CHAPTER 1

THE EDUCATIONAL CONTEXT OF THE STUDY

1.0 Introduction

Education at the tertiary level in India is dominated by the lecture mode of instruction. The medium of instruction at many centres is English. On account of inadequate library facilities and the absence of any effective media-based support, a difficult circumstance in which teaching/learning takes place, students are highly dependent on lectures. Against this back­ground, the present study is an investigation of the cognitive operations and processes related to teaching-learning in the existing lecture-based situation. It seeks to identify the learning strategies and skills that would enhance students' learning from lectures, and to devise means for imparting such skills to them. The research programme outlined here is based on two premises. They are firstly, cognitive processes students engage in when listening to academic discourse are of crucial importance, and secondly, the strategies that are involved within the cognitive processes can be modified and developed through training and instruction to make them more effective for better processing of input. The investigation which aims to study certain phenomena is thus empirical in nature.
Given the practical educational context of the study, a need-based approach to the problems of learning is adopted. There is a commitment to locating students' needs in the existing set-up and finding the means of meeting these needs. This admittedly falls short of analyzing (with a view to improving) the entire system, curriculum, the planning and delivery of lectures and students' skills.

1.1 The aims of the study

The central objective of the study is to identify the cognitive learning strategies that underlie effective learning from subject lectures, and to work out means of developing these strategies in learners. As the acquisition of subject knowledge by students is not restricted to the lecture situation in the classroom, the use of appropriate strategies before and after class hours is also considered. The study attempts to identify the learning strategies to be used through pre-, while and post-lecture tasks, that would be most useful in acquiring lecture information.

The study is based on the premise that college students do not get as much benefit from the instruction imparted through lectures as they should. Various deficiencies in the students' learning resources may be responsible for this low effectiveness.
Locating these and then suggesting relevant guidance is what the present study aims at. It attempts specifically to find out the problems in comprehending the information presented, the reasons for inadequate use and exploitation of the lectures; and the extent of use of the information presented for future purpose. The main aim of the study is to alter student behaviour by way of training them to use note-taking as a strategy for maximum use of lecture information. The research does not intend to bring about any change in the subject lectures or the way the lectures are delivered. This is not within the perview of the present research. The study all through aims to bring about the change in the learning process from the learner's perspective. Therefore the training suggested is for the students in order to make them aware of the importance of the use of learning strategies. Intake and input are closely related to each other, i.e. they are interactive in nature. It is the listener's responsibility to convert input to intake. This means that the way and the amount of information internalized would very much relate to the kind of input or the nature of the discipline that the learners are exposed to. The learner's attitude towards the input, i.e. the subject and the topic in a subject, would influence the uptake. Therefore student behaviour in terms of how they look at the entire process of learning, which would involve using appropriate learning strategies, would have to be trained.
1.2 The educational context of the study

Lecturing is the chief mode of instruction in different subjects at the tertiary level and is foreseen as remaining the main mode of presentation for a long time. A lecture traditionally is a way of imparting information and also provides a context for learning. In colleges where English is the medium of instruction, lectures in all subjects are delivered in English. Students spend several hours listening to lectures. Even if this quantum were to be reduced in keeping with new pedagogic approaches, lecturing will remain an important component of college level instruction. Finding ways of making it more productive is considered very necessary. One of the objectives of instruction is to make the learner independent in relation to activities of learning. The present study examines the possibility of introducing practice in activities which require student participation and involvement in order to make them more independent. Being able to employ the strategies to receive information adequately, is essential and is considered an integral part of classroom learning. The study therefore focusses on the use of learning strategies for acquisition of subject information. At the tertiary level, most of the students are expected to have a basic proficiency in the language. However, it is probably true that most students have problems with certain features of the lecture mode of instruction as presented by their lecturers. The
features of spoken discourse also form an essential part of their academic discourse. It is argued that students need training in comprehending lectures in English in order to enable them to cope with the acquisition of the subject matter. Students will have to understand the language used to convey the subject matter being presented as both language and subject knowledge are closely interlinked. In order to help students acquire a better grasp of the presented subject information, the nature of discourse and vocabulary which tend to be subject-specific, will have to be taken into account.

