed the basis of the interaction. It determined the rule of politeness, gave information on the participant's background and upbringing, and was used as a criterion to evaluate the suitability of strategies selected to attain the cognitve objective.

Rules for the socio-affective component were assumed to be understood and used by all participants. The presence of such rules would be realized when one of them was broken, such as when an ineffective communication had occurred. For example, when a teacher requested that pupils raise questions in classrooms, and pupils did not respond to the request. On first analysis, this nonresponse could be attributed to the fact that the pupils did not understand what the teacher meant and required. But on further analysis, the nonresponse could be explained by an inappropriate request for such a social situation, i.e., youngsters do not normally question their elders, thus the pupils were inhibited from breaking that rule of respect for elders. So, this nonresponse was more affected by the socio-affective component than by the cognitive component.

The data contained many instances of ineffective communication between teachers and pupils in classrooms. Step-by-step description of the interaction, and comparisons with interactions in other social situations, such as at home and among peers, indicated that such ineffectiveness was caused mostly by the socio-affect rather than the cognitive component. The teacher might have issued a directive that was comprehensible to all pupils, but pupils were not able to comply because such compliance, might be against social rules they have learned at home.

An analysis of the data within a framework which considers the physical and social contexts would not only focus on both cognitive and socio-affective components of the message but it also enables a more complete study of the process of communication as it unfolds step-by-step, from several angles at once. The findings from the

data suggested particular hypotheses on such matters as ineffective communication caused by the teacher's treatment of errors, contextual boundaries and so on, which otherwise would not have developed if another definition of communication had been used.

2. Collection of Data

The definition of communication as an ongoing process, within social and physical contexts requires a particular set of data for study. It develops over a period of time with each response or input changing or adapting the direction of the episode. An analysis of the inputs and other variables requires a moment-to-moment examination of the episodes, within the context of the participants and the setting.

It was hypothesized that contextual cues were important in analyzing the interaction, and the observer took notes on possible relevant social and physical contexts. But it was found that a lot of data were lost. These include gestural and facial cues that were most important during interactions between close participants like mother and child, where much information was not verbalized but was imparted by such cues as a nod, a shake of the head, or eye contact.

Even when there were only two participmats, the observer was not able to account for all these cues. They were quite subtle and slight, and it took quite a while for an observer to be attuned to their role in the interaction. In addition, because the cues involved a back-and-forth response between the two participants, the observer would have to be able to focus on three variables (i.e., the speaker,

the responder, and both of them) simultaneously to be able to describe the cues adequately.

The data on audiotape and brief notes on the contexts collected for this study were considered the baseline data for the study of communication as a process. The contextual cues, which were not captured on audiotapes nor adequately accounted for by notes made by observers, could be collected through the use of videotape.

Videotaping verbal interactions would give the investigator much information about the context. An example would be an episode in the classroom (46) in Chapter III, where the teacher posed the question about "Why is it that chickens cannot swim?", and several pupils attempted to make the correct response. Both pupils modified their responses based on what the other pupil said, in turn. There would be exchanges of cues between the pupils such as eye contacts, noddings, gestures, which determined the modifications of responses. These were not available, and so further analysis of the episode was not possible.

A videotaping which would capture relevant contextual cues would require a lot of expertise and skill. When the interaction is a face-to-face interaction between two or more participants, there should be that many number of cameras to focus on all participants. But focusing on each participant may not capture the dynamics and interactions between them. Alos, having that many cameras would certainly affect the naturalness and spontaneity of the situation, so that in trying to get as much relevant data as necessary, the context of the interactions, which is an important part of the inter-action, could be affected.

The first step toward collection of the most useful set of data would be an exploratory study of the kind conducted by this study. The audiotapes and notes on the context allowed the investigator to form a general picture of the interaction and of the interaction of participants and context. This could form the basis for identifying variables that could be investigated further. The information could also be used to develop task and laboratory situations to study certain variables in more detail.

