

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

In order to highlight the special features of the present study an attempt has been made to arrange the related literature in a comprehensive manner. The main emphasis of this chapter is to bring to light those studies and other related material which are applicable for the present investigation.

The studies are organised in a systematic manner, for example, under the semester system, trimester and quarter system have also been discussed. The courses of study, methods of teaching, and evaluation with all of its components have been discussed separately. Many of the studies of international and national levels selected for the review, may not have direct bearing on the present study but they lead to a comparatively better conceptual understanding of the semester system. For the sake of convenience the chapter has been divided under the following heads :

1. Semester System in foreign countries and in India.
2. Courses of Study in connection with the Semester System.
3. Methods of teaching in relation to the Semester System.
4. Evaluation in connection with the Semester system.
5. Implications drawn from the previous literature for the present study.

Semester System in Foreign Countries and in India

The sources for the review of literature on semester system include the suggestions of the various commissions and committees, books and articles of different educationists. Only a few available Indian studies have been quoted pertaining to the semester system. A few studies undertaken in foreign countries have been taken into consideration.

A committee report of Darmouth College, America (1957) states that the college changed from semester to three-term course programme from 1958-59 academic year. The objective for the three-term course was to increase the student's responsibility for their own education and to shift the emphasis from teaching to learning. The Committee discussed the three^{term} Calendar - its consideration, Saturday

classes and class schedules. Committee felt if the three term proves feasible then that will help their educational system.

The Report, University of Michigan (1958) states that the recommendation was for Michigan University to remain on the two Semester Calendar for few years following 1958. The Committee discussed the aspects of the university calendar in connection with the extensive data from Michigan College. The report of the colleges and universities contains both historical information and discussion of a variety of aspects interacting with calendars, such as, time interval between semesters, variation among institutional units, time for examinations, grading papers and determining grades.

Stephen F. Austin State College report (1962) cited the summary of the advantages of semester versus quarter plans and a list of 28 aspects to be considered in calendar study. The report also includes an extensive series of tabulation of calendar practices among the institutions of higher education in Texas. The study group recommended a standard calendar for all, calling for a basic semester system which completes the fall semester prior to christmas and provides a summer session of 12 weeks.

Webb (1963) completed a research report on the practices and problems of year-round, calendar system. The report included a comparison of the Canadian and United States systems. The study covers fully the references and summaries of previous studies.

The University Calendar, U.S.A. (1964) analysed the academic calendars of colleges and universities in the United States in 1960. This report gave a brief historical introduction along with a discussion of different types of calendars such as quarter, semester, year round and irregular calendars and factors in calendar planning. The calendar described that the most important features of the semester calendar were two regular terms of about 15 weeks of classes each running late September to early June, plus a summer session which is outside the regular academic pattern. The length of terms refers to the number of weeks in actual class excluding registration, vacation and examinations etc.

The calendar of Wilkes College (1966) covers 87 colleges and universities in the State of Pennsylvania. This calendar gives useful tables showing variety of length of semesters, registration periods, instruction weeks, reading periods, length of class periods, length of examination periods, time intervals between semesters and

the like for the State's sample.

Richard's, et al. (1968) study was a comparative study between trimester and quarter system in the University of California and California State colleges. The four quarter calendar was suggested over the trimester because of its quarter flexibility and better articulation with other educational institutions.

Suslow (1968) made a comparison between the semester Summer sessional plan, the quarter plan and the trimester plan. A historical summary of the development of year-round operation at Barkley was also stated in his report. Most interesting part of the study is the section on curriculum revision, space utilisation, student advice and summer quarter implementation. Report also included the 1967 and 1968 summer quarter enrolment statistics and attitudinal measures from the 1968 students.

Jat (1970) studied the teachers' attitudes towards semester system in Meerut University. The findings of his study was that more than 56.9 per cent of the teachers of the colleges of Meerut city were in favour of switching over to the semester system.

Desai (1970) discussed the semester system in detail in reference to the Indian conditions. The term semester signifies the division of the academic year into two parts in U.S.A.,

U.K., Japan, Germany and many other countries. It emphasises the semesterwise courses and examinations. Semester carries certain hours of credit. According to Desai, the semester system was first adopted by the agricultural universities and the Indian Institute of Technologies and then by the University of Baroda, Aligarh, Delhi and Meerut etc. The division of the academic year, inter-disciplinary courses, credit system, internal and external examinations, advisory system, study habit of the students were discussed in particular reference with the semester system. Some of the difficulties such as the inter-disciplinary time-table, teacher student ratio, inter-university mobility, internal evaluation and over load of tests were highlighted in connection with the functioning of the semester system.

Ahmed (1971) stated that to meet the nation's educational need, semester system seems to be one of the suitable system. Utility of the semester courses with inter-disciplinary approach, flexibility in selecting courses, uniformity among students throughout the year were discussed. To him, introduction of the semester system with all other aspects like assignments, tests, seminars, tutorials will help the students in a better way.

