CHAPTER 2

LITERATURE REVIEW

This review will examine the pattern of classroom behaviour from 1912 onwards, the relation between interaction and language learning and peer group talk. It will focus on the nature of language in classrooms primarily on teacher-student and student-student interactions.

The first major systematic study of classroom behaviour was conducted by Romiett Steven in 1912. Her study revealed that questioning practices often resembled a recitation where teacher talk dominated, the major activity was asking and reacting to questions and the rate of question-asking ranged from one to four questions per minute (Hoetker & Ahlbrand, 1969). Subsequent studies from the turn of the century to about 1950 revealed that the question-answer recitation approach was typical classroom behaviour despite the fact that successive generations of educational thinkers raised doubts about the effectiveness of the rapid-fire, question-answer pattern of instruction.

In 1966, Bellack conducted a study on the verbal behaviour of 15 high school teachers and 345 pupils in 15 New York City areas. Bellack summarised the results in a set of descriptive 'rules of the language game of teaching.' He found that the roles of teachers and pupils were clearly delineated. The teacher usually structured the lesson and then solicited for responses. The students' task was to respond to teacher's solicitations. Verbal interchange occured at an

average rate of slightly less than two cycles per minute. It appeared that during that period this sequence somewhat influenced teacher training. Much of the training focused on the skill of asking questions (Hoetker & Ahlbrand, 1969). However, to be noted is that many teacher training programs in recent years give less emphasis to the question-answer sequence of the past.

Researchers including Sinclair & Coulthard (1975) and Mehan (1979) have also noted that classroom interactions generally have a 3-part structure (IRE sequence), that is, the teacher initiates a question, the student responds and the teacher evaluates the response (Cazden, 1988; Johnson, 1995). According to Bloom (1994), several researchers have suggested that IRE sequences limited substantive classroom discussions, skewed learning toward cognitive processing at lower levels and hindered students' participation. However, other researchers suggested that IRE sequences could provide substantive discussion depending on how it was conducted and on the nature and content of the teacher's initiation and evaluation. Bloom (1994) and Heap (1980, 1988) were of the opinion that IRE sequences might help clarify to students what knowledge they were responsible for knowing.

The view of teacher dominance in classroom talk was consistent with the views of other later researchers who studied classroom talk at middle and high school levels (Barnes, Britton & Rosen, 1971; Cazden, 1988). Edward & Mercer's (1987) study quoted in Dobbs (1995, p 34) showed that "across a wide range of teachers, classrooms and even countries", teachers talked about 66% of the time. Even in one-on-one tutorials and conferences, teachers tended to

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monopolize the interaction. Such monopoly was used to control students' behavior and the content of students talk (Cazden, 1988; Stubbs, 1983 quoted in Alvermann et. al., 1990).

In most classroom discourse, asking questions is central to teacher-talk (Dobbs, 1995). A 1990 study by Forrestal (Dobbs, 1995) also showed that 60% of the teacher-talk revolved round asking questions - mostly display questions which teachers already had answers to. Display questions though useful in checking comprehension were never asked in non-academic situations and were, therefore, not suitable model for L2 students. Asking real or referential questions about sudents' opinions was a better gauge of students' comprehension on a topic. It boosted students' self-esteem because they felt that their ideas and feelings count. Moreover, it helped them exercise analytical and critical thinking skills (Dobbs, 1995).

According to Dobbs (1995) teachers usually adjusted their speaking speed to students' comprehension ability. He further maintained that it was better to overestimate than underestimate students' abilities to avoid offending them. Forrestal's (1990) study cited in Dobbs (1995) showed that the average length of time a teacher allowed for a response was only one second. This was inadequate time. With increased wait time, students were more likely to respond, used more advanced language and reasoning and be more expansive. Three seconds of wait time was recommended (Cazden, 1988).

Having reviewed the literature on patterns of classroom discourse over the last several decades, attention will now focus on the relation betweeen class interaction and learning.

2.1. RELATION BETWEEN CLASSROOM DISCOURSE & LEARNING

Research on turn-taking in classroom interaction had used terms like 'high input generators' (HIG) and 'low input generators' (LIG) to document turn-taking. These terms were introduced by Seliger (1983) in a study on 3 HIGs and 3 LIGs. He investigated the relationship between learners' participation pattern and their ability to master English. He found that the HIGs outperformed the LIGs in English achievement and had more out-of-class contact with native English speakers. He concluded that "learners who initiate interaction are better able to turn input (language understood) into intake (language used)". (Seliger, 1983).

