CHAPTER - VI

CONCLUSIONS AND IMPLICATIONS
The present study was undertaken to investigate if the students in open university adopt different approaches to learning than students in traditional university because of differences in learner, content and context characteristics and thus have differences in their academic performance.

It was assumed based on individual differences and cognitive theories of learning that students in open university may differ in their learner, content and context characteristics and adopt different approaches to learning than students in traditional university. It was further assumed that the differences in learner, content and context characteristics and approaches to learning of open university students may lead to different academic performance than students in traditional university.

Based on these assumptions, several hypotheses were laid down and tested. These may be listed as below:
Hypotheses

1. Students in open university will significantly differ from students in traditional university in terms of learner, content and context characteristics.

2. Students in open university will significantly differ from students in traditional university in their approaches to learning.

3. Learner, content and context characteristics will significantly correlate with approaches to learning of students both in open and traditional universities.

4. Learner, content and context characteristics will significantly correlate with academic performance of students both in open and traditional universities.

5. Academic performance of students in open university will significantly differ from students in traditional university.

6. Academic performance will significantly correlate with approaches to learning of students both in open and traditional universities.

7. Approaches to learning of students in open and traditional universities can be reliably predicted by using learner, content and context characteristics as predictors in the regression analysis.

8. Academic performance of students both in open and traditional universities can be reliably predicted by
using learner, content and context characteristics as well as approaches to learning as predictors.

Sample

The universe of population comprised of all students undergoing a course in Diploma in Management [DIM] under one open and two traditional universities. The selection of sample was done by following a three-stage procedure. In the first stage, information regarding the open university (i.e. IGNOU) and the variety of courses it offered was obtained. In the second stage, information regarding study centres was bagged in. In the third stage, the final sample selection was made.

The sample population for the study was drawn by following quota method of sampling. Out of 200 students selected for inclusion in the sample, 100 students were drawn from open university, viz., IGNOU [64 from Delhi region and 36 from Orissa region] and 100 from traditional university [that is 68 from Delhi University and 32 from Utkal University, Orissa]. Due to inadequate number of female students registered in the course, only male students were selected.

Research Design

Keeping the objectives of the study in view, an ex-post facto research design was used.
Variables

Measured Variables

a. Learner characteristics  
b. Content characteristics  
c. Context characteristics  
d. Approaches to Learning  
e. Academic Performance

Matching Variables

a. Type of course taken - Diploma in Management  
b. Nature of course  - Part-time  
c. Nature of students  - Sponsored candidates from all sectors having supervisory/ executive experiences  
d. Gender of students  - Male

Tools

A shortened version of Internal-External Control Scale [Rotter, 1966] was used to measure personal orientation. Approaches to learning was measured by a modified version of Approaches to Studying Inventory [Entwistle and Ramsden, 1983]. Student Perceptions Scale was devised anew in order to measure learner, content and context characteristics. All these tools were pilot tested and then used/administered. The underlying factor structure of all the instruments were identified. Besides, these
three instruments, marks/grades obtained in the final examination were taken as an index of academic performance.

**Analysis of Data**

Means and standard deviations were calculated for all the variables. The 't' test analysis was done to test the significance of differences between different group means on learner, content and context characteristics, approaches to learning and academic performance. Correlational analysis was carried out to determine the interrelationships among different variables, namely: learner, content and context characteristics, approaches to learning and academic performance. Finally, step-wise multiple regression analysis was done by taking learner, content and context characteristics as predictors and approaches to learning as predictand in one analysis and academic performance in another analysis.

**6.2 Findings and Conclusions**

1. Students in open traditional university significantly differed from those in open university in terms of their ultimate goals and perceptions of context characteristics. Significant differences were found between students in open and traditional universities in the city, in terms of their perceptions of overall content characteristics. Hypothesis one was thus, partially confirmed. The perceptions of
ultimate goals [learner characteristics]; quality of education [content characteristics]; feedback system, teacher-pupil interactions, peer-group interactions, administration and opportunity to acquire skills [content characteristics] assumed importance in differentiating open university students from traditional university students. Taylor et al. (1982) reported marked differences between students at the open university and conventional university in terms of their goals. The open university students showed predominantly personal goals, whereas students in conventional university had mainly academic or vocational goals. Although students in open university possessed realistic goals and were satisfied with the quality of education, their experience of institutional context/climate was less positive as compared to students in traditional university. The latter group perceived the environment more positive and supportive. Open university students were however, responsive to content characteristics like quality, presentation, form of expression, language used, relevance of course and assessment demands etc.