Parikh (1972) studied the semester system in the M.S. University of Baroda. Following are the findings of her study :

1. In general the attitude of the students was favourable towards semester system.
2. The students of Social Work Faculty had most favourable attitude towards semester system in comparison with those of other faculties viz. Faculty of Education and Psychology, Home Science and Technology and Engineering in the same university.
3. The students of Faculty of Education and Psychology were second in number .
4. The students of Technology and Engineering Faculty had less favourable attitude than the students of Home Science Faculty towards semester system.
5. As the length of experience increases the percentage of students having favourable attitude increases, the graduate students had more favourable attitude than under-graduate students.
6. There was no significant mean difference between the experienced groups of the Faculty of Education and Psychology and Faculty of Social Work.
7. The students of Home Science and the students of Technology and Engineering do not differ significantly in their attitude towards the semester system.

Report of the Expert Level Seminar (1973) on Semester System concentrated for the better functioning of the semester system in the Indian universities. Few problems were also

discussed, such as, too many examinations, responsibility of teachers, overcrowding in the classrooms, holidays, flexibility of the courses, development of the question banks etc. At the end of the seminar it was felt that to make a success of the semester system, the above mentioned problems should be taken into serious consideration.

Implementation of the internal assessment and credit system were also discussed. Participants commented on the system in many ways - according to one participant the semester model of organizing teaching-learning has a focus, a syntax, a social system and a support system. Another participant realised and expressed the defects of the semester system. One of the prevailing defect is that the students do not get much time for extra-curricular activities and there is the waste of time between the first and second semester. Suggestions were there to modify the existing semester system.

Kapur (1975) commented the semester system as practised in Meerut University as a complex system and that it was somewhat different from other universities. The university has three examinations in a year - including the summer session. Paper setting is done by the professors and readers of other universities but the students are examined by the teacher's of the Meerut University. Tabulations are done by

by computers. Reevaluation procedure is also in existence and the students can seek admission directly in the second semester. The author felt that many of these aspects can be used even in the annual system. He suggested for the simplification of the summer examinations and for the abolition of the direct admission to the ^{next} semester. To him for the success of the semester system, cooperation among the teachers, college managements, office staff and the student is very much necessary.

Sharma (1976) conducted a comparative study between the traditional and the semester system. The project was at Udaipur University. The main objective was to compare the performance of students at traditional examination with the performance of the students in semester examinations qualitatively. The sample of the study was from the post-graduate science classes. The findings of the study shows that the mean scores in the final theory papers were greater in the semester system in most courses than the traditional system of examinations. The quality of performance was better in semester examination than in the traditional examinations.

Devadas (1976) in the University of Madras Monograph IV, speaks about the introduction of the semester system in the University of Madras at the post-graduate and under-graduate classes. The Vice-Chancellor assumed the leadership to

initiate an overall reform programme in teaching, learning and evaluation. This was done by (a) revision of the curricula (b) semesterised learning (c) restructuring of question papers and (d) introducing the grading system. The semester pattern has been introduced in all the post-graduate courses from 1976-77 and 40 under-graduate colleges also came forward to tryout the semester pattern. Monograph gave some idea about the following issues :

- (i) Philosophy of the semester pattern.
- (ii) Duration and dates of the semester.
- (iii) Orienting students and staff to the semester pattern.
- (iv) Distribution of the semester examination papers.
- (v) Methods of teaching - weightage for seminars, composition, translation, field work and other practical experiences.
- (vi) Size of the classes and work load of teachers in the semester pattern.
- (vii) Place of community and social service.
- (viii) Role of continuous internal assessment.
- (ix) Restructuring question papers, and
- (x) Records to be maintained for the semester pattern.

Rajaguru, et al. (1977) studied the trimester system in the Orissa University of Agriculture and Technology. The university started with the traditional system but switched

over to the trimester and semester respectively. The findings of the project were : more attention on the coverage of the courses, proper evaluation, effective advisory system, vigilance in conducting examination, encouraging the extra-curricular activities and extending the use of library facilities helps to make trimester as a goal oriented system of education. But, the university switched over to the semester system.

Tongpaeng (1977) studied the attitude of students and teachers towards semester system at M.S. University of Baroda. The study says that the attitude of the students (60%) and teachers (65%) were favourable towards the semester system. According to the study, of the male teachers have more favourable attitude towards semester system in comparison with those of the other sex. The girl students and boy students attitude do not differ significantly towards the semester system. There is no difference of attitude among the male and female teachers who have got more experience. They have more or less the same attitudes towards semester system.

Siddiqi and Khatoon (1978) studied the examination results of eight years under the semester and eight years under non-semester system of education in the two faculties of social sciences and science, at the M.A. and M.Sc. levels.

