

CHAPTER IV

ANALYSIS AND INTERPRETATION OF THE DATA

Introduction

The present chapter is devoted to the description of analysis and interpretation of the data. The tools employed for collecting the data have already been discussed in chapter III. The information pertaining to the utilisation of funds (specially granted for the implementation of College Science Improvement Programme (COSIP) and College Humanities and Social Sciences Improvement Programme (COHSSIP) and the examination results of the final year students in Science, Humanities and Social Sciences at the undergraduate level after the introduction of programmes were collected from the college office records. The principal's role is analysed as a teacher as well as an administrator. The principal is considered as a teacher if he takes classes at the undergraduate level in the concerned programme and as an administrator in studying the problems faced by the colleges in implementing the programme/s. The analysis and interpretation of the collected data are presented in six sections as follows :

Section One : Objectives of the COSIP and COHSSIP

Section Two : Realisation of accepted objectives of COSIP and COHSSIP

Section Three: Students' reactions towards the activities of COSIP and COHSSIP.

- Section Four : Problems faced by the principals in the implementation of COSIP and COHSSIP.
- Section Five : Utilisation of funds for the implementation of COSIP and COHSSIP.
- Section Six : Trend of students' achievement in Science, Humanities and Social Sciences at the undergraduate level after the introduction of COSIP and COHSSIP.

The data are analysed programmewise : (i) COSIP and (ii) COHSSIP. The data pertaining to the problems faced by the principals in the implementation of the programmes are classified into three categories i.e. colleges having (i) COSIP, (ii) COHSSIP, and (iii) both the programmes i.e. COSIP and COHSSIP together. The data are analysed itemwise.

Section One

4.1 Objectives of COSIP and COHSSIP

This section deals with the teachers' acceptance of, and emphasis laid on, the objectives of COSIP and COHSSIP for their attainment. The acceptance of objectives of COSIP and COHSSIP and the emphasis laid thereon for their achievement by the teachers are studied with the aid of a checklist. The numbers of teachers including principals (as teachers) who were involved in COSIP and COHSSIP and responded to the checklist were 146 and 127 respectively. The checklist enumerates the objectives of COSIP and COHSSIP which are discussed hereunder.

The objectives of COSIP and COHSSIP as spelt out by the University Grants Commission (U.G.C.) are to strengthen and enrich the teaching-learning and evaluation processes in Science, Humanities and Social Sciences at the undergraduate level in the colleges and to offer opportunities for change and innovations within the framework of the existing curriculum. The programmes seek to create awareness among the teaching community about their role in the process of modernisation and change, and the need for active participation in it. The programmes provide direction to the continuous self-renewal, experimentation and institutionalisation of innovative practices. They lay emphasis on developing the spirit of enquiry, independent thinking and application of knowledge in practical life contexts. It has been envisaged that the successful implementation of COSIP and COHSSIP would pave the way for academic autonomy for participating institutions.

The U.G.C. has supplied guidelines to the colleges on the implementation and modalities of COSIP and COHSSIP with an exhaustive list of activities to be organised and procedures to be adopted. However, the colleges have been given the required freedom to implement the programmes with necessary flexibility and discretion. The colleges have been advised to undertake the proposed activities relying upon their human and physical resources and to integrate such activities with the normal scheduled academic work. The success of COSIP and COHSSIP would obviously depend upon the acceptance of their objectives by the college faculty

and the degree of emphasis laid on them at the level of implementation. Such acceptance of objectives and emphasis laid thereon may vary from college to college, department to department in a college and even individual to individual in a department depending on their expertise, commitment, institutional climate and allied factors.

4.1.1 Acceptance of Objectives of COSIP and COHSSIP

The table 4.1.1 shows the teachers' acceptance of objectives of COSIP and COHSSIP.

Table :4.1.1: Acceptance of Objectives of COSIP and COHSSIP
(Responses in Percentages)

Objectives of COSIP and COHSSIP	COSIP	COHSSIP
1. To introduce new methods of instruction in the classroom as well as in the laboratory	100	100
2. To develop instructional material	63.01	77.17
3. To introduce new experiments for changing laboratory activities	91.10	5.51
4. To establish workshop in order to design and assemble equipment for fabricating new apparatus for supporting instructional programmes	47.95	Not applicable
5. To provide more opportunities to students for independent laboratory activities	91.10	5.51
6. To make efforts to enrich, modernise and update the syllabi	38.36	33.08
7. To make optimum use of common facilities such as stationery, cyclostyling and audio-visual equipment etc.	72.60	80.31
8. To provide opportunity to students for practical orientation in discipline	58.90	51.18

(Continued...)

(Table 4.1.1 continued)

Objectives of COSIP and COHSSIP	COSIP	COHSSIP
9. To enrich the library with relevant advanced books and journals and to make best use of it	100	100
10. To develop self-study habits among the students	100	100
11. To develop question bank in each discipline containing objective type, short answer type and essay type questions	23.29	16.54
12. To introduce internal assessment	76.71	65.35
13. To design and set tests according to new techniques of examination	32.19	24.41
14. To make arrangement for remedial teaching for academically weaker students	13.01	15.75
15. To devise special programmes for gifted students to enable them to develop their innate talents	58.90	54.33
16. To extend the programme for guest lectures	46.58	58.27
17. To extend the facilities of workshop repair centre to neighbouring institutions	15.07	Not applicable
18. To introduce job-oriented courses within the framework of the existing curriculum	21.23	Zero
19. To start interdepartmental and inter-collegiate programmes for uplifting education at the undergraduate level	80.82	67.72
20. To send teachers to advanced learning centres for refresher courses	77.40	72.44

(i) COSIP : According to the table 4.1.1 the objectives 1, 9 and 10 have been accepted by 100 percent respondents. It indicates that the respondents are interested in adopting varied

progressive methods of instruction which are conducive to greater classroom interaction and motivation of students. The enrichment of library with relevant advanced books and journals is a pre-requisite for providing upto date knowledge to students. The respondents seem to be interested in giving more assignments to students for library study so as to develop self-study habits among the students.

The objectives 3 and 5 have been accepted by all the respondents of the concerned Science subjects in which laboratory activities are involved except Mathematics discipline in which there is no scope for each activities. Both the objectives pertain to laboratory activities and are very much interlinked with each other. The objective 3 relates to the introduction of new laboratory activities and the objective 5 seeks to develop scientific attitudes, skills and a spirit of exploration among the students as well as to provide them opportunities to understand laboratory activities properly and pursue science as a career.

The objectives 19, 20 and 12 have been accepted by a very high percentage of respondents (more than 75 percent). It means that the respondents are interested in adopting team approach for generating high quality instructional activities and in providing interdisciplinary and multidisciplinary dimensions to such activities. The objective 20 relates to the sending of teachers to advanced learning centres for equipping them with advanced knowledge and skills in their fields of

study and related areas so as to carry out high quality instructional activities. The respondents are interested in assessing students' performance through diversified activities.

The objectives 7, 2, 8 and 15 have been accepted by a high percentage of respondents (between 50 percent and 74 percent). The objective 7 and 2 relate to the provision of facilities for developing instructional material which makes teaching-learning process interesting. The objective 8 intends to provide the students varied learning experiences which are helpful in bridging the gap between the theoretical aspects of study and practical realities of life. The respondents are interested in channelising the energy of gifted students by, entrusting them with organisational responsibilities and giving them advanced assignments, laboratory activities etc.

The objectives 4, 16, 6 and 13 are accepted by a low percentage of respondents (between 25 percent and 49 percent). The objectives 4 and 16 have been accepted by 47.95 percent and 46.59 percent of respondents respectively whereas the objectives 6 and 15 have been accepted by less than 40 percent of respondents. The objectives 4 and 16 reflects that the respondents are interested in developing instrumentation skills among the students. The respondents seem to be interested in providing opportunities to students for making contact with the experts in the discipline and to make clear to them the rudiments of a discipline and its interrelationship with other disciplines by making arrangement for guest lectures. It has been substantiated by interviews that

the basic reasons for objectives 6 and 13 being accepted by less than 40 percent of respondents are : the nonauthorisation of college teachers to revise, update and modernise the syllabus and the lack of required competence among the staff members for designing and setting tests according to new techniques of examination.

The objectives 11, 18, 17 and 14 have been accepted by a very low percent of respondents (less than 24 percent). It has been substantiated by interviews that the main reasons for these objectives being accepted by a very low percentage of respondents are ; lack of necessary skills among the teachers in framing varied types of questions for question bank ; lack of human and physical resources and of recognised certificate for the job-oriented courses; heavy work load, and lack of students' interest in remedial teaching programme.

(ii) COHSSIP : The table 4.1.1 reveals that the objectives, 1, 9 and 10 have been accepted by 100 percent respondents. It means that the respondents are interested in adopting varied progressive methods of instruction which are conducive to generate healthy classroom interaction. The very essence of modern methods of instruction is to give more assignments to students for library consultation and reflection so as to develop self-study habits among them. For acquainting the students with the recent developments in their fields of study and related areas, the enrichment of library with advanced books and journals is found to be essential.

The laboratory activities are conducted by the respondents belonging to Geography and Psychology disciplines. The total number of respondents who belong to these disciplines are 7 i.e. 5.51 percent of the sample. The respondents accepted the objectives 3 and 5. These objectives relate to the introduction of new laboratory activities and seek to provide more opportunities to students for independent laboratory activities so as to develop scientific attitudes, skills and a spirit of exploration in them.

The objectives 7 and 2 have been accepted by a very high percentage of respondents (more than 75 percent). These objectives pertain to facilitate for developing and displaying instructional materials which are used for facilitating teaching-learning process.

The objectives 20, 19, 12, 16, 15 and 8 have been accepted by a high percentage of respondents (between 50 percent and 75 percent). The objective 20 relates to the sending of teachers to advanced learning centres for equipping them with better knowledge and skills in their fields of study and related areas so as to carry out high quality instructional activities. The objective 19 seeks to stimulate the teachers to adopt team approach for initiating interdisciplinary and multidisciplinary activities. The respondents are interested in assessing students' performance continuously through diversified activities. The arrangement of guest lectures for providing opportunities to students to come

in contact with experts in discipline is found essential. The respondents are interested in assigning varied organisational tasks and advanced academic assignment to gifted students for fostering their creative potential. For bridging the gap between theory and practice and for providing real learning experiences to students objective 8 has been accepted.