3. Analysis of Data

To recapitulate, communication was viewed as an ongoing process. The selection of strategies for communication to interpret and express messages was determined by the continuous interaction of several components and variables of the context and participants. Messages had both cognitive and socio-affective components. A verbal exchange could only be analyzed within the framework of these variables.

A verbal interaction could be interpreted in various ways, depending on the different plays of the context and the values and cultures of both participants, as well as those of the investigator. An adequate analysis of a communication should be able to identify the development and components of the interaction and the effects of inputs as viewed by both participants and the investigator. Such information could then be used to develop a theory of communication.

Two frameworks were used in this study:

a. An adapted Gumperz's conversational analysis

b. A neo-Piagetian theory of constructive operators

a.   An Adapted Gumperz's Conversational Analysis

At the time of the study, this framework was in its formative stage. However, Gumperz had laid down the basic principles of the theory, i.e., the importance of the context, that social and attitudinal variables were conveyed by some linguistic and nonlinguistic forms, and these determine the expression and interpretation of messages within the verbal exchanges.

Gumperz considered paralinguistic cues such as stress and intonation to be important signals of messages within the utterances. But due to constraints of time, this component was not analyzed fully. But it should be considered more fully in further investigations of this kind.

The ideas proposed by Gumperz were used to formulate a framework to describe and explain the process by which the interaction developed and evolved. The unit of analysis used was an episode, which was identified by a change in topic or participant.

This framework was very useful to describe, identify, and explain instances of effective or ineffective communication that had occurred in all social situations. It provided a basis for comparison of episodes across topic, participants, and social and physical contexts.

The theory viewed the episode as a whole unit and identified variables and components of meanings conveyed by the various linguistic and nonlinguistic cues. However, the analysis was useful to describe episodes that had occurred. There was not enough information for prediction of other instances of communication, because the framework isolated variables but did not quite define the interaction and

dynamics of the process of communication. Another framework was required to allow step-by-step analysis of the interaction and more information on the interplay of variables.

Also, the framework proposed by Gumperz was more descriptive than that of Pascual-Leone and there were long analyses of episodes. There would have to be a method to reduce the units of analysis so that more data could be handled and presented in a more precise way. For these two requirements, a step-by-step analysis of the interaction and a possible way to reduce the data and analysis, the study turned to another theory, that of Pascual-Leone's theory of constructive operators.

b. Pascual-Leone's Theory of Constuctive Operators

This theory provides a framework for analyzing the performance of a task from moment-to-moment, identifying inputs and the dynamics of these inputs, the subject's experiences, the context of the task, and any other variables that combined to produce the particular behavior at a given time. It allows one to trace the development of a task and to hypothesize causes and effects of the behavior within the framework of schemes, activation of schemes, and scheme boosters. For the purpose of this study, the task analysis was applied to an episode of interaction.

This framework was designed to account for all variables and factors that could have been used to produce the subject's performance. Thus the episode would have to be lengthy enough to allow for the development of the topic or activity. But such a detailed analysis brought out some problems when applied to a communicative event.

Such a framework would have been more easily applied to a rigid, controlled, or laboratory study of behavior where the variables that produced the behavior could be pinpointed. The situation was different during a natural, spontaneous conversation. As has been indicated previously, numerous factors determined the selection of strategies for communication, and the development and evolution of the interaction was constantly changed, adapted, and modified by the inputs from the participants and their roles, the contexts, the topic, and the interactions of all these variables. The theory did indeed take into account all relevant variables, but there were so many variables to consider in a communicative task of the kind analyzed in this study, that it was difficult to relate all variables within one framework.

This theory is indeed promising as a means to diagnose the process of communication. However, based on the problems encountered during the stage of task-episode analysis, this framework would have to be adapted so that it could be more suitable to analyze communicative episodes. The specifics on how it would apply to a communicative task would have to be worked out, so that the components and stages of the development of the episode could be defined and identified. The main problem is specifying exactly what the schemes are that are involved in communication. Only when definitions and terms are more relevant to a communicative process could the data be reduced to manageable units of descriptions for further comparisons and analysis.