1.3 Need for the present study

The need for undertaking the study arose out of the existing unsatisfactory teaching/learning situation at the undergraduate classes. An earlier study conducted by the researcher - "An investigation into undergraduate students' proficiency in listening comprehension and note-taking" (1978), provides the empirical basis and the justification for the study. The findings of Survey-1 and 2 conducted show evidence of students not benefitting from lectures, or the lectures not contributing much to student learning. The study sets out to investigate the learning process involved in the comprehension and use of lecture information. There have been some experiments related to the skill of note-taking while listening, outside
India. Experiments were conducted by Di Vesta and Gray (1970); Howe and Godfrey (1977); Hartley and Davies (1978); Carrier, Titus et al. (1981), Peck and Hannafin (1983) (see Chapter 2). But these studies were generally limited to one particular skill and did not look at other learning strategies contributing to the learning process as a whole. Some case studies suggest that academic skills are best taught in connection with authentic content material. (Adamson, 1990). From research it is evident that English proficiency in students does not correlate with academic success. One reason is that students lack effective academic skills, one of the important ones being that of note-taking. The present study specifically relates to the problems of lecture comprehension at the tertiary level.

1.4 **Cognitive operations involved in the lecture situation**

The study concentrates primarily on learner activity i.e., involvement of the learner in the learning process, and less on subject matter presentation. Students at the tertiary level need to develop 'strategies' or become conscious of the learning process and ultimately discover strategies for acquiring and organising their own knowledge. Acquisition of information, which is not just a temporary intake of information but the assimilation and use of this input, is not fully realised through natural processing mechanism alone. It is aided by the use of conscious learning strategies related to specific
tasks which the learner adopts. Natural processing mechanism here means encoding information without being consciously aware of using a learning strategy. This simply refers to the automatic auditory processing which includes auditory memory, both short and long term. Use of learning strategies by students would be a conscious process which they could be trained in.

In this context it is necessary to explain what the term 'strategy' refers to in the study. Rigney (1978) has stated that -

"A strategy may be interpreted as signifying operations and procedures that a learner may use to acquire, to retain and to retrieve different kinds of knowledge." (pp.170-202)

According to Dansereau (1978),

"A strategy is considered to be a learner-based technique that, when acquired, would enable the individual to function effectively when confronted with the (a) identification of important, unfamiliar and difficult material; (b) application of techniques for comprehension and retention of circumstances; (c) efficient retrieval of information under appropriate circumstances, and (d) effective coping with internal and external distractions while these other processes are being employed." (pp.1-26)

The study adopts the general meaning of strategies as conscious learning processes that help in comprehension, retention,
retrieval and utilization of the information, which is what students engage in during and after lecture classes. These strategies are also referred to in the study as information-processing strategies. Activities relate to the actual tasks that students engage in by way of implementation of the strategies. Experimentally, the present study focusses only on the learning strategies which are conscious processes of information processing. It is necessary to discuss the activities embodying these strategies at the practical level.

Comprehension of lectures in different subjects requires the use of different cognitive abilities like inferring, interpreting, evaluating and reasoning. The main student activity in the lecture is that of note-taking while listening. Therefore the study begins by focussing on this particular activity which is generally assumed to aid comprehension and long term memory, especially when students are exposed to lengthy, difficult subject matter and examined at the end of the year.

Thus the skill of note-taking during a lecture mainly serves two purposes. Firstly, it serves as an external memory aid, and secondly, as an aid to comprehension and encoding process. Notes taken down in a classroom situation, when rehearsed later, facilitates long-term retention. The processes of decoding, encoding and interpretation involved in comprehension
of a message becomes easier when systematic notes are taken down and is followed by an activity or task based on the notes taken. Using notes for later reference is one way of consolidating all that is learnt. Note-taking is an instrumental activity as it has an important function in mediating between student's perception of the task or information and what he eventually learns. Thirdly, one of the most readily available sources of information which helps students in coping with the forthcoming examinations are the lecture notes. A student's job is to organize these materials so that they would be useful later. Note-taking as an instrumental activity ultimately is a personal and individualistic activity. This finds support in what Lindsay and Norman, 1977 (in Rost 1990) have to say. They pointed out that there is a paradox in selecting what to note down as important: note-taking is a decision to defocus the text, and to focus on the act of writing. Listeners who are most attentive to the lecture, and possibly understanding more of the lecture content, might take the fewest notes. Therefore notes as taken down in class would not reflect students' comprehension abilities unless they are reviewed and reorganized. It is assumed that the reviewed forms of notes would be more meaningful to the students.

The study attempts to look at processes of learning as a whole. For successful comprehension and acquisition of information presented through lectures, student activities in the classroom alone are not adequate. Activities outside
class hours through the use of different strategies and skills are essential to consolidate the input. These are brought about through pre-lecture, during lecture and post-lecture activities (see Chapter 6). Within this framework, activities or tasks also involve comprehension of written texts, reviewing of notes, taking notes from texts, reference activity etc.

The study involves integration of skills for learning from lectures, and goes into the different aspects referred to above. The analysis thus identifies various activities, processes involved in comprehension. The following sections state more systematically the conceptual framework of the present study.