The objective 6, 'to make efforts to enrich, modernise and update the syllabi' has been accepted by 33.08 percent of respondents. It has been substantiated by interviews that the main reason for this objective being accepted by a low percentage of respondents is the affiliating nature of the universities which does not authorise the college teachers to revise, modernise and update the syllabi.

The objectives 13; 11 and 14 have been accepted by a very low percentage of respondents (24 percent or below). It was pointed out during interviews that the main reasons for these objectives being accepted by a very low percentage of respondents are : lack of professional competence among the teachers and heavy work load.

The objective 18, 'to start job-oriented courses within the framework of the existing curriculum' has not at all accepted by any of the respondents. It may be due to the very nature of Humanities and Social Sciences disciplines.

It is obvious from the above analysis that 100 percent respondents of COSIP and COHSSIP are interested : in introducing new methods of instruction in the classroom as well as in the laboratory; in enriching the library with relevant advanced books and journals and in making best use of it ; and in developing self-study habits among the students. All the respondents of COSIP and COHSSIP who belong to the disciplines in which laboratory activities are involved, have accepted the objectives relating to introducing new experiments for changing laboratory activities ; and providing more opportunities to students for independent laboratory activities. The majority of respondents of COSIP and COHSSIP are interested in developing instructional material; in making optimum use of common facilities such as stationery, cyclostyling and audio visual equipment; in introducing internal assessment; in providing opportunity to students for practical orientation in discipline; in devising special programmes for gifted students for enabling them to develop their innate talents; in starting interdepartmental and intercollegiate programmes for uplifting education at the undergraduate level ; and in sending the teachers to advanced learning centres for refresher courses.

A low percentage of respondents of COSIP and COHSSIP is found to be interested : in making arrangement for remedial

teaching programme for academically weaker students; in developing question book containing objective type, short answer type and essay type questions', in designing and setting tests according to new techniques of examinations; and in making efforts for revising, modernising and updating the syllabi. Through interviews it has been found that the main reasons for these objectives being accepted by a low percentage of respondents are : heavy workload of the teachers; lack of students' interest for remedial teaching programme; lack of competence among the staff-members for developing question bank; and affiliating nature of the universities.

4.1.2 Emphasis Laid on Objectives of COSIP and COHSSIP for their Attainment

The table 4.1.2 shows the emphasis laid on the objectives of COSIP and COHSSIP for their attainments in terms of priority given by the teachers.

Table :4.1.2: Emphasis laid on Objectives of COSIP and COHSSIP for their Attainment

Objectives of COSIP and COHSSIP	COSIP		COHSSIP	
	Score	Rank	Score	Rank
1. To introduce new methods of instruction in the classroom as well as in the laboratory	612	3	514	2.5
2. To develop instructional material	375	10	393	5
3. To introduce new experiments for changing laboratory activities	573	4.5	32	16.5
4. To establish workshop in order to design and assemble equipment for fabricating new apparatus for supporting instructional programmes	264	13.5	Not applicable	
5. To provide more opportunities to students for independent laboratory activities	573	4.5	32	16.5

(Continued...)

(Table 4.1.2 continued)

Objectives of COSIP and COHSSIP	COSIP		COHSSIP	
	Score	Rank	Score	Rank
6. To make efforts to enrich, modernize and update the syllabi	227	15	172	12
7. To make optimum use of common facilities such as stationery, cyclostyling and audio-visual equipment etc.	428	9	437	4
8. To provide opportunity to students for practical orientation in discipline	321	12	225	11
9. To enrich the library with relevant advanced books and journals and to make best use of it	647	1	546	1
10. To develop self-study habits among the students	626	2	514	2.5
11. To develop question bank in each discipline containing objective type, short answer type and essay type questions	118	17	88	14
12. To introduce internal assessment	476	8	317	8
13. To design and set tests according to new techniques of examination	157	16	116	13
14. To make arrangement for remedial teaching for academically weaker students	78	19	75	15
15. To devise special programmes for gifted students to enable them to develop their innate talents	329	11	283	9
16. To extend the programme for guest lectures	264	13.5	278	10
17. To extend the facilities of workshop repair centre to neighbouring institutions	64	20	Not applicable	
18. To introduce job-oriented courses within the framework of the existing curriculum	96	18	No Score	
19. To start interdepartmental and inter-collegiate programmes for uplifting education at the undergraduate level	529	6	339	7
20. To send teachers to advanced learning centres for refresher courses.	498	7	372	6

The table 4.1.2 shows the summated scores of all the respondents against each of the objectives in their respective programme with their ranks. The ranks indicate the degree of emphasis laid on the programmes' objectives for their attainment and are assigned in order of priority. The highest score is ranked 1, the next highest score is ranked 2, the next highest score is ranked 3, and so on. As the rank increases the degree of emphasis decreases. If two or more objectives have the same score, then the mean of progressive ranks for those objectives is computed, and the same rank (mean) is assigned to all those objectives.

The respondents of COSIP and COHSSIP assigned same ranks 1 and 8 to objectives 9 and 12 respectively. The objectives are : 'to enrich library with relevant advanced books and journals and to make best use of it' ; and 'to introduce internal assessment' respectively. It means that the respondents of COSIP and COHSSIP have laid the same emphasis on these objectives for their attainment. There is a slight difference in the ranks assigned to objectives 1 and 10. The objectives are : 'to introduce new methods of instruction in the classroom as well as in the laboratory'; and 'to develop self-study habits among the students'. It also indicates that the respondents of COSIP and COHSSIP have laid similar emphasis on these objectives for their attainment. There is a difference of one rank assigned to objectives 8, 19 and 20 by the respondents of COSIP and COHSSIP. The objectives are : 'to provide opportunity to students for

practical orientation in discipline' ; 'to start interdepartmental and intercollegiate programmes for uplifting the education at the undergraduate level' ; and 'to send teachers to advanced learning centres for refresher courses'. In the remaining objectives, much variation is found in the ranks assigned to them by the respondents of COSIP and COHSSIP.

Section Two

4.2 Realisation of Accepted Objectives of COSIP and COHSSIP

For realising the accepted objectives of COSIP and COHSSIP changes and innovations have been effected in various aspects of academic programme such as methods of instruction, instructional material, enrichment of library with advanced books and journals and its proper utilisation, practical orientation in disciplines, guest lectures, remedial teaching programme for academically weaker students, special programmes for gifted students, evaluation procedure - question bank and internal assessment, revision of syllabi, publication of news bulletin, job-oriented courses etc. The present position of various activities organised under COSIP and COHSSIP is studied with the aid of a questionnaire. The numbers of teachers including principals (as teachers) who responded to the questionnaire of COSIP and COHSSIP are 146 and 127 respectively. A series of questions are asked under each aspect. Some questions are of 'Yes' or 'No' type; if the response is 'Yes' then the respondent is directed to the next items; if the response is negative then he has to leave blank the other questions pertaining to that aspect. At many places the respondents are asked

to check more than one item, the percentage against each item is calculated out of the sample of COSIP and COHSSIP separately and there the responses have figured out to be more than 100 percent because the respondents may have selected more than one choice. The teachers' perception of effectiveness of activities of COSIP and COHSSIP is determined in terms of means.

A descriptive analysis of changes and innovations effected in various aspects of the academic programmes after the introduction of COSIP and COHSSIP is attempted below :

4.2 A Methods of Instruction

Methods of instruction are recurrent instructional processes, applicable to various kinds of subject-matter, and useful by more than one teacher in any educational system. Methods of instruction are recurrent because the activities can be repeated. They are instructional processes which pattern teachers' behaviour (lecturing, discussion etc.); delivery system for curriculum (printed subject-matter, programmed instruction etc.); and organisational system for promoting learning (tutoring, independent study etc.). The success of teaching depends upon the various activities conducted by the teachers inside and outside the classroom for promoting students' learning. The COSIP and COHSSIP attach much importance to the adoption and institutionalisation of a variety of methods of instruction. The COSIP and COHSSIP expect less lectures, more guided reading or assignments; therefore, adoption of instructional methods such as assignments, tutorials, seminars, group discussion, symposia, workshop activities, projects, and laboratory activities

are at the core of the programmes. Frequent and well defined assignments and their correction through discussion help the students in developing the habits of independent study. The discussion methods also serve as a feedback to the teachers and students.

The following tables 4.2A.1a, 4.2A.1b, 4.2A.1c, 4.2A.1d and 4.2A.1e show the adoption of methods of instruction after the introduction of the programmes, frequency of practising them (per week or month), average duration of the class or group, average number of students in a class or group, percentage of students participating in discussions during tutorials, seminars, group discussions, symposia etc.

4.2A.1a Adoption of Methods of Instruction : The table 4.2A.1a shows the percentage of respondents adopting various methods of instruction after the introduction of the programmes.