The Aligarh Muslim University was under semester system since 1967. The findings of the study states that the performance of M.A. and M.Sc. students worked out in terms of distribution, pattern of division and failures under semester and non-semester systems of education between the period 1961-67, 1969-76, was interesting. The percentage of first division has doubled or troubled in almost all the departments of the two faculties. The percentage of second divisions has gone down under the semester system in both the faculties except in the departments of Economics and History, which showed an increase in second divisions. The number of third division has gone down under the semester system in both the faculties. At the end of all the findings, investigator showed some factors through figures to support the validity of the results.

Gupta (1978) conducted one study on semester system of education at Agricultural College, Udaipur University. The objective of the study was (1) To analyse the functioning of various aspects of semester system; (2) To bring out the scope of improvement in various aspects of semester system. The major findings of the study was the adequate provisions for students to participate in games, sports, scientific societies and social clubs under semester system. The

'system of examination' was reported as less burdening on the part of the teachers and students under semester system on account of adequate time for teaching and also to keep students occupied in academic pursuits throughout the year. Teaching aids and equipment of course is an aspect which has been worked out least effectively. It demands the provision for more teaching aids and equipments to both the teachers and students. The study highlights the scope of development in agricultural curriculum to make it vocational-cum-job oriented.

Patel (1978) studied the present scheme of semester system and evaluation procedure at B.Ed. and M.Ed. programme in the Faculty of Education and Psychology at M.S.University of Baroda. The findings of the study were :

1. Male M.Ed. students offer the highest mean score to 'semester system' followed by the Faculty staff, female B.Ed. students, outsiders, female M.Ed. students and male B.Ed. students; whereas outsiders give the highest mean score to grade system followed by female M.Ed. students, Faculty staff, female B.Ed. students and male B.Ed. students.
2. The mean difference between the students and the staff in the context of semester system is not significant.

3. The picture of semester system, grade system and internal assessment is not very clear to the students.
4. The 50% of the respondents have observed that the new scheme of evaluation encourages favouritism and prejudice. Among this, 50% B.Ed. students hold the majority.
5. So far as the study habits of the students teaching and evaluating habits of teachers are concerned, the new evaluation procedures do not yield bright results.
6. Majority want the combination of objective tests and essay type questions having the 50% weightage.
7. Again majority want the combination of 'internal assessment' and 'external assessment' having the weightage of 50%.
8. ' $T_1 + T_2 + C = 25 + 25 + 50$ ' pattern of testing seems to be popular.
9. Viva-voce test is necessary.
10. So far as the course coverage is concerned, the picture is encouraging.
11. 'Teachers evaluate what they teach' is the general opinion, but there are solitary cases could hold category view.
12. Students do not carry with them the good image of the Faculty when they leave the Faculty.
13. External evaluation will bring useful and healthy contacts between the students and the staff members.
14. There are good as well as the bad points of the new scheme of evaluation. Good points should be epitomised and bad points should be erased.

Kamala (1978) discussed about the semester pattern and the examinations in Moscow, Soviet Union. Higher education in Soviet Union is based on the semester pattern. There are two semesters - the first begins at September and closes at the month of January, the second starts at February and continues with the summer vacation. In between the two semesters there is a winter vacations. Examinations are held at the end of each semester. At the commencement of the semester, teacher elucidates the topics to be covered for the course, booklets, references and handbooks. The number of students in the class is limited, ranging from 10 to 20, so individual attention can be paid to each student. Seminars are compulsory for the students. Examinations are held twice a year ; the first examination differs from the second. The first is called 'Zachoth' where the student is merely told whether he has passed or failed. In the second examination marks are awarded on a five point scale. The examination is also conducted orally. One (1) and two (2) points denote that the candidate has failed; three (3) denotes satisfactory; while four (4) and five (5) stand for good and very good respectively. The students are asked to appear before a board where a piece of paper containing 2/3 questions is

is given to the student who has to answer them in a comprehensive manner. Supplementary questions are also asked which comes from the class lectures. If then the student fails, chance will be given to him to prepare himself within a few days. The student is given liberty to clarify their doubts. With the education, the Soviet youths' future is planned. With diplomas, each student is offered choice of jobs.

Natarajan (1979) studied the semester system in Indian Universities with all its important aspects like syllabuses, methods of teaching, internal assessment, grading and question banks. He found teacher's need to be trained for the semester system. A scientific and rational design of (system approach) semester system was also given by the author for the help of other universities in case of their implementation.

Pillai (1979) studied the semester system and found the following conclusions :

1. The principals, parents, teachers and students are in favour of the system.
2. Urban students and particularly women students are highly in favour of the semester when compared to rural and men students.