2. In metropoly, both open and traditional universities students differed significantly from each other in the use of strategic approaches to learning. On surface and deep approaches they did not differ significantly. Hypothesis two was also partly confirmed. Traditional university students
in the metropoly adopted strategic approaches to learning consistently. Open university students on the other hand, seemed to have partial reliance on surface and deep approaches to learning. Most probably, they were not sufficiently motivated and convinced to use desirable learning strategies. Evidence from researches in other countries [Watkins, 1985; Watkins and Astilla, 1985; Entwistle, 1985; and Selmes; 1986] showed that superficial/rote learning strategy was adequate for success at school level, and that students entered university having reliance largely on rote method of learning. Even if the institution emphasized on comprehension/meaningful learning and the subject matter required, students gave least importance to change their learning strategies. These results thus indicated the necessity for changing students' conceptions of teaching-learning processes in general, and approaches to learning in particular.

3. Some of the learner, content and context characteristics, correlated significantly with approaches to learning of students both in open and traditional university. Hypothesis three was partially accepted. It was evident that the socio-familial set up of traditional university students in the metropoly exerted positive influence on their level of motivation which in turn, determined adoption of specific learning strategies. In a similar vein, one's goal patterns and goal commitment whether immediate or
deferred, exerted maximum influence on one's study behaviour. Goal commitment embodied two types of motivational facets. The extrinsic facet dealt with the level of commitment to the attainment of qualifications, or earning a degree for that matter. Students having this motive/goal in mind, perceived career opportunities as they were so far barred by lack of qualifications, promotions and financial gains on course completion, improving one's status etc. as strong incentives for their behaviour.

The intrinsic motivational facet on the other hand, dealt with the level of interest in the subject matter itself or interest in learning for its own sake. If the subject matter matched with the students' level of interest and career aspirations, then the intrinsic motivation heightened, leading to better learning outcomes. Ramsden and Entwistle [1983] found that intrinsic motivation appeared as a factor in the list of desirable study traits of a deep approach: the ability to relate ideas and the use of evidence in arguments. Goal perceptions of open university students in the metropoly correlated with deep approach. Extrinsic motivation appeared more closely linked with the surface approach characterised by fear of failure and syllabus-boundness. Goal patterns of open university students in the city correlated with surface approach. Ramsden made use of another form of motivation namely,
achieving motivation which appeared in strategic approach. Traditional university students in the metropoly possessed pragmatic goals, which were positively associated with strategic approaches to learning.

Reasons for taking up the course were positively linked to different approaches. As far as the relationship between locus of control and approaches to learning was concerned, the results obtained were inconclusive. For open university students in the city, locus of control correlated positively with surface approach, whereas in the metropoly it was negative. There existed some evidences of a significant relationship between deeper level of learning and an internal locus of control [Watkins, 1984; Watkins and Astilla, 1984]. However, these were not sufficient to conclude that the relationship is causal in nature.

The quality of instruction and relevance of course significantly correlated with approaches to learning of students both in open and traditional universities. Instructions imparted by using either lecture method or printed materials were perceived by students in open and traditional universities qualitatively better than unassisted learning. Students in both the universities were similar in their perceived relevance of the course. Open university students however, perceived the sequencing of materials, the language used, level of difficulty etc.
positively. These influenced their approaches to learning too. They tended to adopt surface and deep approaches to learning. Students in classroom-based education perceived the assessment demands more conspicuously as compared to students in a distance education programme. This in turn, promoted the use of strategic approaches to learning. This finding is in agreement with Ramsden and Entwistle's (1983) findings.