Seliger conducted another study in which he investigated the relationship between errors and participation. He found that HIGs produced more language and, hence, more frequent errors than LIGs. A higher percentage of the LIGs' errors were due to first language interference than were HIGs' errors. Therefore, more errors did not mean less learning by learners.

Allwright (1991) pointed out that there were some limitations in Seliger's studies. Since only 6 subjects were involved, the studies must necessarily be considered as pilot studies. The results might not be reliable because Seliger did

not examine the performance of other members of the class. If their data were included, there might be no significant differences between the HIGs and LIGs as revealed in the studies of other researchers.

Slimani (1987) quoted in Allwright (1991) built on the work of Seliger's and used his method of analysis as well. She used the term 'uptake' for any information or skills learners claimed to have obtained from language lessons. She was unable to confirm Seliger's positive findings. There was no evidence that interaction led to progress. However, her work revealed that more proficient learners were willing to interact because they were more proficient and found interaction less stressful. There was also a relationship between proficient interaction and uptake. The proficient learners claimed that 50% of what they learned was from interaction they had participated in. The less proficient learners found it more profitable to listen than participate verbally.

In another study quoted by Allwright (1991), Sato (1982) used a quantitative analysis to examine learners' turn-getting behavior. She investigated the relationship between cultural traits and discourse patterns. She reinforced the stereotyping of Asian students being passive and quiet learners. These students were found to take fewer self-selected turns and teachers allocated fewer turns to them. The Asian students tended to bid more than other learners before speaking. Non-Asian learners spoke more spontaneously. However, Asian learners seemed to be more restrained in class participation.

The findings by these researchers were consistent with Sinclair's (1987) view. He pointed out the difficulty in establishing a direct relationship between

language and learning. This was because discourse analysis focused on the way people used language to pursue their objectives. It described behavior which was public, which followed social rules and which involved more than one person. In contrast, an individual's learning was a private, inner mental process. It was difficult to, thus, see the relation between language and learning.

The 1980s saw a linguistic turn in educational research. It looked at classroom interaction from a new perspective. Since language is both the medium and content of classroom discourse, descriptions of classroom life need to consider language use and its complexities.

McCarthey (1994) conducted a study to compare the nature of teacher talk to students' subsequent talk and the texts students produced. She found that three out of four students, to an extent, drew from the classroom discourse and transformed their text into something uniquely original. However, the fourth student drew from other past experiences rather than from the classroom dialogue because of miscommunication between student and teacher.

Bloom (1994) came up with a different perspective on classroom discourse. According to him, there was a need to conceptualize (rather than merely connect) teacher talk and student literacy. He raised an important issue when he pointed out that teacher talk and student literacy could not be seen as isolated entities in themselves. It was still unclear how they were related to each other or whether to describe classroom literacy events by separating teacher talk and students literacy. Rather, researchers need to conceptualise linkages between

and among events. What was needed was to see the influence of one event on another and the conceptualization of relationships of various language events.

2.2. PEER GROUP TALK

This section will focus on peer-group talk. It will look at a variety of situations involving teacher-fronted versus student-centered discussion, discussion involving active students with passive students and small work groups. According to Sinclair (1987), peer talk can and do transfer features of mutual support which is missing in teacher-led discourse.

A study involving a teacher-fronted and student-centred lesson was that of Pica (1987). According to Pica, extensive research revealed that the learning environment must include opportunities for learners to engage in meaningful social interaction to discover the linguistic and sociolinguistic rules necessary for second language comprehension and production. The social interaction most appropriate to interlanguage development was that in which learners and interlocutors shared a need for mutual understanding. This need could be met when the learner and interlocutors modified and restructured their interaction as a result of their requests for clarification, comprehension or confirmation.