3. Arts and Commerce students are highly in favour of the semester system than the science students.
4. There is no significant difference in the opinion about the semester system between the teachers and the students.
5. Nearly 84 percent of teachers and students agree that semester helps the students to continue to study throughout the year.
6. Though 88 percent of teachers claim that sessional work in the semester system is preplanned and worked according to the time table, nearly one fourth of the students do not agree to it.
7. About 25 percent of students have indicated that seminar and other new techniques of teaching and learning have not been properly conducted in their colleges.
8. Whereas the teachers claim that they have been fair in the internal assessment of the students, 34 percent students do not agree to it.
9. Even after the introduction of the semester system, disciplinary problems have been in existence in men's colleges as it was before.

Bulletion of Higher Education (1979), U.G.C. suggested that for the effective implementation of the semester system, it should be linked with unit courses to enable students to have greater flexibility in the combination of courses and to offer courses on an interdisciplinary basis. The committee said, according to the information available with Commission,

sessional evaluation at different levels has been introduced in 44 universities, 14 agricultural / technological universities and 7 institutions deemed to be universities. Question banks have been or are being developed in 21 universities. Grading system is in operation at 44 universities / institutions. Semester system is in operation at 40 universities, 5 institutions deemed to be universities and all agricultural and technological universities.

Courses of Study in connection with the Semester System

The aim of the semester system is to have greater flexibility in terms of course formulation. Under the semester system departments are allowed more flexibility in formulating the courses. Students can make choices in courses according to their interest and needs from the large number of courses. In connection with the courses under the semester system much literature is not available.

Chaurasia (1970) studied the attitudes of the graduate students of Meerut University towards the general courses under the semester system. Boys were more interested in general courses than the girl students. Boys felt the necessity of the general courses, while the girl students showed attitude towards the study of their regular course books.

Singh (1971) stated the merits of the semester system in connection with the Meerut University. He felt that under the semester system, a teacher has the freedom to prepare the syllabus of the courses which he is to teach and examine. According to him that is possible only in unitary universities. This becomes a problem in affiliating universities where colleges are governed by different managements and also the government and therefore there is no uniformity in the policies of the institutions.

University Grants Commission (1971) in its Brochure titled the Principles and Mechanics of the semester system discussed the courses under the semester system. Division of the academic year implies that courses are designed to cover one semester (instead of a year) and that final examinations are held twice a year. The subjects are organized into two successive one - semester courses. The major advantage of the semester system is that it allows much more flexibility to the departments. A department can usually offer a much greater variety of courses under the semester system. With the large number of courses students are allowed for a wider choice according to their needs and interests. For few students concentrating on fewer courses leads to more efficient study and learning. Thus semester

courses help the students, teachers and the departments of various universities.

Mehta, et al. (1977), explained the curriculum in connection with the trimester/semester system, specially in the agricultural universities. There it is a course outline divided into convenient units where theoretical and practical aspects are included. The syllabuses serve as a blue print both for the teachers and the students. ^{The} Criteria for curriculum building are :

- (i) Purpose and aim of the course,
- (ii) the characteristics of the pupils who are to take the course,
- (iii) educative environment of the students,
- (iv) use of information available,
- (v) flexibility
- (vi) people's need and interest.

The agricultural universities have emphasised that curriculum should be planned by giving importance to the student's performance.

Chandra (1977) explains, in developing a curriculum that the step of evaluation of learning is an important link between the preliminary planning of curriculum and revising the curriculum for its effectiveness. To evaluate

the students' learning the examination through several tests, systematic observation of skills etc. are important. This observation covers laboratory experiments and their class works, project work, community services etc. But to observe all these aspects of a student, it requires pre-planned and controlled attitude of the observer. The teacher requires much developed evaluative techniques in case of the curriculum construction.

National Council of Educational Research and Training (1978) framed a Teacher Education curriculum to bring about the suitable reforms in the programmes of teacher education. The NCERT suggested that programmes and curricula are to be prepared according to the local requirements and resources, to innovate suitable methods, modes and techniques of teaching different groups and to evolve appropriate procedures of evaluation to assess the efficiency on teacher education on a continuous and comprehensive basis. Salient recommendations of the committee were :

1. Flexibility - flexibility within the framework of acceptable national goals and values, flexibility for relevance, continuing education, mobility.
2. Interdisciplinary approach.
3. Education as a discipline
4. Task oriented teacher education.
5. Introduction of the semester system.

6. For evaluation - internal assessment for both theory and practice.
7. Experiments, innovations and research for development.

Methods of Teaching in Relation to the Semester System

The important aspect of any system of education is the teaching learning process. Teaching is the process of arranging situations that are conducive for effective learning. To make the educational system effective, teacher can play a vital role by exhibiting his talents through various methods, for example by narrating, describing, illustrating and discussing etc. Like many other educational systems, semester system of education also gives much importance on the methods of teaching. In the area of methods of teaching, a number of studies have already been made in both foreign countries and also in India but there is no specific study on teaching methods under semester system. Hence attempts have been made to focus related studies or literature in connection with the teaching methods which may throw some light on the teaching methods in Semester system.