Of all the context characteristics included in the study, the mode of delivery and employment potential of the programme correlated significantly with approaches to learning of students both in open and traditional universities. Approaches to learning of traditional university students both in metropoly and city significantly correlated with orientation, peer-group interactions, administration and ability to apply skills. For open university students in the metropoly, the approaches to learning correlated with orientation, opportunity to acquire skills and ability to apply skills, whereas the approaches to learning correlated with feedback system, peer-group interactions and administration in case of open university students in the city. Students in open university had very dissimilar perceptions of context-related characteristics, which restricted their reliance on strategic approaches to learning.
4. Some of the learner, content and context characteristics correlated significantly with academic performance both in open and traditional universities. Hypothesis four was thus partly confirmed. Academic performance of students in traditional university in the city significantly correlated with ultimate goals [learner characteristics]; relevance of course [content characteristics]; and employment potential of the programme [context characteristics] respectively. Academic performance of students in open university in the city correlated significantly with the mode of presentation and feedback system. The positive association of academic performance with feedback was also reported by Tuckman (1990b). They significantly differed from the students in traditional university in terms of academic performance.

5. It was found that students in open and traditional universities in the city differed significantly from each other on academic performance. Hypothesis five was accepted partially. The students in traditional university outperformed those in the open university. This finding was supported by Panda (1980) and Bahuguna (1986). The achievement of former was better due to the provision of better teaching facilities, conducive academic environment and many other factors.
6. Academic performance of students both in open and traditional universities correlated significantly with some dimensions of approaches to learning. Hypothesis six was thus partly confirmed.

The finding of positive association between approaches to learning and academic performance supported the findings by Marton and Saljo, 1976a,b; Biggs, 1979a; Ramsden and Entwistle, 1983; Das and Kirby, 1984; Ramsden et al., 1989; and Duckwall et al., 1991.

7. Approaches to learning adopted by students both in open and traditional universities could not be reliably predicted by taking learner, content and context characteristics as predictors. Hypothesis seven was not accepted. It appeared that different set of factors ought to be tried that may better explain the variance in approaches to learning.

8. Academic performance of students in traditional university in the metropoly could be predicted better by taking deep, surface and strategic approaches to learning as predictors. However, the accuracy of prediction in academic performance by using learner, content and context characteristics was not very high. Hypothesis eight was thus partly accepted.

It was observed that academic performance as well as
approaches to learning were influenced by learner, content and context characteristics both singly and jointly. However, the accuracy of prediction of academic performance as well as approaches to learning by using learner, content and context characteristics was not highly reliable. Despite the fact that learner, content and context characteristics had positive association with academic performance and approaches to learning, these did not prove very good predictors. Perhaps the very nature of students and management programmes counteracted with the possible interplay of learner, content and context characteristics. Since all the students were sponsored candidates, they never felt the need of either to excel others, or to take deep interest in the subject matter or of being involved in the institution itself. The main intention of majority of students was to earn a degree either for promotion or to please the superiors. However, even if students were largely unaware of their own intentions, goals, content of education and context of education etc., they made use of some learning strategies. In other words, students' study processes and behaviour are largely guided by their own motives and goals, personal orientations, background characteristics, prior level of knowledge about the subject matter, subject-related characteristics, difficulty level of the course offered, relevance and employment potentiality, feed-back system, mode of delivery, teacher-pupil and peer-
group interactions, administration, opportunity to acquire and apply skills.

The positive contribution of learner, content and context characteristics in determining approaches to learning had been recognised in several other studies. The personal preferences, values and motives predisposed a person to adopt a distinct study strategy (Biggs, 1979). Franssens (1977) had shown experimentally that a learning task perceived to be irrelevant, or which induced anxiety, reinforced the use of the surface approach. The perception of assessment system in terms of the factual knowledge that was required to be learned influenced students' learning behaviour substantially (Elton and Laurillard, 1979). Ramsden et al. (1989) reported that perceived school environments and pupil's learning were related systematically.