On a more technical issue, the parameters of the scheme-boosters must be established. Pascual-Leone incorporates several

scheme boosters, i.e., M-space, L-learning, field-factor, affect-factor. Of these, only M-space has been specified, the parameters of other scheme boosters are yet to be specified. Also, how these scheme-boosters interact during the process of communication has not yet been defined. More precise definition of these important operators would facilitate the application of the analysis on the process of communication.

The two frameworks for analysis could be used profitably together, Gumperz's adapted format to give a general description and identify schemes or variables and the ways they form the process of communication, and the neo-Piagetian analysis to analyze the schemes and the effects of the various operators (M-space, L-learning, field-factor and affect-factor).

C.   Possible Cross-Cultural Research in Communication

There is much interest in cross-cultural studies of cognitive development, including communication. Previous studies had several weaknesses. Many used the same instrument to measure communication competences of subjects in various cultures. The process variable was not taken into account, and therefore the comparison of subjects across cultures and age groups was not quite valid.

A preliminary comparison of communication data, whether effective or ineffective, from a rural school in Malaysia and from some classrooms in the United States suggested that there were similarities in the kinds and structures of these communicative episodes. There were differences in cultural and social components,

but the presence of these similarities could be a starting point for more comparisons or the process of communication between cultures. These could be geared toward identifying possible universals within the process of communication, while refining knowledge about the process of communication toward development of a more adequate theory to explain ineffective communication in classrooms.

CHAPTER VI   CONCLUSION

It was hypothesized that poor performance of rural pupils in Malaysia could be traced to frequent occurrences of ineffective communication between teachers and pupils during daily interaction. Evidence of frequent ineffective communication was found and there is reason to believe that these constant misunderstandings affected pupils' interest and motivation and teachers' performance and expectations, and hindered learning and teaching. Steps should be taken to improve education for rural pupils beginning at the classroom communication level. Verbal teacher-pupil interactions should be made as effective as possible.

This study was designed to analyze classroom communication between teachers and pupils, compare strategies used in different social situations, and use the information to suggest steps to improve teacher-pupil communication in classrooms, and facilitate more effective teaching and learning.

This concluding chapter briefly reviews the study, its findings, and possible implications for education and methods of studying the process of communication. It also lists the hypotheses that were generated from the findings.

A.   Summary of Study

This study was exploratory, more hypothesis generating than hypothesis testing. Data on communication were collected in natural situations; only spontaneous data were included for analysis.

Strategies for communication used by teachers and pupils were compared, and rules were formulated for selection in different social situations, i.e., the classroom, at home, and among peers. Instances of ineffective communication in classrooms were identified and analyzed against the teacher's and pupil's total repertoire of strategies for communication.

Two grade 2 classrooms in a rural school in Malaysia were observed and audiotaped. Classroom data were composed of three elementary science, one reading (English and Malay), and two language (English and Malay) lessons for each class. In all there were twelve lessons for analysis.

The subject's were two teachers and eight pupils, two boys and two girls from each class. These subjects were observed and audiotaped at home interacting with mothers, fathers or siblings, and with peers. These data were transcribed and only those data judged spontaneous and natural were included for analysis.

All transcriptions of classroom data and spontaneous interactions at home and with peers were divided into self-contained episodes, and analyzed within a framework of Gumperz's conversational theory and Pascual-Leone's theory of constructive operators.

The data showed that each individual teacher or pupil has a reper¢ire of strategies for communication that are used to attain the following basic objectives:

    a.   Information-based, i.e., giving, requesting, and sharing information. Strategies were question, statement, narration, discussion, and problem solving.

b. Activity-based, i.e., to give a directive and require an activity or task in response. Strategies were command, request, indirect request, and persuasion..

c. General negative feedback, which cut across both objectives above and included rhetorical questions and requests for repetition.

All strategies were available to all participants. The selection from among possible alternatives was determined by a combination of various factors, including constraints of time, assumptions of social hierarchy and amount of information brought into the interaction, and importance of objectives to participants.