Lambert, et al. (1964) compared team-teaching with the self-contained classroom and found significant differences between the two plans as regards classroom interaction

patterns and in student achievement, but not in the student adjustment.

Brinkmann (1966) studied the attitude of students towards programmed instruction. He reported that most of the subjects agreed that programmed learning was a good way to learn, and that they could learn a great deal by using a programme. Nearly all of them disagreed with the statements that they did not have to think while learning through a programme or that programme learning was a boring method of learning. Not a single student considered the programme difficult and at the same time, no one felt that the whole programme was easy.

Coats and Smidchens (1966) used ten minutes lessons, each presented by two teachers in two ways - (1) statistically when the static speaker read the entire speech from a manuscript, making no gestures or direct eye-contact, and holding vocal inflection to a minimum; but however, speaking with good diction and sufficient volume; and (2) dynamically with the speaker delivering the speeches from memory, with much vocal inflection gesturing eye contact, and animation. A test immediately after the lecture indicated that 'Students did remember much more from the dynamic lecture than from the static one.'

Tutorials have been found to produce significant results especially with undergraduate students. Etters (1967) showed, based on a supplementary programme conducted at Parsons College, how tutoring would help the low achiever.

Desai (1970) identified the use of lecture, tutorials and seminars for the improvement of the teaching learning in the under-graduate and post-graduate classes. Lecture method, no doubt is an effective method for teaching but it needs strength in content, organisation, delivery and supplementary work. Tutorial also plays its own important role in the post-graduate and under-graduate classes. To him, seminar method is specially advantageous for the post-graduate students. A good combination of lecture, tutorial and seminar method will bring the fruitful result in case of different teaching methods.

Deb, et al. (1976) discusses the different methods of teaching which are applicable to semester, credit, internal and continuous assessment, letter grading and course evaluation. Through assessment, the teacher tests the student for his knowledge, skills, comprehension, application and inventiveness. Teachers also get feedback from the students in case they are involved in the course work.

Santhanm (1977) analyses that teaching methods have been engaging the attention of educational progressionists. Lecture as a method of teaching, despite endless criticism against it, has survived to the present. Besides lecture, discussion, team-teaching, independent study, and tutorials have been the chief approaches and were examined by various researchers and theorists. He found ^{that} no serious and exhaustive researches have been done on teaching methods in the colleges in India.

Collingwood and Hughes^x studied the effects of three types of university lecture notes on student achievement. There are a series of three different kinds of lecture notes - duplicates of the lecture's detailed notes, copies of the headings, key-points, diagrams, outlines, tables and references from lecture notes with spaces for the students. The study stated that the students preferences were for three types of notes which are distributed before or after the experimental lectures. A significant interaction between initial preference and treatment was found. The result of the investigation suggested that the efficiency of lectures can be improved through the distribution of some forms of notes.

Joshi (1979) in his monograph on university teaching methods covers 18 colleges and three universities of the

states of Gujarat, Kerala, Andhra Pradesh, Maharashtra, Rajasthan and Uttar Pradesh. The lecture method seems to be the most popular technique employed by the teachers of the colleges and the universities in the degree classes. But at the post-graduate levels the time spent on lecture is comparatively less than the under-graduate classes. On discussion period - a good amount of time is spent both for practical classes of under-graduate and post-graduate classes. The tutorials and seminars are also not popular teaching devices at college and university stage. Self study is the objective of the university teaching. Assignment helps in the self study. Seventy two percent of teachers revealed interest in the use of audio visual aids.

Evaluation in Connection with the Semester System

Evaluation always plays a vital role in any system of education and it is designed to assess the achievements of the students under the courses of study that they pursue. Unlike other system, semester system indicates that a certain unit of course work has to be completed within a particular limit of time. The year is divided into two sessions - with syllabus, mentioning the combination and number of courses. The teacher completes the instructional part of the courses or syllabus and

adopts different procedures of assessment for the achievement of the students; for example through (i) continuous internal evaluation which covers tests, assignment, quiz, seminar, discussion etc., (ii) grading and (iii) question bank. The above mentioned features are not the concomitants of the semester system but often associated with the semester system. All the aspects mentioned, come under the area of examination reforms, so^a few studies on examination reform have been taken into consideration as related literature. A few studies on grading, internal assessment and question bank in international and national level have also been undertaken. The study of different Education Commission's suggestions helped the present study from the point of view of related literature.

Internal Assessment : Lele, et al.(1962) found that combination of internal assessment marks with the external assessment marks did not significantly improve the prediction of further performance of students.