(i) COSIP : The table 4.2A.1a shows that the lecture method, despite vehement comments against it, has remained as the main tool of instruction, obviously on account of its several compelling advantages such as usefulness in introducing a new topic to the class, faster rate of transmission of information etc. The recognised limitation of the lecture method is that it does not allow a full discussion of points of interest. The programme expects the employment of a variety of teaching methods and it can be noticed in the higher percentage of respondents using modern participative methods. The majority of respondents were giving assignments to students prior to the introduction of the

Table :4.2A.1a: Adoption of Methods of Instruction

(Responses in Percentages)

Methods of Instruction	COSIP		COHSSIP	
	Practised prior to the Introduction of the Programme	Practising at Present	Adoption: Introduction of the Programme	Practising at Present
Lecture	100	100	Zero	100
Assignment	54.80	76.71	21.91	47.24
Seminar	-	56.85	56.85	-
Tutorial	39.04	60.96	21.92	11.81
Group discussion	-	7.53	7.53	-
Symposium	-	-	-	-
Workshop Activities	-	47.95	47.95	-
Project	-	91.10	91.10	-
Laboratory Activities	63.70	63.70	Zero	5.51
				100
				65.35
				44.09
				66.93
				51.18
				14.17
				-
				22.05
				Zero

programme which indicates its popularity. It has been adopted by 21.91 percent of respondents after the introduction of the programme. The assignment has its own advantages of developing in students the skills of organising, summarising, sequencing and evaluating different thoughts pertaining to a topic. Seminar which was not at all practised prior to the introduction of the programme has been adopted by a good percentage of respondents. In seminar an adequate exposition and discussion of the topic is attempted. Tutorial has been adopted by 21.92 percent of respondents; some of the respondents were practising it prior to the introduction of the programme. Group discussion has been adopted by a very low percentage of respondents (7.53 percent). Workshop activities have been started by 47.95 percent of respondents; they were not in practice prior to the introduction of the programme. These activities have been initiated for developing in students the skills of construction, operation, servicing and maintenance of apparatus. Project work which provides opportunity to students to learn about problems in their natural settings has been adopted by the highest percentage of respondents. There is no variation in the percentage of respondents practising laboratory activities prior to and after the introduction of the programme.

(ii) COHSSIP : The table 4.2A.1a reveals that the lecture method, despite numerous criticisms against it, is found to be a widely used instructional process, obviously on account of its several advantages. It becomes clear from the table that the respondents have adopted a variety of teaching methods after the

introduction of the programme. The assignment method has been adopted by 18.11 percent of respondents after the introduction of the programme. Some of the respondents were practising assignment method prior to the introduction of the programme. This method has its own advantage of developing in students the skills of organising, sequencing, summarising and evaluating the thoughts pertaining to a topic. Seminar method which was not organised at all prior to the introduction of the programme has been adopted by 44.09 percent of respondents. Seminar has been adopted owing to its merit of developing independent thinking, effective communication and the values and skills of interactive learning among the students. Tutorial method has been adopted by a satisfactory percentage of respondents. A very low percentage of respondents were practising it prior to the introduction of the programme. Tutorials are conducted for helping the students in their personal and academic growth. Group discussion method which was not in practice prior to the introduction of the programme has been adopted by 51.18 percent of respondents. This method provides opportunity to students to discuss assigned topics and issues in a planned manner in small groups and later to discuss them in the whole class. Symposium has been adopted by a very low percentage of respondents. Project method has been adopted by 22.05 percent of respondents which is very low. Projects provide opportunity to students to select problems of their own interest and to analyse them in a systematic manner; in the process they are expected to exercise judgement

and come to conclusions about the result of the study. Laboratory activities are applicable to the respondents belonging to Geography and Psychology disciplines and all these respondents practise them.

The above analysis makes it clear that the lecture method has been practised by all the respondents of COSIP and COHSSIP prior to and after the introduction of the programmes. The laboratory activities have been practised by the same concerned percentages of respondents of COSIP and COHSSIP prior to and after the introduction of the programmes. The varied progressive methods of instruction such as assignments, seminars, tutorials, group discussions and project work have been adopted by varying percentage of respondents of COSIP and COHSSIP after the introduction of the programme. Workshop activities have been adopted by 47.95 percent respondents of COSIP only.

4.2A.1b Frequency of Practising the Methods of Instruction : The table 4.2A.1b shows the frequency of practising methods of instruction by the respondents belonging to COSIP and COHSSIP.

(i) COSIP : According to the table 4.2A.1b it is found that, though the lecture method is practised by 100 percent of respondents, the frequency of practising it varies remarkably. There are respondents who practise it 4 or more times in a week; side by side there are respondents who practise it two times in a month. The data have further been substantiated by interviews wherein it was found that some of the respondents were actively engaged in post-graduate work and research activities. Besides lecturing, the

Table 4.2A.1b : Frequency of Practising Methods of Instruction
(Responses in Percentage)

Methods of Instruction	COSIP										COHSSIP			
	Per Week		Per Month		Per Week		Per Month		Per Week		Per month			
	Four or more times	Three times	Two Times	Once	Two times	Once	Four or more times	Three times	Two times	Once	Two times	Once		
1. Lecture	48.63	-	36.30	-	15.07	-	67.72	-	32.28	-	-	-		
2. Assignment	-	-	-	-	13.01	63.70	-	-	-	-	14.96	50.39		
3. Seminar	-	-	-	-	4.80	52.05	-	-	-	-	4.72	39.37		
4. Tutorial	-	-	-	39.04	21.92	-	-	-	-	48.03	13.39	5.51		
5. Group discussion	-	-	-	-	-	7.53	-	-	-	-	17.32	33.86		
6. Symposium	-	-	-	-	-	-	-	-	-	-	-	14.17		
7. Workshop Activities	-	-	-	32.19	15.76	-	-	-	-	-	-	-		
8. Projects	-	-	-	40.41	43.15	7.54	-	-	-	18.11	3.94	-		
9. Laboratory Activities	41.10	-	22.60	-	-	-	5.51	-	-	-	-	-		

respondents practise other interactive methods too, with varying frequency. The majority of respondents give assignments to students once in a month. It is also substantiated by interviews that most of the respondents have specified the number of assignments for a term or semester and it varies from 4 to 6. Seminars and group discussions are practised once in a month. Tutorials are practised once in a week by 39.04 percent of respondents. Workshop activities are conducted by 32.19 percent of respondents once in a week. Project work is discussed once in a week and fortnight by nearly equal percentage of respondents (40.41 and 43.15 percent). Laboratory activities are conducted four or more times in a week.

(ii) COHSSIP : The Table 4.2A.1b shows that the majority of respondents practise lecture method 4 or more times in a week. It is substantiated by interviews that the frequency of practising lecture method depends upon the classes taught and the research work guided by the respondents. The majority of respondents give assignments once in a month to the students. It is further substantiated by interviews that most of the respondents have specified the number of assignments to be submitted by the students for a term or semester, varying from 4 to 6. Seminars are organised once in a month by 39.37 percent of respondents. Tutorials are generally conducted once in a week. Group discussions and symposia are normally organised once in a month. Project work is discussed by 18.11 percent of respondents once in week. Laboratory activities are conducted four or more

times in a week by the respondents belonging to Geography and Psychology disciplines.

From the above analysis a trend emerges that the respondents of COHSIP and COHSSIP generally practise lecture method and conduct laboratory activities 4 or more times in a week; tutorials are conducted once in a week; project work is discussed once in a fortnight; the participative methods such as seminars, group discussions, symposia are organised once in a month and the assignments are given once in a month. Workshop activities are conducted once in a week by the respondents of COHSIP only. Workload is the factor which inhibits the respondents from practising various discussion methods frequently.

4.2A.1C Average Duration of the Class : An appropriate time is required for conducting various teaching-learning processes. The Table 4.2A.1c shows the average duration of the class.

(i) COSIP : According to the table 4.2A.1c the unit of time devoted to lectures and tutorials is less than one hour. It is substantiated by interviews that the respondents devote periods of 40 to 55 minutes' duration for these activities. The assignments are given to students either in lecture or tutorial periods and after corrections are returned on subsequent days and discussion follows; if the situation warrants extra time is devoted for discussing the assignments. The unit of time devoted for other periods such as seminars, group discussions,

Table :4.2A.1c: Average Duration of the Class

(Responses in Percentage)

Methods of Instruction	COSIP			COHSSIP		
	More than One Hour	One Hour	Less than One Hour	More than One Hour	One Hour	Less than One Hour
1. Lecture	-	-	100	-	-	100
2. Assignment	No fixed time, either discussed in lecture of tutorial period			No fixed time, either discussed in lecture or tutorial periods		
3. Seminar	56.85	-	-	29.92	14.17	-
4. Tutorial	-	-	60.96	-	-	66.93
5. Group discussion	7.53	-	-	6.30	44.88	-
6. Symposium	-	-	-	-	14.17	-
7. Workshop Activities	47.95	-	-	-	-	-
8. Project	91.10	-	-	22.05	-	-
9. Laboratory Activities	63.70	-	-	5.51	-	-

workshop activities, project works and laboratory activities is generally above one hour and specifically two combined periods which sometimes extends upto two hours and even more.

(ii) COHSSIP : The table 4.2A.1c shows that the unit of time devoted to lectures and tutorials is less than one hour and usually periods of 40 to 55 minutes' duration. The assignments are given to students either in lecture or tutorial periods and they are discussed after correction on the subsequent days in the same periods. The unit of time devoted to seminars, laboratory activities and project work is usually more than one hour and specifically two combined periods. The unit of time devoted to group discussion and symposia is one hour.

The above analysis makes it clear that normally the unit of time devoted to lectures and tutorials is a period of 40 to 55 minutes' duration. The unit of time devoted to seminars, project work, and laboratory activities is more than one hour and usually two combined periods. It seems that the unit of time devoted to various methods of instruction is adequate.

4.2A.1d Average Number of Students in a Class or Group : This is the question of economy of staff time, which is bound to become an increasingly important consideration with the rising demand for higher education. If for some purposes, uninterrupted exposition by word of mouth is a satisfactory method of teaching, it should be used for those purposes, since it is obvious that in this way a teacher can reach to larger group than any manageable

Table :4.2A.1d: Average Number of Students in a Class or Group
(Responses in Percentages-

Methods of Instruction	COSIP				COHSSIP			
	Over 50	Between 26-50	Between 11-25	10 or Below	Over 50	Between 26-50	Between 11-25	10 or Below
1. Lecture	39.72	57.53	2.74	-	77.95	22.05	-	-
2. Assignment	19.18	54.79	2.74	-	43.30	22.05	-	-
3. Seminar	11.64	45.21	-	-	37.01	7.08	-	-
4. Tutorials	-	-	60.96	-	-	-	62.21	4.72
5. Group discussion	-	7.53	-	-	14.96	36.22	-	-
6. Symposium	-	-	-	-	-	14.17	-	-
7. Workshop Activities	-	-	47.95	-	-	-	-	-
8. Project	-	-	75.35	15.75	-	-	7.88	14.17
9. Laboratory Activities	-	23.97	39.73	-	-	-	5.51	-

discussion group. The organisation of varied teaching methods also depends upon the number of students or class size, for example, the discussion methods need closer contact among the members of the group and hence, a smaller class - size which is essential for better communication and for fostering reflecting thinking. Project work, laboratory activities and workshop activities require limited number of students so that individual attention could be paid to them. The table 4.2A.1d shows the average number of students in a class or group

(i) COSIP : The table 4.2A.1d shows that the number of students in small lecture classes varies between 11 and 25 whereas the bigger lecture classes have more than 50 students. The majority of respondents report that the number of students in lecture classes varies from 26 to 50. The same trend of students' strength is observed with regard to assignments. 45.21 percent of respondents report the number of students in seminar to be between 26 and 50. The respondents who organise group discussions report the number of students in such activities to be between 26 and 50. The number of students in tutorials, workshop activities, project work and laboratory activities are reported generally to be between 11 and 25.