The selection of an appropriate strategy for communication would facilitate interaction and communication. The data suggested that the appropriateness of a strategy was defined in terms of the expectations of the addressees. Thus, during a peer interaction a directive could use either an indirect request or a persuasion strategy. The use of a request or command strategy would violate the expectation of the addressees, and would be judged inappropriate. The use of an inappropriate strategy for communication would result in misunderstanding of the content and/or socio-affect component of the exchange. Inappropriate responses might be made during the exchanges that would cause more misunderstandings and further ineffective communication.

The findings indicated that there were more instances of ineffective communication in classrooms between teachers and puils than between participants during home and peer interactions. This

was probably due to the one-to-one interactions at home and among peers. In such situations, social closeness between participants made it important that ineffective communication be resolved immediately to preserve the social relationships. The situation was quite different in classrooms, where a teacher interacted with forty or more pupils simultaneously. In such an interaction, the teachers created a semblance of social distance between themselves and their pupils when they preserved physical distance to maintain discipline and control in the classrooms. The physical setup of the class -- pupils seated in rows facing the blackboard and the teacher -- further promoted the distance. Teachers were not able to interact with individual pupils as would be the case during home and peer interactions. This social and physical distance between teachers and pupils decreased the importance of effective communication, as the attainment of objectives did not necessarily affect the social relations between them.

The diagnosis of ineffective communications between teachers and pupils during daily classroom interactions indicated that these could be caused by one or a combination of the following factors:

a. Mismatches of strategies for negative feedback, including request for repetition and questions.

b. Treatment of errors.

c. Contextual boundaries.

In episodes of ineffective communication it was usually the pupils who misunderstood the teacher's treatment of errors or use of questions and took the information-based strategies to be

attitudinal or value-laden. Thus while a teacher's rejection of a pupil's response would simply be part of the instructional procedure to the teacher, pupils might interpret it as a rejection of the responder based on their experiences of errors in other social interactions. The teacher's intent and the pupil's interpretation of a strategy were at odds, and an ineffective communication occurred. Teachers might not be aware that an ineffective communication had occurred, and so could not resolve the ineffectiveness at that time. It was hypothesized that an accumulation of such ineffective communications would affect pupils' motivation, interest, and performance in classrooms and also the teachers' performance and expectations of pupils. All these interact and compound the negative effects of ineffective communication for both teachers and pupils.

Data from a simulated teaching-learning situation, the nested boxes, indicated that pupils could use teacher's classroom strategies when they assumed the role of a teacher in the task. But occurrences of ineffective communication during the task were minimized, primarily by the one-to-one relationship, and also because both peers resolved the ineffectiveness in order to preserve social closeness between them.

Interactions in classrooms were more rigid than those outside the classroom, and they were controlled by the teacher. Pupils could not use the more sophisticated strategies for communication that they had developed outside classrooms. A comparison of teachers' and pupils' interactions with their peers indicated that pupils' interactions were as well-developed as those used by teachers during their

peer interactions, in particular the strategy for cooperative problem solving. But these strategies were not used in classrooms.

Another problem for teacher-pupil interactions seemed to be the pupils' separation of outside and inside classroom experiences. Classroom lessons might deal with topics of nature study that were familiar with pupils' experiences in their daily life, but they could not relate these two experiences due to the time constraints and technique used by the teacher. Teachers tended to evaluate pupils' responses in such a way that many classroom interactions became more of a testing situation for pupils' knowledge and skills. Thus pupils were reluctant to volunteer information that might be rejected, and this affected their self-image and self-confidence.

There were three instances when teachers were less rigid and allowed pupils to make utterances without constantly evaluating them as correct or incorrect. In such situations, pupils were able to volunteer information, and related their outside classroom experiences to classroom lessons. Such episodes were considered effective communication and should be encouraged.

B.   Implication of Results

1. Pedagogy

Ineffective communication in classrooms seemed to impede the teaching-learning situation. Pupils could not fully comprehend teachers' verbalizations, and teachers could not get adequate feedback from pupils to restructure and improve their teaching techniques,

classroom procedures and lesson presentations. A diagnosis of
ineffective communication could give teachers and educational
planners information to improve the education available to the
target population, in this particular case, the rural population.

a. Daily Classroom Interactions

The data indicated that there was much ineffective communi-
cation between teachers and pupils during daily verbal interactions.
An accumulation of these episodes would negatively affect both the
teaching-learning process and the pupils' and teacher's interest,
motivation, performance, and expectations.