Badami's (1967) main aim of study was to study the correlation between the internal evaluation and university examination marks, and also the disparity between the two examination marks. Again he wanted to know the reactions of the students, teachers and principals of some of the colleges.

The sample for the study was the affiliated colleges of the Gujarat University. The findings and the results of the study were that there is no high correlation between internal evaluation and university examination marks. A majority of the principals, professors and students agreed that internal evaluation is necessary, but in the way it is practised has created a number of problems which demand immediate attention and action on the part of all concerned.

Krisnawami (1972) discusses the purpose of education and its relation to the development of the student's skills and power of mind. He mentions about the teaching-learning process and evaluation with its effectiveness. In the evaluation part he criticises the traditional system of examination and has suggested the internal system of evaluation. To him, the internal assessment should be continuous assessment with comprehensive aspects of the educational objectives. At the end the author has suggested for the autonomy to design the courses according to the local requirements, specific teaching objectives, specific tools for internal assessment in a continuous way.

Bulletin of higher education (1975) discusses about the internal assessment and the grading system for the

examination reform in Indian Universities. Through internal assessment the students ability of writing, capacity to do work in the field, project work, participation in the seminars and discussions becomes clear. Internal assessment stands not only for discipline but also for the realization of the effectiveness of the teaching learning process.

Bulletin suggested to try out the internal assessment first in the unitary universities in the post-graduate departments and autonomous colleges. The bulletin has suggested for the implementation of the grading system in the universities. As per the bulletin, grading system would be able to reduce the element of subjectivity and the irrationality of the marking system.

Monograph by the Research Cell (1977), Association of Indian Universities studied some Indian University teacher's attitude towards internal assessment through workshops on semester system. Emphasis was given on continuous internal assessment also. Continuous assessment is an evaluation process through which students' knowledge, intellectual abilities, skills, interest, initiative, industry, discipline, attitudes, aspirations etc. are developed throughout the courses of study. The teacher who teaches the courses knows his students better, so he is the best judge of the students. Continuous assessment tells a teacher how well the student

is learning. Though many universities have already introduced the internal assessment but somehow the adoption design is in an arbitrary fashion. The Research Cell consulted the teachers of different universities and took suggestions for the proper implementation. The monograph consists of the following aspects : introduction to internal assessment, need for continuous assessment, basic principles - design of continuous internal assessment, recording and storing of continuous assessment, internal and external examinations, marking versus grading for internal assessment.

Sahasrabudhe (1977) in her doctoral thesis mentioned about the implementation of the continuous assessment, grade system in the four faculties at the M.S. University of Baroda. Besides that the traditional type of evaluation is still in practice in more than half of the faculties was discussed.

Reddi (1977) studied the attitude of students towards internal assessment. The study covers the attitude of 120 students of university college where internal assessment is being tried. It was compared with that of 120 students of another university college, where the system was going to be introduced. Stratified random sampling was adopted. The findings of the study were that those who had experience with internal assessment had slightly more favourable

attitude towards the system than those who did not have any experience with it. But even then those who had experience of the system felt that the influence of extraneous, non-academic considerations on evaluation was not insignificant. Neither the students of the traditional university nor those of the experimental university wanted complete internal assessment. A majority of them favoured only partial internal assessment.

Reddy (1977) studied 29 students in a post-graduate class. It covered five theory papers and a dissertation. Each theory paper was valued for 100 marks, out of which a maximum of 25 marks was for internal assessment and a maximum of 75 marks for the university examination held at the end of the course. The findings of the study showed that the correlation coefficients between the marks in internal valuation, external valuation and internal assessment were generally low. The whole result shows that one cannot hope to get a perfect correlation of 1.00 between the two, a high rank correlation is to be expected. Thus, the fear of students that the marks of some underserving students may be bolstered while some deserving students may be marked down, if internal assessment is introduced. So before introducing the internal assessment a full-proof system must be made in place of external examinations.

Mehta and Sarma (1977) studied the internal assessment on 179 post-graduate students from traditional and semester courses. Results showed that the mean of the sessional marks at the semester was greater than the traditional examinations. For almost all subjects mean of the sessional marks was greater in the semester courses than the traditional courses. The relationship between the sessional marks and final theory marks at semester examinations was significant for all the four subjects (studied) where it was not significant at traditional examinations. Besides, the results, merits and demerits of the internal assessments were clearly mentioned.

Narsian (1978) found all the twelve universities in India have accepted the change in educational system in principle. Internal assessment is in practice but nature of adoption differs in each university. Grading system was also adopted by five universities while question bank only in two universities.

Srivastava and Srivastava (1979) studied the internal assessment in Meerut University and the sample was only the post-graduate students of one college. The findings of the study clearly points out that internal assessment is more liberal and favours students in obtaining better divisions. They found to obtain I division in internal assessment as

compared to the external examination is easy due to boosting of marks in internal assessment. Internal assessment is more liberal in subjects of science group as compared to subjects of arts group. A high percentage of students secures first division in science subjects as compared to arts group students.