(ii) COHSSIP : According to the table 4.2A.1d, the majority of respondents report the number of students in lecture classes to be more than 50. The same trend is observed in 48.30 percent and 37.01 percent of respondents while giving assignments to the students and organising seminars. The majority of respondents report

that the number of students in tutorials varies between 11 and 25. The number of students in group discussions is reported to be between 26 and 50 by 36.22 percent of respondents. The number of respondents who organise seminar report the number of students in this activity to be between 26 and 50. A very low percentage of respondents reports the number of students in project work as 10 or less. The respondents belonging to Geography and Psychology disciplines report the number of students in laboratory activities to be between 11 and 25.

It seems that the number of students actually involved in the practice of methods such as assignments, seminars, tutorials and project work is larger than the numbers normally expected for such activities. This situation leads to difficulties for teachers in giving adequate individual attention.

4.2A.1e Students' Participation in Discussion Sessions : During a lecture the students are engaged in listening to, and taking notes of, a continuous exposition. There may be a few questions, but there is normally no discussion. In discussion sessions the students are expected to participate actively. Discussion sessions aim at securing an adequate exposition and discussion of the content of a topic and developing the mental powers of students. The table 4.2A.1e relates to students' participation in discussion sessions.

Table :4.2A.1e: Students' Participation in Discussion Sessions
(Responses in Percentages)

Methods of Instruction	COSIP			:	COHSSIP		
	over 60%	Between 31%-60%	30% or below		:Over :60%	Between 31%-60%	30% or below
1. Seminar	-	16.44	40.41	23.62	11.02	9.45	
2. Tutorials	29.45	22.60	8.91	40.16	26.77	-	
3. Group Discussion	-	7.53	-	33.86	17.32	-	
4. Symposia	-	-	-	-	14.17	-	

(i) COSIP : The table 4.2A.1e makes it clear that the students' participation in discussions during seminars is not satisfactory. Only 29.45 percent of respondents report that over 60% students participate in tutorials. In group discussions the respondents mark students' participation as between 31 percent and 60 percent. The low percentage of students participating in seminars and high participation in tutorials is due to the size of the group.

(ii) COHSSIP : It is obvious from the table 4.2A.1e that there are some respondents who report students' participation to be quite high (over 60 percent) during seminars, tutorials and group discussions. In symposia, the respondents mark students' participation as between 31 percent and 60 percent.

The above analysis makes it clear that the greater participation in discussions, of students belonging to COHSSIP than the students belonging to COSIP may be due to their linguistic proficiency and the scope for discussion inherent in Social Sciences and Humanities disciplines.

4.2A.2a Duplicated Material : Here, by 'Duplicated material' is specifically meant the duplicated bibliographical notes and lecture abstracts supplied to the students to supplement the class lecture. The COSIP and COHSSIP provide opportunities and facilities to the teachers to supply duplicated material to students in advance in connection with class lecture. The major objectives of supplying duplicated material to students are to make lecture structured, to promote students' preparation for the class and to avoid the need of dictating notes. It presents library resources related to the topic in a structured, comprehensive and related manner. It focuses on significant points of the lecture which need further elaboration and attention through careful library study. The table 4.2A.2a shows the percentage of respondents supplying duplicated material to students in advance in connection with class lecture.

Table :4.2A.2a: Supply of Duplicated Material
(Responses in Percentages)

Supply of Duplicated Material among the Students	COSIP	COHSSIP
Yes	63.01	77.17
No	36.99	22.83

(i) COSIP : The table 4.2A.2a shows that the majority of respondents supply duplicated material to the students in advance to the class lecture. Through interviews and examination of the duplicated material, it is found that it contains mainly, definitions, formulae, derivation of formulae, diagrams, circuit

diagrams, tabulated data, bibliographical notes, lecture abstracts etc. The duplicated material contains factual information and excludes opinions. The respondents supply the duplicated material either : (a) in the beginning of the session for the entire syllabus ; and/or (b) in advance of a unit ; and/or (c) in advance of each lesson.

(ii) COHSSIP : The table 4.2A.2a reveals that the majority of respondents supply duplicated material to the students in advance in connection with class lecture. Through interviews and examination of duplicated material it is found that it contains definitions, quotations, statements of educationists, formulae, diagrams, tabulated data, brief notes on the lecture, bibliographical references etc. The respondents supply duplicated material in the beginning of the term and also later lecturewise and unitwise.

It is inferred that the majority of respondents of COSIP and COHSSIP supply duplicated material to the students in advance in connection with class lecture. The percentage of respondents of COHSSIP supplying duplicated material to the students is greater than the percentage of respondents of COSIP.

4.2A.2b Frequency of Assessing Students' Preparation based on Duplicated Material : The main purpose of supplying duplicated material to students in connection with class lecture is that they would attend the class with prior preparation. It is also expected

of the teachers to be prompt in assessing students' preparation. The table 4.2A.2b shows the frequency of assessing students' preparation based on duplicated material.

Table :4.2A.2b: Frequency of Assessing Students' Preparation based on Duplicated Material (Responses in Percentages)

Frequency of Assessing Students' Preparation	COSIP	COHSSIP
Always	4.79	-
Often	45.89	14.96
Occasionally	7.53	50.39
Seldom	4.79	11.81
Never	-	-

(i) COSIP : The table 4.2A.2b reveals that 45.89 percent of respondents assess students' preparation based on duplicated material for the class 'often' and 4.79 percent 'always'. It means that the respondents are interested in generating interaction in the classroom and providing feedback to the students who take interest in consulting reference books.

(ii) COHSSIP : The table 4.2A.2b shows that the majority of respondents assess students' preparation based on duplicated material for the class 'occasionally'. It means that the respondents are not regular in assessing students' preparation based on duplicated material for the class.

It is found that the respondents belonging to COSIP assess students' preparation based on duplicated material for the class

more frequently than the respondents of COHSSIP.

4.2A.2c Techniques of Assessing Students' Preparation based on Duplicated Material : A question has been asked to the respondents ; 'How do you assess students' preparation based on duplicated material ? (Check more than one ') . ' The table 4.2A.2c shows the techniques of assessing students' preparation based on duplicated material.

Table :4.2A.2c: Techniques of Assessing Students' Preparation based on Duplicated Material
(Responses in Percentages)

Techniques of Assessing Students' Preparation	COSIP	COHSSIP
i) 'By probing questions	63.01	77.17
ii) By inviting their queries	63.01	77.17
iii) By asking them to recall the topic in a nutshell	3.42	5.51

It is obvious from the above table that the respondents of COSIP and COHSSIP who supply duplicated material to students assess their preparation for the class by probing questions and by inviting queries. It seems that these techniques are helpful to the respondents to know the level at which the students stand in relation to a particular unit or part of a lesson and to identify those significant points of content which require special attention.

4.2A.2d Teachers' Perception of Effectiveness of Duplicated

Material : It is hoped that the duplicated material would enable the students to develop the habits of library exploration; to collect upto date information pertaining to topics; and to study the subject-matter in depth. Broadly speaking, the duplicated material would enable the students to refer to the library resources with greater ease. The table 4.2A.2d shows the perception of 63.01 percent of teachers of COSIP and 77.17 percent of teachers of COHSSIP about the effectiveness of duplicated material in terms of means.

Table :4.2A.2d: Means Showing Teachers' Perception of Effectiveness of Duplicated Material

Items	COSIP		COHSSIP	
	Means of Individual items	Overall Mean	Means of Individual Items	Overall Mean
i) In exploring library resources	4.51		4.15	
ii) In making a choice of books edition and content	4.37	4.30	4.17	4.07
iii) In preparing their own notes in detail	4.14		3.89	
iv) In studying the subject-matter in depth	4.19		4.05	

(i) COSIP : According to the table 4.2A.2d, the overall mean (4.30) signifies that the duplicated material is helpful to students in having easy access to library materials 'to much extent'. The means of individual items reveal that the duplicated material is helpful to students in exploring library resources(4.51)

'to a great extent'; and for the remaining items 'to much extent'.

(ii) COHSSIP : According to the table 4.2A.2d, the overall mean (4.07) indicates that the duplicated material is helpful to students in having easy access of library resources 'to much extent' which is further, substantiated by the means of individual items.

The above analysis makes it clear that the duplicated material is found helpful in promoting the habits of library consultation among the students to a considerable extent. This highlights the need for supplying duplicated material in all the disciplines so as to develop the self-study habits among the students.

4.2A.3 Projection of Lecture on Screen Through Visual Aids :

For successful teaching instructional materials are necessary. Blackboard is the most traditionally effective teaching aid. Duplicated material also forms one of the effective ways to supplement a lecture. Films, filmstrips, maps, charts, models, tape recorders, T.V., radio etc. may be other varieties of instructional material. The COSIP and COHSSIP provide full freedom to the colleges to procure audio visual aids and to make use of them for supplementing class lecture. The table 4.2A.3 shows the percentage of respondents projecting their lecture through visual aids.