Most ineffective communication in the classroom took place
without the teacher's being aware that anything had gone wrong. The
teacher seemed to be concentrating on imparting information and
developing skills and did not give enough attention to the pupils'
socio-affective development. Pupil development was compartmental-
ized into information, skills, and social personality.

When teachers were aware that an ineffective communication
had taken place, more often than not they treated it as a misunder-
standing of information or perhaps inattentiveness. They would then
repeat the question or request the pupils to repeat their responses,
which in turn increased the misunderstandings on the part of both
teachers and pupils. In most cases it could be suggested that
teachers would conclude that the ineffectiveness was caused by the
pupils' failure to understand what was required of them. Often
ineffective communication in classrooms was not resolved in time,
or was dealt with in a way that damaged the pupils' self-images

and self-confidence.

As a first step toward resolving the problem, there should be a program to train teachers to diagnose and resolve the occurrences of ineffective communication. During the process of diagnosis, teachers must be able to view the process objectively, so that they can see the causes of misunderstandings and can recognize that ineffectiveness may be caused by the teacher.

The traditional role of teachers as figures of authority in classrooms was supported by the assumption that they know more than their pupils. This assumption could be rendered invalid with regard to particular content areas with particular groups of pupils. The teachers also worked with the assumption that their pupils learned best when teachers gave the relevant information to them, but peer interactions indicated that cooperative learning by exchanging information could be a more effective alternative when dealing with a particular content area. Thus it would be necessary to change teachers' basic beliefs and attitudes with regard to the process of learning and their role as teachers.

b. Curriculum Development

The curriculum was imposed on teachers and pupils by a central agency of education. As far as possible, the content was made relevant to both urban and rural pupils, but some portions were more relevant to urban pupils and some were more relevant to rural children.

An analysis of classroom interactions indicated that even when the content was relevant to rural children and their experiences, the teaching techniques and requirements of examinations rarely allowed

the rural children to relate their experiences to the lesson content. As a result, it seemed plausible to say that classroom content was compartmentalized by the pupils as classroom rather than non-classroom experiences. Pupils' participation and involvement were constrained by lack of time and the one-to-forty interaction between teacher and pupils. This was considered a great loss to the classroom and teaching. The pupils' contributions would have been rich and valuable and would have added interesting facets to the topic.

The curriculum was followed strictly by teachers and the school. Even within the limitations of time and examination require- ments, however, it may be possible to include components where teachers would specifically involve pupils in classroom discussions and perhaps contribute from their own experiences.

During their first seven years of life, pupils had acquired quite sophisticated skills in communication, but classroom inter- actions did not give them the opportunity to use these strategies. Teachers also had access to these strategies, but during classroom interactions they had to resort to strategies that maximized exchange of information while minimizing the time used. Time constraints and possible disciplinary problems limited the use of these more flexible strategies for communication, but a compromise might be achieved, so that the curriculum could include topics that would encourage pupils to use their other strategies for communication, such as problem solving, and thereby bridge the gap between inside and outside class- room experiences.

A pupil's growth and development are perhaps overcompart-
mentalized into inside and outside classroom experience. The pupil
is taught to operate in different subject areas, in different ways,
in different social situations. This does not foster the develop-
ment of a whole individual capable of operating in all spheres of
social interaction. This is related to a wider issue of the
individual's ability to cope with adulthood and survival in a modern,
technological society. The data from this study suggest a rethinking
of the objectives of the curriculum, to include portions geared
toward the development of the individual.

c. Teacher Training

The findings suggest some revision in the ways that teachers
teach and relate to pupils. Some strategies to improve teacher-pupil
interactions could be suggested within the constraints of classroom
size, demands of examinations, and curriculum.