The incongruency between learner characteristics and content and context characteristics did exert a non-facilitatory effect on the adoption of appropriate learning strategies of students both in open and traditional universities. Effort should be made to attain congruency among these characteristics which could foster desirable learning strategies leading to better learning outcomes.
6.3 **Implications**

The findings of the present study seem to have several implications for students, educators, course designers, programme evaluators, administrators and policy makers. Some of these are discussed below.

Students in both the universities viz., open and traditional, need to be aware of their own intentions, motives, study orientations, task demands as well as the salient features of the learning context as these are the factors which profoundly affect their approaches to learning. They should realize the fact that learning incorporated the knowledge of facts and figures alongwith constructing meanings, abstracting ideas etc. The requisite skills for learning vary, whereas the inculcation of appropriate learning skills like application of learning strategies appropriate to the task and situation, using of organised methods of studying, information and retrieval skills, oral and written communication skills etc. add permanence to learning and result in deeper and better understanding. Students should be made responsible for and in control of their own learning. They should be convinced that their own methods and ways of tackling study problems are not the optimal one and can be changed if appropriately manipulated. Biggs and Rihns' (1984) study showed marked shifts from the surface approach towards the deep and
achieving approach following an intervention programme.

Educators need to be aware of the possible interplay of learner, content and context characteristics and their relation to approaches to learning and performance of students. Since the foremost duty of the educators is to help students learn, they can best perform this by assisting students to change the conceptions of learning and to become aware of their own learning processes. Students gain awareness when they are encouraged to articulate their own thoughts. It is through this process that students' over simplications and naive conceptions are revealed. Teachers should be aware of their role as a motivator not just a deliverer of instruction. They should help students to set goals and make plans regarding academic tasks. The goal must be valued and it must be seen as attainable. They should be qualified not only to teach the respective subject matter but also to teach students how to learn this subject matter well. A lot of the students' behaviour are guided by hidden curriculum which lead to the adoption of surface approach. Teachers should make every effort to minimize the discrepancy between formal curriculum and the hidden curriculum. They need to understand the effects of their teaching on students' attitudes and approaches. They should consider ways in which they can make explicit the type of learning that is expected and should adopt teaching methods
which promote active thought within a clear structure. They should deliver informational feedback to students at a regular interval. Telling students where they stood relative to others or to the teacher's expectations caused students to engage in more self-regulated performance [Tuckman and Sexton, 1989 b]. They should discourage the habitual use of surface approach and induce deep and achieving approaches to learning.

The surface learning can be discouraged by controlling factors like poor organisation, oversimplification, heavy work load, assessment demands, poor personal relations, lack of immediacy in feedback, inappropriate goals, lack of perceived relevance etc.

Deep learning is likely to result, provided students' interests are aroused and they are actively involved in the subject matter. Improving strategic approach depends largely on how students can be made aware of the ways of optimising their use of time and of monitoring their study activities.

Course designers need to be aware of the existing discrepancy between the proposed effects of structuring materials and their actual effects. The proposed effects envisage to ease the transfer of information and to promote meaningful learning. The actual effects may be the rote and mechanical learning. The
supplanting effects of cues in learning materials may enable students to avoid taking an active part in the learning process. In other words, the type of cues built into materials determine which ways students should approach the task. While designing the course materials, the provision should be made to consider the development of the learners' study strategies in compliance with content related characteristics. Course contents should be structured and organized in such a way that students can automatize their use of the learning strategies appropriate to the task and situation.

Course contents should be evaluated in the proper context before being released to the students. Success of the course depends on the language used, relevance, difficulty level, sequencing of materials, mode of presentation, form of expression, etc. Besides, much depends on the contexts which make or mar the sound of the course. Programme evaluators should ensure congruency between content and context characteristics. The structural and administrative ambiguities in the programme should be minimized. They should make note of the fact that for intense involvement of students in study, personal relevance of the contents is crucial.
Administrators should realize that the atmosphere created by the interaction between staff and students, and between teaching staff and clerical staff influenced students' perceptions of the institution as a whole. Efforts should be made to minimize the dissonance between staffs and students and among staffs. Moreover, administrators should be careful in implementing the policies and executing various programmes as these implicitly regulate students' learning behaviour.