Table :4.2A.3: Projection of Lecture on Screen Through
Visual Aids
(Responses in Percentages)

Projection of Lecture on Screen Through Visual Aids	COSIP	COHSSIP
(i) Most of the lecture	-	-
(ii) A summary or part of it	7.53	5.51
(iii) Figures, diagrams, formulae, phrase etc.	10.98	9.45
(iv) None of the lecture	81.49	85.04

It is obvious from the table 4.2A.3, that the projection of lecture on screen has not become popular among the respondents of COSIP and COHSSIP. During the interviews the respondents pointed out lack of physical facilities, non-availability of materials for projection and lack of technical competence among the teachers as the main reasons for not projecting lectures on the screen.

4.2A.4a Assignment : Assignment is specifically meant as the written work given to the students to be completed through consultation of reference material either in the library or at home. Assignments demand the reading of literature with an alert and critical mind. Assignments give coherence and clarity to thoughts and train them in the art of using language effectively and communicating to others. It is expected of the respondents to give assignments to students so as to develop self-study habits among them. According to the table 4.2A.1a, 76.71 percent of respondents of COSIP and 65.35 percent of respondents of COHSSIP

follow the practice of giving assignments to students. The table 4.2A.4a shows the varied types of questions asked in the assignments to the students.

Table :4.2A.4a: Types of Questions asked in Assignments
(Responses in Percentages)

Type of Questions	COSIP	COHSSIP
(i) Objective type	-	-
(ii) Short answer type	10.27	8.66
(iii) Essay type	-	14.96
(iv) Combination of (i) and (ii)	8.90	-
(v) Combination of (i) and (iii)	-	-
(vi) Combination of (ii) and (iii)	15.75	25.20
(vii) Combination of (i), (ii) and (iii)	41.78	16.54

(i) COSIP : From the table 4.2A.4a, a trend emerges that the respondents prefer asking a combination of objective type, short answer type and essay type questions in assignments to the students. It means that the respondents are interested in training the students in answering varied types of questions specifically to the point.

(ii) COHSSIP : The table 4.2A.4a reveals that 25.20 percent of respondents ask short answers type and essay type questions in combination in assignments. It is substantiated by interviews that the respondents belonging to Humanities group prefer to ask essay type questions whereas the respondents belonging to Social Sciences group prefer to ask short answer type questions in

assignments.

The notable difference between the respondents of two groups is that objective type questions have not gained much favour with the teachers of COHSSIP. It is due mainly to the comparative difficulty of framing objective type questions in Humanities and Social Sciences disciplines.

4.2A.4b Submission of Assignments by the Students : The respondents expect that the students should submit the assignments after completion. The table 4.2A.4b shows the percentage of respondents reporting the submission of assignments by the students.

Table :4.2A.4b: Submission of Assignments by the Students
(Responses in Percentages)

Teachers' Responses	COSIP	COHSSIP
Yes	76.71	65.35
No	-	-

The table 4.2A.4b reveals that the respondents who follow the practice of giving assignments to students report that the students submit the assignments after completion. It is substantiated by interviews that the percentage of students submitting assignments varies and depends upon the weightage given to assignments in the external or internal examinations.

4.2A.4c Treatment Given to Assignments : If the students are to derive full advantage from assignments, it is obligatory on the part of the teachers to go thoroughly them and to make written

criticism and then to discuss them with the students. The table 4.2A.4c shows the treatment given to assignments by the respondents.

Table :4.2A.4c: Treatment Given to Assignments
(Responses in Percentages)

Treatment Given to Assignments	COSIP	COHSSIP
(i) Return them with written correction or criticism but without oral discussion	21.92	9.45
(ii) Discuss them orally in general	6.16	22.83
(iii) Both the above	48.63	33.07

(i) COSIP : The table 4.2A.4c indicates that 48.63 percent of respondents correct the assignments with written remarks as well as discuss them with the students. Only 21.92 percent of respondents return the assignments with written remarks to the students and without discussion. These practices provide feedback to the students for improving the assignments.

(ii) COHSSIP : The table 4.2A.4c shows that 33.07 percent of respondents correct the assignments with written remarks as well as discuss them with the students. There are 22.83 percent of respondents who discuss the assignments orally with the students. It seems that the respondents are interested in providing reinforcement to students for improving their assignments.

It is clear from the above analysis that the practice of correcting assignments with written remarks and then discussing them with the students is widely accepted by the respondents of

COSIP and COHSSIP. The reason why some of the respondents are not able to follow both the practices is the greater number of students in the classes or groups.

4.2A.4d Teachers' Perception of Effectiveness of Assignments :

The effectiveness of assignments is measured in terms of their helpfulness to students in developing the habits of : expressing independently; answering in a precise and orderly manner; organising and interpreting the facts systematically; and summarising different thoughts critically. The table 4.2A.4d shows the perception of 76.71 percent of teachers of COSIP and 65.35 percent of teachers of COHSSIP, who give assignments to the students, about their effectiveness in terms of means.

Table :4.2A.4d: Means Showing Teachers' Perception of Effectiveness of Assignments

Items	COSIP		COHSSIP	
	Means of Individual Items	Overall Mean	Means of Individual Items	Over-all Mean
(i) Expressing independently	2.86		3.35	
(ii) Answering in a precise and orderly manner	3.73	3.45	3.66	3.63
(iii) Organising and interpreting facts systematically	3.70		3.95	
(iv) Summarising different thoughts critically	3.49		3.57	

(i) COSIP : In the table 4.2A.4d, the overall mean (3.45) indicates that assignments are helpful to students in developing the habits of self-study and answering specifically to the questions 'to much extent'. The means of individual items reveal

that assignments are helpful to students in developing the habits of : answering in a precise and orderly manner (3.73); organising and interpreting facts systematically (3.70); and summarising different thought critically (3.49) 'to much extent'; and for the remaining item 'to some extent'.

(ii) COHSSIP : According to the table 4.2A.4d, the overall mean (3.63) signifies that assignments are helpful to students in developing the habits of self-study and answering specifically to the point 'to much extent'. The means of individual items reveal that assignments are helpful to students in developing the habit of expressing independently (3.35) 'to some extent' and for the remaining items 'to much extent'.

The above analysis indicates that assignments are perceived to be of much help to students in developing the habits of self-study and answering specifically to the point by the respondents of COSIP and COHSSIP. They perceive that the students are not able to express independently in assignments to an appreciable level.

4.2A.5a Seminar : Seminar is a form of group discussion in which a group of students meets with faculty members to listen to and discuss individual reports on some common theme. It is subject-centered and hence an adequate exposition and discussion of the topic is to be secured. The growing emphasis on critical thinking and problem-solving in college and university instruction accounts in part for the increased attention paid to seminar method as a vehicle of instruction. A seminar session appears to be most satisfactory when it is related to a topic about which the students

already have a background and experience, but at the same time need additional clarification, explanation and interpretation. A seminar normally begins with the presentation of a paper or an essay written by a member of the group which is followed by discussion. The proceedings of a seminar are conducted by a member of the group designated as chairman and reported by another member known as the reporter. It launches a thesis of a penetrating and provocative character upon which all the members of a group have opportunity to express freely. According to the table 4.2A.1a, 56.85 percent of respondents of COSIP and 44.09 percent of respondents of COHSSIP follow the practice of seminar method. A seminar can be organised based either on a class lecture or on certain other topics of interest. The table 4.2A.5a shows the percentage of respondents who organise seminars based on class lectures.

Table :4.2A.5a: Organisation of Seminars based on Class Lectures
(Responses in Percentages)

Organisation of Seminars based on Class Lectures	COSIP	COHSSIP
Yes	17.81	33.86
No	39.04	10.24

The above table shows that 39.04 percent of respondents of COSIP and 10.24 percent of respondents of COHSSIP do not usually organise seminars based on class lectures. It means that they organise seminars on a topic of common interest to teachers and

students other than class lectures. It is substantiated by interviews that these respondents organise seminars for discussing the progress of the projects taken up by the students or on some advanced topic of interest. There are 17.81 percent of respondents of COSIP and 33.86 percent of respondents of COHSSIP who organise the seminars based on class lectures. It means that the lecture continues to be the main vehicle of instruction whereas seminar supplements it and plays a secondary role in helping to clarify certain issues.

4.2A.5b Chairing of Seminar Sessions : For directing discussions in seminars and for avoiding lecturing and unnecessary argumentation the sessions are chaired by a member of the group. The teachers normally chair the sessions. Sometimes experts in the discipline from outside may be invited to chair the sessions and for sharing their views of the particular topic. Students may also be given opportunity for chairing the sessions so as to inculcate in them leadership qualities and skills for conducting discussions effectively. The table 4.2A.5b shows the pattern of chairing of seminar sessions.

Table :4.2A.5b: Chairing of Seminar Sessions
(Responses in Percentages)

Chairing of Seminar Sessions	COSIP	COHSSIP
(i) By teachers	36.30	25.20
(ii) By outsider (guest expert)	-	6.30
(iii) By students.	-	-
(iv) By anyone of the three above	20.55	12.60

(i) COSIP : The table 4.2A.5b shows that 36.30 percent of respondents invite teachers to chair the seminar sessions and a very low percentage of respondents invites either teachers or guest expert or students to chair the seminar sessions.

(ii) COHSSIP : The table 4.2A.5b reveals that 25.20 percent of respondents invite the teachers to chair the seminar sessions. Only 12.60 percent of respondents follow the practice of inviting either teachers or guest experts or students to chair the seminar sessions.

From the above analysis a trend emerges that normally the seminar sessions are chaired by the teachers, obviously by virtue of their long experience and thorough knowledge of the subject-matter.

4.2A.5c Recording of Seminar Proceedings : In a seminar session it is tried to secure maximum students' participation. For guiding the speaker and attracting his attention towards specific points of discussion it is essential to record the proceedings of seminar sessions. The recorded points have crucial significance for conducting follow up study. The table 4.2A.5c shows the percentage of respondents inviting members of the group for recording seminar proceedings.