It was clear from the data that teachers used questions indis-
criminately to request information and to imply negative feedback to
pupils' responses. Theus negative feedback may not be intended by
teachers but may be incorrectly understood by pupils. Teachers could
be trained to use the question form more clearly, so that pupils
would be given the proper cues to the cognitve and socio-affective
components of the teachers' utterances.

Another facet of teaching brought out in the study was the
testing situation that teachers fostered in classrooms. More often
than not, teachers evaluated pupil responses, and interactions were
usually rigid. Teachers controlled interactions, and pupils did not

contribute as much as they could. Teachers should include time in their daily lessons when they would allow pupils to contribute freely and participate without the fear of constant, negative evaluation.

The one-to-forty teacher-pupil interaction made it difficult for teachers to diagnose and resolve ineffective communication in classroom interactions. The simulated teaching-learning situation, the nested boxes, indicated that pupils could assume the role of teacher. The one-to-one relationship in that task made it easier to diagnose instances of ineffective communication between them, and these instances were resolved quickly.

An alternative form of classroom interaction could be developed, in which the one-to-one interaction could be used. Other adults from the community could be brought in to interact with pupils, thus adapting to the classroom a form of the teaching situation at home. The class could also be divided into small group sessions, so that pupils could interact with one or a small group of pupils. In this way the cooperative problem-solving learning situations that were often used among peers could also be used in classrooms.

These alternative forms of interactions are new, and should be developed and tested. The technique could be developed and disseminated through the preservice and in-service teacher-training programs. It should be borne in mind that these alternatives are not seen as replacing forms of interaction that are peculiar to schools, but rather as supplementing them.

2. Methods for Studying Communication

The method for data collection and analysis used in this study
was found to be quite suitable for studying the process of communi-
cation in relation to social and cultural background. Previous
methods tended to focus on the communication in one social setting
only. This resulted in a narrow definition of communication, because
an individual's total repertoire of strategies for communication can
only be identified in various social situations where he interacts
with other participants of different age, social relations, and so
forth. The dynamic, flu id, characteristics of the process of commun-
ication are not easily replicated in a laboratory situation, and
relying on data from laboratory tasks only would not give a total
view of the process either, as much valuable data on the process
may be lost or not activated.

The data from this exploratory study, which analyzed spontan-
eous communication in various social situations could be used to
develop a general theory of the communicative process and to identify
areas for controlled study under laboratory or semi-natural conditions.

a. Collection of Data

Data should be natural, spontaneous interactions, for only
then can the process of communication be reflected and studied.
These data could later be used to identify areas and variables that
are important in the process, and the ways in which these variables
produce interactions and selection of strategies for both interpre-
ting and expressing meanings.

In order to get a good general picture of the process and identify the variables, it was important that the process be studied in its natural environment. Because communication is.strongly influenced by the social context, that context must be taken into account. The social context includes the participants, social relations, closeness and distance, and so on. These are not verbalized but are communicated through linguistic forms and other contextual and paralinguistic cues. Thus, data collection should also include observations and notes about the particular interactions.

It would have been ideal if videotapes of the interactions could have been obtained, but it would have been too expensive for this study. In addition, the techniques of videotape may affect the direction of the interaction. In order to get videotapes of each participant, several cameras must be used. The bright lights and number of people manipulating cameras and tape recorder would affect the interaction. So that there would have to be a trade-off, between maintaining the natural situation of the communication and trying to capture all possible variables on camera with the risk of manipulating the context and situation.

The issue of videotaping will have to be resolved, and perhaps inexpensive, inconspicuous, new equipment will help. It may even be adequate to audiotape and keep observational notes on the events. But the observers will have to be familiar with the culture of the people they are studying, and be carefully trained to pick up relevant variables.

b. Analysis of Data

The frameworks used for analysis of data were Gumperz's conversational analysis, and Pascual-Leone's theory of constructive operators.

Gumperz's conversational analysis provided a good way to describe and explain strategies for communication used during classroom and outside-classroom interactions. In particular, it took into account the social elements that influenced the meaning and intent of the interactions. This framework was also useful in identifying and diagnosing instances of ineffective communication. Thus, critical social and cognitive variables, and the ways in which they interact with each other, were identified and isolated.