Policy makers should be explicit about the quality of manpower trained through these programmes. Unless all institutions of higher learning ensure the development of personal knowledge and critical thinking among its students, the attainment of comparable quality in manpower would be an utopian dream. Policy makers should ensure that the open as well as traditional institutions of higher learning encourage deeper level of understanding and learning. They should not encourage and reward surface learning and reproduction of factual knowledge. In other words, models of systems planning should include qualitative measures of student learning into their analyses.

It was further observed that the open university courses (particularly DIM) were designed to promote analytical and conceptual comprehension of the
materials along with the application of ideas to the job situation. Only by adopting a deep approach, the student could relate and reflect on items of knowledge acquired. A cursory examination of students' approaches to learning revealed that these objectives were not actualized by students. They exhibited only partial reliance on deep approaches to learning. They, on the other hand, tended to rely on surface learning. Although students perceived the course materials qualitatively good and enriched, they lacked the motivation to focus on the intentional aspect of the materials. Policy makers should take note of this and should try to ensure conditions of deep learning. This can be done by creating optimal learning conditions and a supportive environment. Efforts should be made to enhance student motivation in the contact programmes and to maximize compliance among course content, pedagogy and the very manner in which students study. Qualitative face-to-face feedback should be given in detail to those who needed it, (as opposed to in written form) with suggestions for needed change. Strategy of contextualizing knowledge can be used to enhance the potential attractiveness of the task performance and to raise intrinsic motivation of students. This can be done by providing information to students about the context, on
which the knowledge gained (either procedural/conceptual) might be used. More so far the learners of the open university, who would otherwise fail to make use of the contents and skills acquired in this programme.

Programme co-ordinators of the study centre should make sure that the proper academic environment was generated for students. The academic environment should include the study package mailed to the student, the interaction via assignments, tutorial assistance and any other interaction between student and institution of either an academic or administrative nature. He should further ensure that timely attention be given to students' learning problems of any kind by the counsellor. Programme co-ordinators can monitor and influence students' level of interest and attitudes, thereby enhancing students' reliance on particular approaches to learning.

6.4 Limitations

1. The independent and interactive effects of several cognitive and non-cognitive factors like intelligence, creativity, cognitive style, personality, age etc. on approaches to learning and academic performance could not be studied in view of the scope of the problem as well as physical accessibility of students
particularly in open university.

2. The effects of student support services and academic stress on approaches to learning also could not be investigated.

3. Students' approaches to learning across different academic subjects or disciplines were not investigated.

4. Influence of gender on approaches to learning was not examined as female students were not many.

5. Despite the fact that nearly 170 study centres and 16 regional centres were in operation, the present study was limited to only two regional centres and five study centres, because of the problem of physical accessibility of students.

6.5 Suggestions

Enumerated below are some of the suggestions for further explorations in the area of student learning in general and distance education in particular.

1. The problem of the present study should further be explored using pre-post research design.

2. A longitudinal study should be designed to investigate students' approaches to learning at the beginning of the year and at the end of the year.

3. Independent and interactive effect(s) of learner, content and context factors on approaches to learning and academic performance across different subjects
should be examined using a factorial design.

4. The effects of gender and age on approaches to learning of students should be explored.

5. The results of the present study may be extended to examine other levels of education.

6. Motive-strategy congruency hypothesis should be tested following a longitudinal framework.

7. Using a pre-post design, the effect of attitudinal interventions on students' approaches to learning should be investigated.

8. The efficacy of tools used in the present study should further be tested.

9. The effect of content-specific and content-general strategies on approaches to learning and academic performance of students should be studied.

10. A correlational study should be made of effective media utilization, perceptions of optimal learning environment and approaches to learning of students.

11. A longitudinal study should be undertaken to investigate the relation of approaches to learning of students to their professional development.

12. The relation between approaches to learning and academic performance may be studied by taking other indicators of academic performance like self-ratings or peer-ratings etc. besides marks/grades obtained in the examination.