Table :4.2A.5c: Recording of Seminar Proceedings
(Responses in Percentages)

Recording of Seminar Proceedings	COSIP	COHSSIP
(i) By students	42.47	27.56
(ii) By teachers	8.90	-
(iii) By both	5.48	16.54

From the table 4.2A.5c, a trend emerges that the seminar proceedings are normally recorded by the students. It was pointed out during interviews that some of respondents of COSIP and COHSSIP ask a panel of students and teachers to record the seminar proceedings which is advantageous for validating the specific points of interest. This practice gives students a sense of better participation and develops their ability to summarise the specific issues raised during discussion.

4.2A.5d Frequency of Supplying Duplicated Material about the

Topic in Seminars : For pin-pointing the crucial issues and keeping the discussion under the purview of the topic in seminars, it is expected that the speakers should supply duplicated material pertaining to the topic to the participants. It helps in generating a better interaction process. The table 4.2A.5d shows the frequency of supply of duplicated material pertaining to the topic in seminars.

Table :4.2A.5d: Frequency of Supplying Duplicated Material about the Topic in Seminars
(Responses in Percentages)

Frequency of Supplying duplicated Material in Seminars	COSIP	COHSSIP
Always	-	4.72
Often	12.33	18.11
Occasionally	22.60	13.39
Seldom	19.18	7.87
Never	2.74	-

(i) COSIP : The Table 4.2A.5d makes it evident that 22.60 percent of respondents report that the speakers supply duplicated material pertaining to a topic in seminars occasionally and a lower percentage of respondents mentions that the speakers supply duplicated material often.

(ii) COHSSIP : The table 4.2A.5d shows that 18.11 percent of respondents report that the speakers supply duplicated material pertaining to a topic in seminars often and a very low percent of respondents mentions that it is done always.

It is noteworthy that while the practice of supplying duplicated material pertaining to a topic in seminars is not regularly observed under COSIP, a better situation is found under COHSSIP. In Humanities and Social Sciences at least some respondents supply duplicated material in all the seminars and the percentage of respondents who does it often is higher than those who do it occasionally.

4.2A.5e Interaction Process in Seminar Sessions : In seminar sessions it is expected that every student should contribute to the discussion according to his abilities and knowledge of the subject in a free, frank and friendly manner. The table 4.2A.5e shows the process of interaction in seminar sessions.

(i) COSIP : The table 4.2A.5e on the next page shows that 33.56 percent of respondents report that the seminar sessions are marked by domination by a few participants. It is substantiated by interviews that the students who have command over language and subject-matter participate more in discussion in comparison to other students.

Table :4.2A.5e: Interaction Process in Seminar Sessions
(Responses in Percentages)

Seminar Sessions are marked by	COSIP	COHSSIP
(i) Majority participation in the discussion	-	29.13
(ii) Domination by a few	33.56	14.96
(iii) Domination by one member participant	19.86	-
(iv) Domination by speaker himself	3.42	-

(ii) COHSSIP : The table 4.2A.5e reveals that 29.13 percent of respondents report that the seminar sessions are marked by majority participation in the discussion. A lower percentage of respondents (14.96) reports that only a few students participate in seminar sessions.

It is noted that seminars under COHSSIP are characterised by greater participation of the members in discussions in comparison to participation in COSIP. The greater participation in Humanities and Social Sciences is due to the inherent characteristics of the disciplines and scope for debating over various view points and schools of thought. However, special attention is to be given towards strengthening seminars in Science discipline.

4.2A.6a Tutorial : The Tutorial is meant to be a small group process in which the teacher and not more than six students are present (University Education Commission 1948-49). It aims at establishing an intimate relationship between the teachers and

students so as to provide personal and academic guidance to the latter. While tutorials may involve moral or social guidance or helpful advice; its principal function is a kind of 'intellectual mid-wifery'. In an intimate way, the teacher directs and develops the thought process which is always an activity of the student himself. According to the table 4.2A.1a, 60.96 percent of respondents of COSIP and 66.92 percent of respondents of COHSSIP follow the practice of organising tutorials. The table 4.2A.6a shows percentage of respondents who organise tutorials based on class lectures.

Table :4.2A.6a : Organisation of Tutorials based on Class Lectures

(Responses in Percentages)

Organisation of Tutorials based on Class Lecture	COSIP	COHSSIP
Yes	50.69	61.42
No	10.27	5.51

The table 4.2A.6a indicates that the majority of respondents of COSIP and COHSSIP organise tutorials based on class lectures. It means that the tutorials serve the secondary purpose of supplementing and enriching the class lectures.

4.2A.6b Activities in Tutorials : It is expected in tutorials that topics of related interest in the discipline as well as students' personal problems are to be discussed. The tutorials are not to be strictly confined to the topics covered in the

class lectures. The table 4.2A.6b shows the percentage of respondents conducting tutorials for solving students' academic as well as personal problems.

Table :4.2A.6b: Activities in Tutorials

(Responses in Percentages)

Tutorials for solving students'	COSIP	COHSSIP
(i) Academic problems	45.21	48.03
(ii) Personal problems	-	-
(iii) Both	15.75	18.90

The table 4.2A.6b shows that primarily the tutorials are organised for discussing students' academic problems. Side by side, there are a very low percentage of respondents of COSIP and COHSSIP who discuss students' personal problems also in tutorials. It is substantiated by interviews that some of the respondents of COSIP and COHSSIP give assignments to the students on advanced topics in the discipline and then discuss them in tutorials. Personal problems related to adjustment, hostels, and further study are also handled in tutorials.

4.2A.7a Group Discussion : Seminars and tutorial are forms of group discussion in which all the members of the group contribute towards the discussion of a particular topic. The group discussion connotes a different meaning here i.e. the whole class or group is divided into 5 or 6 groups with less than 10 members and the necessary literature pertaining to the topic is provided to each

group. The members of a group discuss the topic among themselves, crystallise their ideas and prepare a brief report of the discussion. After a specified time the leaders of groups present their papers for general discussion. According to the table 4.2A.1a, the group discussion method is practised by 7.53 percent of respondents of COSIP and 51.18 percent of respondents of COHSSIP. The table 4.2A.7a shows the procedure for selecting group leaders in group discussions.

Table :4.2A.7a: Procedure for Selecting Group Leaders in Group Discussions.

(Responses in Percentages)

Selection Procedure of Group Leaders in Group Discussion	COSIP	COHSSIP
(i) Randomly	-	17.32
(ii) Based on merit	7.53	33.86
(iii) Through election	-	-
(iv) Through rotation as per attendance rolls	-	-

It is evident from the table 4.2A.7a, that the respondents of COSIP who organise group discussion and 33.86 percent of respondents of COHSSIP prefer the meritorious students for group leadership. It may be by virtue of their wider knowledge of the subject-matter and ability to organise the content of the topic in a systematic and comprehensive manner.

4.2A.7b Mode of Conducting a Group Discussion : The preparation of papers for presentation in group discussion is a collective intellectual endeavour of the members in a group. It cultivates

the habit of team work among the students. The discussion of a paper may be confined to a particular topic or enough flexibility may be introduced. The table 4.2A.7b shows the mode of conducting a group discussion.

Table :4.2A.7b: Mode of Conducting a Group Discussion
(Responses in Percentages)

Mode of Conducting a Group Discussion	COSIP	COHSSIP
(i) Confining discussion strictly to the topic	2.05	19.69
(ii) Allowing enough flexibility to introduce new ideas from other disciplines when such a step promises to be fruitful	5.48	31.50

From the table 4.2A.7b, it is evident that 5.48 percent of respondents of COSIP and 31.50 percent of respondents of COHSSIP allow enough flexibility to introduce new ideas from other disciplines when such a step promises to be fruitful during discussion sessions. It means that the respondents are interested in imparting an interdisciplinary dimension to the discussions.

4.2A.8a Symposium : Symposium is an instructional technique in which two or more persons but less than six speak on a topic from different angles. It attempts to present a comprehensive picture of the topic through the views expressed by the various speakers. After the presentation of the papers/talks, discussion follows. The table 4.2A.8a shows the percentage of respondents indicating the number of students who present their papers in a symposium.

Table :4.2A.8a: Number of Students Presenting Papers in a Symposium

(Responses in Percentages)

Number of students who present papers in a Symposium	COHSSIP
Four or more	2.36
Three	11.81
Two	-

Symposium is organised by the respondents of COHSSIP only and that too, by 14.17 percent of them (table 4.2A.1a). The table 4.2A.8a indicates that 11.81 percent of respondents invite three papers for presentation in a symposium. It is substantiated by interviews that normally 10 minutes are assigned to each paper and the remaining time is devoted for group discussion.

4.2A.8b Mode of Conducting a Symposium : A symposium can be organised either by delivering time bound speeches or reading brief papers or a combination of both. The table 4.2A.8b shows the percentage of respondents indicating the mode of conducting a symposium.

Table :4.2A.8b: Mode of Conducting a Symposium

(Responses in Percentages)

Mode of conducting a Symposium	COHSSIP
(i) By delivering short speeches	-
(ii) By reading brief papers	7.87
(iii) By combining both the techniques	6.30

The table 4.2A.8b shows that 7.87 percent of the respondents conduct the symposium by allowing the students to read brief

papers. There are 6.30 percent of respondents who allow the students to read brief papers and supplementing them with short speeches in a symposium.

4.2A.8c Interaction Process in a Symposium : The table 4.2A.8c shows the percentage of respondents following the practice of conducting discussion after the presentation of papers.

Table :4.2A.8c: Interaction Process in a Symposium
(Responses in Percentages)

Discussion follows papers in a Symposium	COHSSIP
Yes	14.17
No	-

The table 4.2A.8c shows that the respondents who organise the symposium follow the practice of conducting discussion after the presentation of papers. Discussion is fruitful in making clear certain issues emerging from the papers.

4.2A.9 Teachers' Perception of Effectiveness of Discussion

Methods : The effectiveness of discussion methods such as seminar, tutorial, group discussion and symposium is measured in terms of their helpfulness to students in enabling them to learn the subject as well as in developing their higher intellectual abilities and skills. The teachers expect the inculcation of independent study habits among the students and their active participation in teaching-learning process. Through discussion methods, the students get a clear picture of the topic. It is tried through discussion methods

to arouse intellectual curiosity among the students and to develop a healthy spirit of constructive criticism. The table 4.2A.9 shows the perception of 100 percent of teachers of COSIP and 100 percent teachers of COHSSIP about the effectiveness of discussion methods in terms of means.