1.5 The research problem: basic hypotheses

This investigation into 'learning from lectures' by college students began with the following working hypotheses:

1. Students do not learn as much as they ought to form subject lectures in English that constitute the major component of the instructional input provided to them.

2. To the extent that inadequacies in students' learning resources are a contributory factor in the poor uptake from lectures, these inadequacies can be located and appropriate remedial inputs provided (in the form of special training).
A number of sub-hypotheses are involved in these two central arguments underlying the present study. They are:

1. Students do not understand lecture information to an adequate degree.

2. Students are unaware of cognitive strategies that can help them in processing information from lectures effectively for comprehension and acquisition.

3. Students engage in various activities such as taking notes in class (during lectures) and reading and revising them later; but they do so without consciously applying any strategies that could make their efforts more 'productive'.

4. The notes typically taken by students reflect their comprehension abilities in relation to the encoding strategies they use.

5(a). Understanding the basic structure of a discipline is beneficial for the assimilation of input.

5(b). The effective learning strategies particularly the strategy of noting will vary with tasks in different disciplines, reflecting the nature or structure of the subject.

Discussion

A distinction is being made in the study between the more or less habitual activity of taking down simple notes that many
students seem to engage in and the application of the strategy of note-taking (leading to selective and structured notes). The theoretical aspect of the study is concerned with the nature of effective learning strategies in the lecture situation, while the application aspect focuses on developing these needed capabilities in students.

1.6 The scope of the study

1. The research approaches the problem from the point of view of the student, i.e. the study deals with activities that involve student initiative and participation. Further it limits itself to students' problems in the classroom and how they are to be tackled by the students with teachers' guidance within the given situational constraints. The study focuses on the learning process and does not examine the instructional factors in any detail.

2. The study deals with three of the Humanities subjects, each of a very different nature. The three widely studied Arts subjects are: Economics, History and English Literature. These three subjects are taken as lecture input in the study. In the given context, the three subjects are considered useful from the point of view of the needs of the students. These are students going in for higher education with special subjects which are considered authentic input. For a text/input to be useful to the students for transfer of learning strategies, the texts
must be used in situations in which they are normally used for information gathering purposes. The study deals with typical lectures in three different subjects.

3. Third year B.A. students alone are taken up for the study. The main reason for this being, these students need the strategies the most, especially those going in for higher education, where they would need to listen to lectures and talks in their specialized subjects. It is assumed that most of these students are at a stage when they will be able to look at a subject with a broad perspective. It is assumed that they would be able to understand concepts, their relationships to each other, the principles involved, mode of inquiry etc., if they are given training in the use of appropriate learning strategies related to tasks based on understanding of the nature of the above subjects. Based on the survey findings, the study proposes to suggest guidelines for making better use of learning strategies related to specific activities.

The study therefore does not intend to test a series of hypotheses through systematic evaluation procedures but only attempts to see the feasibility of a working model by trying to find answers to certain questions. The study is more of a preparatory step towards a well constructed programme of instruction.
A basis for the intervention proposed

The generally observed unsatisfactory returns by way of student learning from lectures could be due to the following factors:

1. Some of the information is not attended to by the students.
2. Only a small part of what is attended to is comprehended.
3. Whatever little is comprehended in class, is not adequately used due to lack of awareness of the use of learning strategies related to specific tasks.

One way of approaching this problem of inefficient learning would be through giving students practice in using these learning strategies related to tasks on comprehension of lectures. Students are expected to be able to motivate themselves i.e., to challenge themselves to follow difficult presentations, to discover what parts could be of interest to them etc. This is made possible by developing/highlighting certain cognitive activities. As mentioned earlier, the aims of learning are partly determined by the needs of the students and these needs are related to the classroom skills which ought to be primarily learner-centred.
1.7 The methodological framework for the study

The study adopts the following design. The main stages are:

a. selecting a situation for investigation based on certain empirical hypotheses,
b. stating the theory related to teaching/learning process,
c. collecting data and compiling evidence through survey related to attitudes and responses,
d. analysing notes related to student abilities,
e. organising the evidence, and
f. stating implications and suggestions for improving learning from lectures.

The research problem as envisaged leads on to observing some of the conditions surrounding the study, which is then followed by the formulation of certain hypotheses. The data involves (a) analysis of students' needs and problems in the comprehension of lectures, and (b) teacher attitudes and abilities as derived from teacher response. On the basis of the data, various micro-skills or abilities (see Chapter 2) involved in lecture comprehension that students have to develop are stated. The stating of the micro-skills leads
on to identifying relevant objectives for dealing with the input.