Bulletin of Higher Education (1979) recommended the following suggestions on Sessional evaluation :

1. The committee reiterated its earlier view that marks/grades of sessional assessment and external examination should not be totalled up. In any case, they should be shown separately if for unavoidable reasons they are added for determining aggregate/overall grade. The name of college/institute should also be shown in the grade card.
2. Since the essence of sessional assessment is that it is open, the scripts should be shown to the students. Grievance machinery should be set up to look into the grievances of students regarding their performance in sessional tests and assignments.
3. It is observed that sessional assessment works well in the unitary universities. But at the undergraduate level in the affiliating universities it sometimes leads to unhealthy competition among colleges. The committee again underlined the importance of trying out sessional evaluation at the post-graduate level before it is extended to the undergraduate level in the light of experience.

4. Universities where the system of sessional assessment has not yet been introduced, or where the system was introduced and given up subsequently may introduce it on an optional basis in the first phase and make it obligatory at a later date.

Grade System : O'Bryan (1973) studied the attitudes towards letter grading with the attitudes toward the honours pass-fail system in a South Eastern College of Medicine. The findings of the study were :

1. Students show a preference for honours - pass, fail grading over letter grading.
2. Instructors do not regard either grading system as superior to the other, although when directed on sub-scale VIII to indicate a preference for one system over the other, most prefer letter grading.
3. Administrators show no preference for one grading system over the other.
4. Students, ~~instructors~~ and instructors prefer letter grading for ease of transfer and administration, students and instructors prefer honours - pass, fail grading for fostering motivation and less anxiety.
5. Student's attitudes toward the grading system are different from those of instructors and administrators.

A plan of action, University Grants Commission, (1973) shows the defects of the present marking system. Marking is a raw system and on a 101 point, range of marking is from 0 to 100 where judgement of the student's performance is difficult. The committee for the plan of action after

discussing about the marking and grading system found that a five point scale is suitable for the students. The five point scale stands for outstanding, very good, good, fair and poor in terms of 1, 2, 3, 4 and 5. Such a scale was felt coarser than the 101 point marking system. Besides five point scale the committee suggested about the overall grading where courses are weighted according to the credit hours of the courses concerned - for example if the grades are g_1, g_2, g_3 etc. and credits for courses etc. are C_1, C_2, C_3 etc., so that the average grade becomes

$$\frac{g_1 C_1 + g_2 C_2 + g_3 C_3}{C_1 + C_2 + C_3}$$

The committee for the plan of action again in 1976 recommended a seven point scale of grading to the universities. The seven point scale stands as O, A, B, C, D, E and F where outstanding, very good, good, average / fair, below average / satisfactory, poor and very poor takes place. Along with the grade, grade point average was also suggested and the minimum requirement should not be less than 2.00. The committee suggested grading for all the post-graduate level departments for better evaluation.

Dugan (1974) studied the student's preference for difference between a nonpunitive A, B, C grading system and a traditional A, B, C, D, F grading system. It was found that grading system preference changes during the semester were not significant, however, at the end of the semester a majority of students in both groups preferred the grading system used by the college they attended.

Saraswathi (1974) mentioned some of the defects of the present marking system. She said that many countries believe firmly that grading is the only scientific way of assessing the candidate. The author explained clearly the unsoundness of the grading that even in America there are controvercies regarding the grading system. She suggested to provide necessary conditions and honest effort for the introduction of the grading system.

Milton et al's (1976) study says that a more fundamental grasp of the options for academic measurement is the most direct route to improve grading. Letter grading, the most commonly accepted form of evaluation is particularly susceptible to the charge of insufficient feedback to the student. The use of examiners and the establishment of effective campus arrangements are only two of the ways recommended to improve an increasingly irritating issue of academic life.

Smith (1977) studied that the traditional A, B, C, D, F grading system utilised by most colleges and universities has been a major focus on student and faculty dissatisfaction for decades. But a number of institutions started the experiment with innovative grading systems. The study focuses on grading innovations at all levels of under-graduate, higher education, college, community and junior colleges.

Bulletin of Higher Education (1979) recommended as following for the implementation of the grading :

1. For a successful working of the grading system, the committee emphasised the need for motivating the teachers at the university level through a series of workshops and seminars.
2. The universities where grading system has not yet been introduced or where the system was introduced and given up subsequently owing to certain circumstances may introduce grading according to the following pattern so that the teachers and students are oriented to the new system. Grades can be awarded by converting the numerical marks into letter grades by using conversion tables to be worked out by the universities themselves for each subject, as indicated in the brochure. In the mark sheet/grade card, numerical marks and letter grades, may be shown simultaneously. However, such conversion is to be done purely as an interim measure. In course of time numerical marks should

be dispensed with. Conversion of numerical marks into letter grades would not apply to those universities / institutions where direct letter grading is working successfully.