Table :4.2A.9: Means showing Teachers' Perception of Effectiveness of Discussion Methods

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
(i) In supplementing class lecture	4.24		4.51	
(ii) In discussing difficult topics	4.45		4.67	
(iii) In exchanging different view-points	3.36		4.40	
(iv) In gaining experience to present the papers	3.64		4.37	
(v) In facing interrogation	3.49	3.79	4.26	4.46
(vi) In developing the power of expression	3.60		4.73	
(vii) In arranging the content of the paper logically and sequentially	3.77		4.40	
(viii) In revising the reports or papers through the suggestions made by the group	3.76		4.35	

(i) COSIP : According to the table 4.2A.9, the overall mean (3.79) signifies that the discussion methods are helpful to students in enabling them to learn the subject as well as in developing certain values and skills in them 'to much extent'. The means of the individual items reveal that discussion methods are helpful

to students in discussing difficult topics (4.45) to a great extent'; in exchanging different view points (3.36) 'to some extent' and for remaining items 'to much extent'.

(ii) COHSSIP : According to table 4.2A.9, the overall mean (4.46) indicates that discussion methods are helpful to students in developing their higher intellectual abilities and skills and getting them a clear picture of the topic 'to a great extent'. The means of the individual items reveal that discussion methods are helpful to students; in supplementing class lecture (4.51); in discussing difficult topics (4.67) and in developing the power of expression (4.73) 'to a great extent' and for the remaining items 'to much extent'.

The above analysis shows that the respondents of COHSSIP perceive the effectiveness of discussion methods in enabling the students to learn the subject as well as in developing in them certain values and skills to a greater extent in comparison to the respondents of COSIP. The respondents belonging to both the programmes agree that discussion methods are helpful to the students in clarifying difficult topics to an appreciable level. The respondents belonging to COHSSIP find that discussion methods are helpful to students in developing the power of expression and in supplementing class lectures to an appreciable level.

4.2A.10a Workshop Activities : The U.G.C. has given encouragement for, and has liberally financed the setting up of workshop and glass blowing units in the colleges for developing in students psychomotor skills such as construction, operation, servicing and maintenance of apparatus. Many of the colleges have no provision for repairing costly apparatus when they go out of order. The U.G.C. expects the

setting up of workshop and glass blowing units in the colleges under COSIP. It is hoped that setting up of workshops will help in creating indigenous capability in design and development of more advanced instruments for both applied and pure work in various areas of science and technology. The workshop activities will develop greater confidence among the students to work on their own and to foster creativity among them. According to the table 4.2A.1a, the workshop activities have been started by 47.95 percent of respondents of COSIP. After giving a list of activities which can be conducted in workshop, the respondents have been asked ; 'Please put a tick mark (✓) in column I against each of the activities for which you provide opportunities to students in the workshop.' The table 4.2A.10a shows the percentage of respondents who provide opportunities to students to conduct varied activities in workshop.

Table :4.2A.10a: Activities Conducted in Workshop
(Responses in Percentages)

Activities	COSIP
(i) Preparing charts, maps, diagrams, sketches etc.	47.95
(ii) Repairing and improvising the apparatus	28.08
(iii) Designing and assembling equipment for new apparatus	12.33
(iv) Operating electrical gadgets	29.45

The table 4.2A.10a shows that 47.95 percent of respondents provide opportunities to students in workshops for preparing charts, models, maps, diagrams, sketches etc. The percentage of respondents who provides opportunities to student to conduct activities in

workshop is not encouraging. It is substantiated by interviews and observations that charts, diagrams, maps, sketches, models etc. have been prepared in Chemistry, Physics, Zoology, Botany, Geology, Microbiology, Mathematics and Statistics disciplines. It is interesting to note that two colleges have prepared charts on periodic table in Chemistry and circuit diagrams in Physics, which have been sold to neighbouring institutions at nominal prices and have been highly appreciated. Only 29.45 percent of respondents provide opportunities to students for operating electrical gadgets. A very limited percentage of respondents provide opportunities to students for repairing and improvising the apparatuses which go out of order. The respondents belonging to Physics discipline provide opportunities to students for designing and assembling electronic equipment for new apparatus. It seems that the workshop activities have been started by a limited percentage of respondents. During interviews, it was revealed that lack of students' interest due, to the nongraded nature of the workshop activities was the main cause for such activities being at a low key.

4.2A.10b Teachers' Perception of Students' Skills in Conducting Workshop Activities : The table 4.2A.10b shows the perception of teachers who provide opportunities to students to conduct workshop activities as mentioned in the table 4.2A.10a, about the use of their acquired skills in conducting such activities.

Table :4.2A.10b: Means Showing Teachers' Perception of Students' Skills in Conducting Workshop Activities

Activities	Means of Individual Items
(i) Preparing charts, diagrams, maps, sketches, models etc.	4.30
(ii) Repairing and improvising the apparatus	4.27
(iii) Designing and assembling equipment for new apparatus	4.22
(iv) Operating electrical gadgets	4.60

The overall mean against these items is not usable, hence it has not been calculated.

The means of the individual items reveal that the students are able to make use of acquired skills in operating electrical gadgets (4.60) 'to a great extent' and for the remaining items 'to much extent'. It means that the students are found able to make use of acquired skills of construction, operation, servicing and maintenance of apparatus to an appreciable extent.

4.2A.11a Project Method : The project method provides opportunities to students to solve the problems in their natural settings. In this method students are encouraged to analyse problems in a systematic way; in the process they are expected to exercise judgement and come to the conclusions about the results of their study. The students are encouraged to identify problems of their own interest in the course or related to it and to find out answers on their own on the basis of empiricism. Projects aim at equipping the students with necessary knowledge and skills for conducting research. The

COSIP and COHSSIP expect that opportunities should be provided to the students at least to complete one small project during the undergraduate course. According to the table 4.2A.1a, the project method is practised by 91.10 percent of respondents of COSIP and 22.05 percent of respondents of COHSSIP. A question has been asked to the respondents : 'what is the form of small research project undertaken by the students ? (Check more than one)'. The table 4.2A.11a shows the percentage of respondents indicating the types of small research projects undertaken by the students.

Table :4.2A.11a: Type of Projects undertaken by the Students

(Responses in Percentages)

Type of Small Research Projects	COSIP	COHSSIP
(i) Survey	6.16	17.32
(ii) Historical	-	3.94
(iii) Biographical with relevance to modern times	-	0.79
(iv) Designing and assembling the equipment for new apparatus	12.33	-
(v) Experimental verification of Laws or Hypotheses	84.93	-

(i) COSIP : The table 4.2A.11a indicates that a very high percentage of respondents reports that the students take up projects for experimental verification of laws or hypotheses, especially in Chemistry, Zoology, Botany, Geology and Micro-biology disciplines. Only 12.33 percent of respondents belonging to Physics discipline report that the students prefer to take up projects

for designing and assembling equipment for new apparatus and thereby, experimentally verify laws or hypotheses. A very few percentage of respondents belonging to Mathematics and Statistics disciplines reports that the students prefer survey type of projects.

(ii) COHSSIP : The table 4.2A.11a shows that hardly 22.05 percent of respondents follow the practice of giving projects to students. A section comprising 17.32 percent of respondents reports that the students take up survey type of projects in Psychology, Sociology, Geography, Economics and Commerce disciplines. A very low percentage of respondents reports that the students belonging to History discipline prefer to take up projects related to places of historical importance.

The above analysis makes it clear that the project method is found to be widely practised by a very high percentage of respondents of COSIP whereas it has been practised by a very limited percentage of respondents of COHSSIP. While the COSIP projects are mostly concerned with the experimental verification of hypotheses or laws, the COHSSIP projects are mostly surveys.

4.2A.11b Supply of Instruction Sheet pertaining to Projects : To assist the students to conduct project work effectively, the project supervisor is expected to supply them guidelines pertaining to the methodology adopted for : collecting data/taking observations; sampling/ experimentation of laboratory apparatus; processing of data / tabulation of observations; analysis and interpretation of data / observation and reporting of the results with conclusions and generalisations. The table 4.2A.11b shows the percentage of

respondents who follow the practice of supplying instruction sheet pertaining to projects to the students.

Table :4.2A.11b: Supply of Instruction Sheet Pertaining to Projects

(Responses in Percentages)

Supply of Instruction Sheet Pertaining to Project	COSIP	COHSSIP
Yes	13.01	4.72
No	78.08	17.32

The above table reflects that the practice of supplying instruction sheet pertaining to project to students is not popular. It is substantiated by interviews that the respondents of COSIP and COHSSIP provide oral instruction to students at every step.

4.2A.11c Process of Finalisation of Projects : Students are allowed to identify and choose problems of their own interest for projects. The finalisation of the problem is done through discussion between project supervisors and students. The project supervisors, for assessing students' insights into the problem, may adopt a number of techniques such as group discussion, exploration of sources of information by the students or a combination of both. The table 4.2A.11c on the next page shows teachers' responses with regard to adoption of techniques for finalising projects.

Table :4.2A.11c: Process of Finalisation of Projects
(Responses in Percentages)

Process of Finalisation of Projects	COSIP	COHSSIP
(i) After exploring the sources of information etc	70.55	5.51
(ii) After group discussion	-	3.94
(iii) After going through both the above process	20.55	12.60

(i) COSIP : The table 4.2A.11c shows that the majority of the respondents follow the practice of finalising the project after ensuring that the students have examined the related literature in depth.

(ii) COHSSIP : Only 12.60 percentage of respondents follow both the techniques for finalising the projects i.e. group discussions and also ensuring that the students have explored the sources of information.

4.2A.11d Teachers' Perception of Effectiveness of Projects:

Teachers' perception of effectiveness of small research projects is determined in terms of their helpfulness to students in enabling them to adopt scientific procedure for solving problems and drawing conclusions based on empiricism. The table 4.2A.11d shows the perception of 91.10 percent of teachers of COSIP and 22.05 percent of teachers of COHSSIP about the effectiveness of projects in terms of means.