Based on the above premise, Pica conducted a series of studies to examine the interactional modification of students engaged in two kinds of classroom activities, that is, a decision-making and information-exchange activities carried out in two versions, one involving teacher participation and, the other, student-

student participation. The findings revealed a low interactional modification in teacher-fronted lesson for both decision-making discussion (11%) and the information-exchange task (15%). However, the student-student participation lesson revealed a four-fold increase in interactional modification between decision-making discussion (6%) and information-exchange task (24%). The low interactional modification (6%) in the former was due to the monopoly of interaction by more proficient students resulting in a 'group' decision. In contrast, there was more interactional restructuring (24%) in the information-exchange activity because of the need to work together to complete a task. Thus, the study led to the conclusion that activities which depended on information exchange and which emphasized collaboration among students and an equal share of responsibility would assist learners' language development.

Another factor that may affect the communicative effectiveness of groups in a second language is a combination of active and passive learners. Cameron & Epling (1989) investigated the performance of a combination of twenty-four pairs of active and passive adult non-native speakers of English and compared success on a 2-way problem solving task, discrimination task and attention task. Discrimination task involved items present in both pictures but arranged differently while attention task involved items present in one picture but not in the other. Participants interacted with one another to find the difference (FD) between pictures. Active subjects were randomly assigned to an Active-Active (A-A) group or an Active-Passive (A-P) group and passive subjects to the A-A group or a Passive-Passive (P-P) group yielding eight pairs of subjects in each

group. However, pairs were matched within each group for sex and randomly assigned to a same-sex partner.

The study revealed that for all three groups, performance was better on the discrimination tasks because both partners had items to talk about than on the attention task where only one partner had information to communicate. Moreover, both the A-A and A-P groups performed better than the P-P group in both tasks. However, there was no effect of sex on success. A major finding was that active pairs of ESL students were better at task solution than passive pairs. When a passive student was paired with an active person, that pair was equally as effective at solving problem as the active-active pairs. Thus, a useful strategy for improving the performance of passive students was to make them interact with active ones.

The study also revealed some important characteristics of a conversation. It was found that time on task and rate of communication did not differ significantly across the three dyads. Instead of the active student dominating topic initiation in the A-P dyads, there was even distribution of initiations across partners. This meant that active students did not dominate conversation when paired with passive students. This conclusion was strengthened when a comparison was made between the A-P group and the other two groups. The result was that one member of the pair in the A-A and P-P groups 'dominated' the conversation as much or more than the active students in the A-P group.

Another study by Alvermann (1995/96) revealed that 'talk-alike' groups where the out-spoken students were grouped separately from the quiet ones who

were better listeners would give a sense of identity and build self-esteem in quiet students who may be intimidated by their more voluble peers.

Finally, small group and pair activities are increasingly being accepted as supplements to teacher-directed large group discussions. They provide occasions for learners to take the initiative to become involved in ongoing talk as conversationalists and to tailor input quality to their levels of comprehension through a type of interactive work termed 'negotiation'. Kinginger (1994) defined negotiation as a series of interactional modifications (eg. repetition, clarification, requests, and comprehension checks) which were counted for each interaction observed. The greater the number of modifications, the more the participation pattern was believed to increase the language learning process. The resultant negotiated input would become comprehensible and available to the learner as 'intake'. It was possible to assess the extent learners exercise initiative in structuring classroom talk. Kinginger applied Van Lier's pilot coding scheme which explored the degree of learners' participation in topic control, turn-taking and sequencing.

Kinginger's study revealed that practice in conversation management affected the development of discourse and strategic competence. When learners were given opportunities to structure their own conversations as in informal discussions, they were able to control topic, turn allocation and sequencing not allowed in a teacher-fronted lesson, thereby, gaining experience in taking initiative. This experience might lead to higher levels of communicative

confidence. In tasks where activities were directed, there was little conversational initiative.

It was also found that active participation in a conversation required careful attention to ongoing talk. Since grammatical competence was acquired through tailoring talk to the learner's current level of competence, then coversational initiative would have a positive effect in most learning environments. Thus learner-centered tasks would have a significant role to play in instruction.

Ernst (1994) looked at how a group activity called the 'talking circle' could provide opportunities for learners to practice and engage in a meaningful interaction. The talking circle focused on the content of students' talk, the social requirements for participation and the use of different communicative functions. In the opinion of researchers like Allwright (1980) and Pica (1987) relevant conversation and instructional exchanges could provide opportunities for learners to practice second language skills, to test their hypothesis about how the language works and to get useful feedback. Such meaningful conversation exchanges were not only for the participating speaker but also for those who were listening. By listening to other students, learners could observe and, later practiced different communication strategies used by others to keep the flow of conversation.