Question Bank : A plan of action committee (1973) by University Grants Commission (U.G.C.) discussed the question bank and stated that a student who is being examined must know how he is going to be examined. Many defects of the present question papers were brought to the light and recommended that the question banks can eliminate the glaring defects of the question paper. An appointed body or a board should scrutinise the questions received from the lecturers. Different processes would be there for the modifications, after modifications the question papers become the property of the bank. The questions should cover different units of the syllabus. Students are free to discuss all the questions so that the fear of question paper does not arise.

Menon's (1974) study for the development of question bank shows the following findings :

1. A pool of scientifically prepared questions for the course 'Educational testing and techniques of evaluation' with specified scheme of objectives, scoring was developed.

2. The psychometric properties of the questions in the pool were studied.
3. The questions in the pool were arranged with respect to different objectives under different units.

A plan of action (1976) by U.G.C. evolved the concept of question bank to remove the defects of the examination papers of the university examination. In the bank questions are collected from the expert committee after scrutiny and modifications, of course, 25 percent of the questions can be set from outside of the bank. The question bank consists of different types of questions - problem oriented, essay type, short type, multiple choice to test different skills and abilities. Constant review of the question is suggested to get rid of publication of guide books, note books and from mass copying.

Amin (1977) studied the question bank and following were the findings of the study. A question bank is a changing pool of items. New questions will be added and less effective questions will be divided off and on. Here after thorough study of the content analysis, the investigator has come out with a number of new terminal behaviour. A large number of questions are also developed. The psychometric properties of these new items can be found out and

like wise the question bank can be enriched.

Association of Indian Universities (1977) monograph discusses how the universities have launched upon the question bank and how many of the universities are on their way to implement. The whole monograph covers eight sections : Question banks, and their uses in Indian University examinations; question banking outcomes; levels and forms of question banks; plan of action to build question items; storing questions; using question banks; pre-post validation of question items; future of question banks. After discussing a few points on the awareness and understanding of the system of question banking the cell hoped that this will be successful over a period of time and make a potential contribution and add a new dimension to the process of examination in higher education.

Yadav and Menon (1978) stated in their article that to evaluate students' performance for the instructional objectives question bank will help to achieve the objectives. Those devices may not be only in the form of questions but may be in a pool of scientifically developed evaluation devices - like questions, assignments, observation schedule, rating scale, etc. Question bank will be the package for the help of the teacher, and it will make the teacher more conscious in their effectivity.

Bulletin of Higher Education, U.G.C. (1979)

recommended the following suggestions for the question bank :

1. It is to be noted that question banks are to be developed by a university on its own keeping in view the objectives of courses of study. Moreover, the development of question bank is not an end in itself. It is to be seen if we have improved upon the existing question papers in relation to well-defined objectives like analysis, synthesis, conceptualization, application etc.
2. The question banks should be released to the students well in time so that they have a better idea of the contents and the underlying objectives of the course. A certain proportion of the questions, say 25 percent, may also be set from outside the bank. It should also be specified that the questions included in the bank are merely illustrative of a design and that the numerical value and syntax might be changed appropriately, whenever necessary.

Implications drawn from the Previous Literature for the Present Study

The review of research and related literature in the area of semester, trimester and quarter system of education and examination reform in particular has far reaching implications for the present study. Report of the University of Michigan (1958), Stephen F. Austin College (1962), The

University Calendar, U.S.A. (1964), Wilkes College (1966), etc. studied different academic calendars in connection with the semester system, which shows some guidelines for the present study. Singh (1970); Parikh (1972), Rajaguru, et al. (1977), Tongpaeng (1977), Siddiqui and Khatoon (1977), Gupta (1978), Patel (1978), Natarajan (1979), and Pillai (1979) studied the semester and trimester system in different universities in India. The findings of the above mentioned studies are relevant to develop a concept of the semester system. The review shows that there is no doctoral study on semester system at the national level.

Other studies pertaining to some aspects of the semester system at the international and national levels have implications for the present study. Badami (1967), Reddy (1977), Mehta and Sarma (1977), Narsian (1978), Srivastava and Srivastava (1979) studied the internal assessment in different universities in India. Menon (1974), Amin (1977) studied and developed question banks for their subjects. O'Bryan (1973) studied the attitude towards letter grading with the attitude towards the honours - pass - fail system in the South Eastern College of Medicine. Dugan (1974) found that the students prefer the grading

system used by the college they attended. In India on grading no study is available except a few monographs.

The study of the above referred literature strengthened the investigator's conviction to undertake a critical study of the semester system as practised in the various universities of India.
