Abstract

The investigation that this study undertakes is based on the premise that degree students are inadequately equipped to utilize properly the input from lectures which is the dominant teaching method. The study concentrates on the cognitive processes involved in listening to and comprehending lectures, and in the storage and retrieval for use of lecture-based information. It is argued that the nature of knowledge in different disciplines requires the deployment of different learning strategies. In consequence an attempt is made to identify such strategies based on the main activity of note-taking from lectures for three selected disciplines and develop means of training students to use them.

Taking into consideration the cognitive operations and the general conditions related to tertiary level education, the study attempts to evolve a working model of 'learning from a lecture'. The model emphasizes the importance of the interaction between students' use of both, cognitive processing mechanisms and conscious learning strategies for understanding the input. The result of such an interaction will facilitate comprehension and use of information. The model therefore indicates the functioning of learning tasks through pre-lecture, during-lecture and post-lecture activities, each contributing to comprehension of information received as lecture input at different processing stages.
The study therefore concentrates on two issues. They are the following:

(1) The identification and utilization of conscious learning strategies which serve to facilitate the processing of information at various stages.

(2) The imparting to students of an understanding of the basic nature and differing demands of a discipline which will improve their overall efficiency in the acquisition of information related to that discipline.

The activity of note-taking from lectures, generally used across disciplines in all classrooms, is the starting point of the present investigation. The study focusses on the effectiveness of the activity and strategy of taking and using notes for comprehension and consolidation of the information. Other learning strategies are related to this main strategy of note-taking, which provides the basic information for lectures. Here a distinction is made between note-taking as an 'activity' and note-taking as a 'strategy'. 'Activity' is referred to as an exercise undertaken by most students at the college level more as an aid to memory. Note-taking as a 'strategy' would mean a more conscious process on the part of the learner for internalising and using lecture information.

In the second stage of the study a survey is conducted which includes analysis of notes from two perspectives. At
one level, the analysis of students' notes looked mainly at information content in order to -

(a) assess the extent to which students' notes as taken down during lecture hours, reflect their activity in comprehension; and

(b) observe the effects of encoding information (taking notes) on factors such as attention and memory.

At another level, notes are qualitatively assessed focussing on the organisational aspect of the notes. The objectives are to -

(a) gauge through an analytical description of the 'organization', the extent to which note-taking is seen as a strategy for learning, where more conscious, active processing takes place, and

(b) assess the scope of the organisational aspect in students' notes for any evidence of their knowledge of the nature of a subject.

The proposed working model explores the relationship between the tasks, the learning strategies, and the discipline. The nature of the discipline, it is assumed, will influence the effectiveness with which a strategy is used, depending on the task type.
1. The survey indicates that -

(a) note-taking without the scope for review or use of the notes later, mainly serves as a storage mechanism;

(b) nothing substantial can be predicted about students' comprehension from notes as taken in class;

(c) the process of encoding in class, even if mechanical, involves some amount of decoding of the information even if it is for storage purpose; and

(d) notes as regards organization, vary in different disciplines only in terms of a very broad framework. These notes mainly reflect the way lectures were presented.

2. The findings of the study suggest that -

(i) students need to be made aware of the different learning strategies and given training and guidance in effective use of these strategies;

(ii) some of the tasks in the suggested working model which are based on the understanding of the basic nature of a discipline, would lead to improvement in students' way of processing and using lecture information. From this finding it is hypothesized that such training will make lectures more useful for the students;
and finally, the appropriate use of particular strategies, and the effectiveness with which a strategy is used (in this case, note-taking) can be made more effective by an awareness of the nature of the discipline and the topics within the subject. Different tasks which exploit the use of different strategies are therefore related to subject-specific skills that students would have to be competent at in order to understand the subject matter.