In Ernst's study, the content of talk was related to procedural matters and students' personal experience. The characteristics of students' talk were seen at three levels : topics discussed involved personal experience, contributions to talk

were in the form of narration and speakers were concerned with conveying meaning than presenting linguistically correct information. Another finding was that any change in the aim of teacher talk produced different outcome in student talk. When the teacher was the initiator, students merely responded; when the teacher asked display questions, students' responses were brief, mere repetitions and with little elaboration. Thus, student participation and language use were restricted or facilitated depending on the type of questions asked, the kind of feedback provided, the extension and organization of turns and who had control of the topics. Thus, the role of teachers in second language classrooms is decisive in enhancing or constraining language use and language learning.

Ernst's study had several implications. If students were to use the language, they needed more practice in turn taking, interrupting and listening activity. They needed to be in a class environment where conversation and negotiation were encouraged, supported and monitored by the teacher. In addition, when students had control over the topic of conversation, they would use a variety of communicative strategies to overcome problems of communicating. When the topics discussed were of interest to the students, when students could use their language skills to express thoughts and feelings, when the conversation offered students a close link between what was being said and the situation in which it was being said, then students would have more opportunities to practice the language and to negotiate meaning.

A study undertaken by Bygate in 1988 examined how group interaction could help language learning.. Her study was based on theoretical arguments that

students learned a language by using it. Activities used to promote language development in the classroom often involved group work where oral discourse was used. Oral discourse did not have to be in full finite sentences compared to written discourse because of the speaker's and listener's reciprocal and mutual knowledge of a situation. In short, oral syntax was negotiable. Oral language also includes the formulation of turns like hesitations, checks and fumbles which made up a move. It was in the build-up to the moves that language learning took place. This was the area where oral interaction contributed to language learning. To study how oral discourse contributed to language learning, Bygate looked at the use of dependent units (noun, adjective, adverbial and verb groups, prepositional phrases and subordinate clauses), and surface relations (repetition, reduction, expansion, substitution, framing/completion and markers) and how they related to dependent units (satellite units).

Bygate's study revealed that learners' interaction offered the learner the flexibility in choosing the most efficient syntactic units for communication. This enabled them to follow their own path towards integrating the grammar of the language into their oral skill. For instance, the learner could produce dependent units in the context of discourse without having to produce 'complete sentence'. Alternatively, since oral production was supported by spoken discourse via surface relation, it could help in accessing vocabulary from memory. Repetition devices could give speakers time to assemble their response. Thus, the flexibility of oral discourse made it easier for the learner to pick up a lexical item or structure offered by a colleague, or else recover it from memory, before

proceeding to weaving it into a phrase or clause. Finally, oral work allowed a speaker to adjust his choice of expression, using his interlocutor as a sounding board.

The above findings on peer interaction revealed some of the benefits of a student-centred discussion. Johnson & Johnson (1985) reviewed extensive research on student-student interaction dating back to the late 1800s. Their data suggested that cooperative learning experiences tended to promote more learning even over a range of age groups, subject areas and learning activities. However, the gap in achievement favoring cooperation widened when the learning tasks were more difficult (ie. problem solving, decision-making, conceptual learning). When achievement and student-student interaction were examined by ability level, the lower one-third of the students gained more than the middle and upper third of the students in cooperative setting. The need to talk about information and ideas rather than just think about them was one of the variables contributing to higher achievement. Moreover, retention of information and the development of specific strategies were enhanced for all students by cooperative interaction. In addition, collaborative learning experiences promoted higher motivation to learn, produced more positive attitudes toward   instructional experiences and the instructors and were linked to higher levels of self-esteem and healthier processes for deriving conclusions about one's self-worth.

2.3. SUMMARY

Taken together, the findings of previous studies show that the pattern of discourse since 1912 has not changed significantly. It is still largely teacher-dominated and asking questions is still a central characteristic in teacher talk. Current estimates of the use of small group learning indicate that students in American schools work together only 7% to 20% of the time (Johnson & Johnson, 1985). A more controversial issue is the relationship between interaction and learning. While some researchers do not see a relationship between interaction and achievement, others are of the opinion that teacher talk does enhance learning. Bloom strikes a balance by stressing the need to conceptualise interaction and literacy.