This analysis was in its formative stage. There was no quantitative component in the analysis yet, so there were many lengthy descriptions of interactions. These descriptions could not be easily compared and quantified. Also, the analysis dealt with episodes in their entirety, not with the step-by-step development of the event. For this part of the analysis, we turned to Pascual-Leone's theory of constructive operators.

Pascual-Leone's theory of constructive operators provided a framework for analyzing a task in a minute step-by-step, moment-to-moment development of the event. It has been used previously to analyze cognitive tasks, when the variables under study have been controlled, so it was easier to identify and account for all the schemes that had or had not been activated. But for a communicative episode, where data were collected during natural, spontaneous

conversations, the number of variables and their interactions were too numerous. It was difficult to adapt the analysis to the communication data in this study. However, the analysis of three episodes done on this framework did suggest the interactions between the variables, and allowed further detailed analysis and diagnosis of the dynamics between the variables, and the parts played by various variables in determining a subject's performance. In particular, this framework accounts for the cognitive basis of the subject's performance. The framework could be further refined to analyze communicative events.

Appendix A

Some differences between Bahasa Malaysia and Dialect Kedah

The forms of the language are similar except for some differences in grammatical features. These are as follows:

(a) Pronunciation of words

For some common words in Bahasa Malaysia and Dialect Kedah, Dialect Kedah changes the last syllable of the word in the following manner:

- ending "ar" or "er" changed to a soft glottal stop, e.g.,

Bahasa Malaysia	Dialect Kedah	English Equivalent
dengar	*dengak*	(hear)
ayer	*ayak*	(water)

- ending "al" changed to a dipthong "ai", e.g.,

Bahasa Malaysia	Dialect Kedah	English Equivalent
pasal	*pasai*	(reason)

(b) Selection of alternative words

Particular words were different in Dialect Kedah, e.g.,

Bahasa Malaysia	Dialect Kedah	English Equivalent
kadang-kadang	*tekoh-tekoh*	(sometimes)

(c) Abbreviation of words

Dialect speakers abbreviated common words, e.g.,

Bahasa Malaysia	Dialect Kedah	English Equivalent
tidak	*dak/tak*	(no, not)
mari	*mai*	(come)

(d) Use of suffix and prefixes

Dialect uses omit most prefixes for verbs, e.g., "men,"
"ber," and substitute "kena" for preposition "di,", e.g.,

Bahasa Malaysia	Dialect Kedah	English Equivalent
mencari	*cari*	(look for, search)
bermain	*main*	(play, playing)
di cari	*kena cari*	(looked for, searched)

(e) Use of particles

Many particles, e.g., "la," "ha," "hm," and "lah" were used
a lot in dialect interactions. Most of these particles were
used to smooth and/or soften directives or requests for
information.

(f) Pronouns of familiarity and politeness

Pronouns when used in informal situations denote familiarity,
but when used in formal or written forms, would be interpreted
as impolite. This rule of familiarity and politeness was not
particular to Kedah Dialect only, it also applied to other
regional dialects.

Bahasa Malaysia	Dialect Kedah	English Equivalent
saya	*aku/kami*	I
kami	*kami*	us
awak	*kamu*	you
dia	*dia/depa*	he/she

(g) Sentence construction

Dialect sentences tended to be briefer, the participants often
made assumptions on shared information that was not verbalized.

Appendix B

Notation to identify episodes

  All episodes could be identified from the numbers beside each, in the following manner:

$$\underset{1}{T1F} / \underset{2}{AH} / \underset{3}{5}$$

1 indicates the subject:

    T - Teacher

    P - Pupil

    F - Female

    M - Male

    1, 2, etc. to identify individual subjects

2 indicates the kind of data:

    AH - At home, home interactions

    Pr - Peer, peer interactions

    NB - Nested boxes, a simulated teaching-learning situation

    Int - Interview

    El. Sc. - Elementary Science

    RT/RK - Reading, in either T or K classes

    LT/LK - Language, in either T or K classes

3 paging on the transcription

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