The suggestions through tasks follow the objectives which are tried out with the students. The findings yield a few suggestions for improvement. The framework is as follows:

1. Empirical hypothesis.

2. Preliminary Survey 1 - Data
   (a) Observation of lecture situation
   (b) Teacher response
   (c) Student response.

Survey 2
   (a) Analysis of students' notes
   (b) Notes test and comprehension tests

Findings (evidence)

3. Theorizing from the evidence

4. Stating implications for improving learning from lectures.

1.8 Overview of the following chapters

Chapter two is divided into several sections, of which the first one deals with higher education and the role of English at the tertiary level. It focuses on the importance of language as a tool for conveying the meaning or message.
of the information presented. The section also presents the situation as it exists at the tertiary level, which include lectures, the profiles of the teacher and the student. The second section deals with the general perspective of the study, i.e., the learner-centred approach with implications leading on to learner-directed study. The sub-section on comprehension of lectures mainly presents different abilities involved in comprehending given information. The section also deals with the cognitive process involved in understanding and the factors that influence understanding of speech. How these are applicable to the learner in the classroom is also considered. The relationship between the natural processing mechanism and learning strategies are discussed. The learning strategies, what they are and their relevance in the context of the study are presented in the next sub-section. The final section presents a brief report on research done in this area.

Chapter three mainly deals with the empirical part of the study - Survey 1. The first section of the chapter presents the design, the objectives of the survey, the sample and the instruments used in the study. The second section reports the analysis and findings of the survey.

Chapter four first deals with the main learning strategy used by learners and other related strategies. Secondly, it briefly discusses the importance of the nature and differing demands of the subjects in an educational context.
It presents the concept of the basic nature of a subject. The different nature of each of the three disciplines are discussed.

Chapter five mainly deals with analysis of students' abilities through the strategy of note-taking in a lecture situation from two different perspectives. This is in fact the second part of the Survey, i.e. Survey-2.

Chapter six presents a working model of learning from a lecture and a feasibility study based on a suggested model of 'learning from a lecture'.

Chapter seven summarizes and concludes the interpretations and observations of the research findings based on the surveys and the feasibility study in relation to the main hypotheses. The next section presents reactions on certain key issues raised and their relevance in the context of higher education. The final section deals with the methodological, theoretical and pedagogical implications of the study and records a few suggestions for further research.

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1. **Student-centred**

In the present study, the focus is on the students, i.e. they being able to cope with the problems in the lecture set up through the use of various learning strategies while performing different tasks. The study emphasizes the active role of the student in the learning process. The approach very much involves the teacher initially, in making students aware of the ways of making lectures more useful. The study, however, aims to lead students on to developing abilities for more independent work.

2. **Survey-1** refers to Chapter-3 specifically, where a survey of the attitudes and responses of teachers and students is conducted.

Survey-2 refers to Chapter-5 which deals with an analysis of students' notes.

3. **Natural processing mechanism**

This refers to the automatic auditory processing which includes auditory memory, both short and long term, as opposed to other conscious processing skills and encoding strategies.
4. **Learning strategies**

The concept of 'learning strategies' according to Rigney and Dansereau is stated in Chapter 2. In the present study the strategies apply specifically to conscious processing of information. Initially students are expected to begin by conscious use of the strategies, which subsequently will lead to sub-conscious or automatic processing. In this sense cognitive learning strategies and information processing strategies are the same. Cognitive operations (abilities) and processes are different from strategies. While cognitive abilities are more sub-conscious processes, strategies are conscious processes used by the learner.

5. **Note-taking**

(a) This term refers to taking notes from lectures or spoken discourse;

(b) **Note-taking** is referred to as a learning strategy and not as a procedure in the present study. The focus is not so much on the format and organisation of notes as much as on recording and using information which are personally meaningful to the students and contributes directly to the comprehension process. 'Note-taking' as a cognitive learning strategy is considered more
individualistic depending on the topics and tasks to which it is applied. Note-taking in the present study is very much considered a strategy for aiding the process of comprehension, and not as a separate skill. The study therefore assesses students' comprehension abilities through their notes. However this could raise a problem where students might be fairly good at note-taking as a skill and not be able to comprehend the gist of the information presented where notes would have to be more meaningfully used. This raises a question as to what is the relationship between note-taking as a skill, with its conventions and organisational factors and note-taking as a strategy, which is more an aid to comprehension irrespective of the form in which notes are taken. There obviously is a relationship between these two functions but it is assumed that without paying too much attention to the format of the notes, the focus can be on the content as long as the notes are meaningful to the students.

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