Table :4.2A.11d: Means Showing Teachers' Perception of Effectiveness of Projects

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
(i) In enabling the students to adopt a scientific procedure for solving problems	4.48		4.46	
(ii) In enabling the students to apply appropriate techniques for taking observations/collecting data	4.52		3.61	
		4.46		3.77
(iii) In enabling the students to tabulate and analyse the data collected or observations mathematically/statistically	4.49		3.42	
(iv) In enabling the students to verify and generalise the results	4.36		3.57	

(i) COSIP : According to the table 4.2A.11d, the overall mean (4.46) indicates that projects are helpful to students in developing in them the spirit of scientific enquiry 'to a great extent'. The means of the individual items, reveal that except for one item, projects are helpful to students enabling them to adopt scientific procedure for solving the problems 'to a great extent'. The projects are helpful to students in enabling them to verify and generalise the results (4.36) 'to much extent'.

(ii) COHSSIP : According to the table 4.2A.11d, the overall mean (3.77) signifies that projects are helpful to students in developing in them the spirit of scientific enquiry 'to much

extent'. The means of individual items reveal that projects are helpful to students in enabling them to adopt scientific procedure for solving the problems (4.46) 'to a great extent'; in enabling them to apply appropriate techniques for taking observations/collecting data (3.61); and in enabling them to verify and generalise the results (3.57) 'to much extent', and in enabling them to tabulate and analyse the collected data mathematically/statistically (3.42) 'to some extent'.

The above analysis shows that the respondents of COSIP perceive the project method of greater help in training the students to employ scientific procedure for solving the problems and studying the phenomena in their natural settings in comparison to the respondents of COHSSIP.

4.2A.12A(a) Language Laboratory : COHSSIP encourages the institutions to establish language laboratory so as to provide facilities to students for improving communication skills, especially in foreign languages. In such laboratories students are provided opportunities to practice languages by hearing, speaking and reacting in a variety of ways. The facilities of language laboratories are to be provided to all the students in a department. The table 4.2A.12A(a) shows the percentage of respondents who have the facilities of language laboratories in their departments.

Table :4.2A.12A(a): Facilities of Language Laboratory
(Responses in Percentages)

Facilities of Language Laboratory	COHSSIP
Yes	6.30
No	93.70

According to the table 4.2A.12A(a), only 6.30 percent of respondents report that they have the facilities of language laboratories in their departments. It is observed through personal visitation that three colleges have established fullfledged language laboratories which have the capacity of twenty students each and two colleges have purchased recorded material in English. It is substantiated by interviews that the facilities of language laboratories are utilised by the English department and by those students who have offered English Language as a subject of the study.

The very low percentage of respondents who reports the ^{their} facilities of language laboratories in departments gives the impression that the very objective of establishing language laboratories in each college has been defeated. Interviews helped in finding out the reasons why other institutions are not coming forward for establishing language laboratories which are : the lack of accommodation facilities; lack of technical assistants for handling equipment, lack of teachers' interest etc.

4.2A.12A(b) Supervision of Students' through Language Laboratory :

It is hoped that the students would improve language skills in terms of pronunciation, pacing, new words, fluency and appropriateness of words through language laboratories. For observing the progress of students in communication skills, it is expected from the subject teachers to supervise them during practice and maintain a record of the progress in their learning. The table 4.2A.12A(b) shows the percentage of respondents who supervise students' learning through language laboratory.

Table :4.2A.12A(b) : Supervision of Students' Learning through Language Laboratory
(Responses in Percentage)

Supervision of Students' Learning Through Language Laboratory	COHSSIP
(i) Pronunciation	6.30
(ii) Pacing	6.30
(iii) New words	6.30
(iv) Fluency	6.30
(v) Appropriateness of words	6.30

The table 4.2A.12A(b) indicates that the respondents who have the facilities of language laboratory, supervise students' learning in terms of improvement of pronunciation, pacing, new words, fluency and appropriateness of words.

4.2A.12A(c) Teachers' Perception of Effectiveness of Language Laboratory : Teachers' perception about the effectiveness of language laboratory is measured in terms of improvement of communication skills among the students. The table 4.2A.12A(c) shows the perception of 6.30 percent of teachers of COHSSIP about the effectiveness of language laboratory in terms of means.

Table:4.2A.12A(c): Means showing Teachers' Perception of Effectiveness of Language Laboratory

Items	COHSSIP	
	Means of Individual Items	Overall : Mean
(i) Pronunciation	3.88	
(ii) Pacing	3.75	
(iii) New words	4.36	4.05
(iv) Fluency	4.00	
(v) Appropriateness of words	4.25	

According to table 4.2A.12A(c) the overall mean (4.05) indicates that the language laboratory is helpful in improving their communication skills 'to much extent' which is further, substantiated by the means of individual items.

4.2A.12B(a) Laboratory Activities : Laboratory activities provide practical learning experiences to students and allow them to discover things for themselves. Laboratory activities help students to develop skills in making accurate and orderly observations and to draw conclusions based on experimentation. The laboratory activities in Science disciplines are conducted in Chemistry, Physics, Zoology, Botany, Geology, Micro-biology and Statistics and in Social Sciences in Geography and Psychology. The COSIP and COHSSIP expect that more opportunities should be provided to students to conduct laboratory activities independently and to arrive at their own conclusions. According to the table 4.2A.12a, 63.70 percent of respondents of COSIP and 5.51 percent of respondents of COHSSIP conduct laboratory activities. The table 4.2A.12B(a) shows the percentage of respondents who provide opportunities to students to conduct laboratory activities independently.

Table :4.2A.12B(a): Provision of Independent Laboratory Activities
(Responses in Percentages)

Provision of Independent Laboratory activities for Students	COSIP	COHSSIP
Yes	63.70	5.51
No	-	-

The table 4.2A.12B(a) shows that the respondents of COSIP and COHSSIP who conducted laboratory activities at the undergraduate level provide opportunities to students to perform laboratory activities independently.

4.2A.12B(b) Teachers' Perception of Students' Skills in conducting Laboratory Activities Independently : The laboratory activities are conducted systematically right from checking of the working conditions of apparatus and tools to drawing conclusions and making generalisations. The table 4.2A.1B(b) shows the perception of 63.70 percent of teachers of COSIP and 5.51 percent of teachers of COHSSIP about the use of students' acquired skills in conducting laboratory activities independently in terms of means.

(i) COSIP : According to table 4.2A.12B(b) on the next page, the overall mean (4.30) indicates that the students are able to make use of acquired skills in conducting laboratory activities independently 'to much extent'. The means of the individual items reveal that the students are able to make use of acquired skills 'to a great extent', in checking the working of conditions of the apparatus and tools (4.67); in setting up apparatus with ease (4.59); in taking measurement and reading instruments accurately and checking up their observations at every stage (4.45); in performing experiment with neatness (4.58); in dismantling and cleaning the apparatus and putting them in proper place (4.47); in tabulating observations meaningfully (4.49); and in calculating and finalising the results mentioning units (4.48).

Table :4.2A.12B(b): Means Showing Teachers' Perception of Students' Skills in Conducting Laboratory Activities Independently

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
(i) Checking the working conditions of apparatus and tools	4.67		4.71	
(ii) Rectifying defects of apparatus in the laboratory situations	3.37		2.14	
(iii) Improvising apparatus if necessary	3.43		2.43	
(iv) Sketching the arrangement of the apparatus at the outset	4.42		4.43	
(v) Setting up apparatus with ease	4.59		4.57	
(vi) Taking measurement and reading instrument accurately and checking their observation at every stage	4.45		4.43	
(vii) Taking precautions in handling instruments and doing experiments	4.39		4.29	
(viii) Performing experiment with reasonable speed and accuracy so as to complete it in time	4.39	4.30	4.13	4.10
(ix) Performing experiment with neatness	4.58		4.57	
(x) Dismantling and cleaning the apparatus and putting them in proper place	4.47		4.13	
(xi) Tabulating observation meaningfully	4.49		4.57	
(xii) Summarising observations leading to generalisations	4.23		4.13	
(xiii) Representing observations by diagrams or graphs	4.17		4.43	
(xiv) Calculating and finalise the results mentioning units	4.48		4.43	

The students are able to make use of acquired skills: in rectifying defects of apparatus in the laboratory situation (3.37) and in improvising the apparatus if necessary (3.43) 'to some extent'. They have been rated as able to make use of acquired skills for the remaining items 'to much extent'.

(ii) COHSSIP : According to table 4.2A.12B(b), the overall mean (4.10) indicates that the students are able to make use of acquired skills in conducting laboratory activities 'to much extent'. The means of individual items reveal that the students are able 'to a great extent'; in checking the working conditions of apparatus and tools (4.71); in setting up experiment with ease (4.57); in performing experiments with neatness (4.57) ; and in tabulating observation meaning (4.57).

The students are able : to rectify defects of apparatus in the laboratory situations (2.14) and to improvise apparatus if necessary (2.43) 'to a little extent'. They have been rated as able to make use of acquired skills for the remaining items 'to much extent'.

It is noted that the respondents belonging to COSIP and COHSSIP are on the whole satisfied about the students' skills for performing laboratory activities independently. In case of some specific tasks such as checking the working conditions of the apparatus and tools; setting up apparatus with ease; performing experiments with neatness and tabulating observations meaningfully the teachers belonging to both the programmes have given high ratings for students' abilities and skills.

4.2 B Library and Audio-Visual Aids

4.2B,1a Library Facilities and Staff : One of the major purposes of the university education is to teach the students to work on their own and to emancipate them from dependence on teachers. Under COSIP and COHSSIP, it is considered essential that library facilities at the undergraduate level, should be adequate and the students should learn to make best use of them. The COSIP and COHSSIP expect the enrichment and maintenance of a good library equipped with advanced books and journals and to make optimum use of it. The table 4.2B.1a shows the percentage of respondents indicating the adequacy of library facilities and staff.

Table :4.2B.1a: Adequacy of Library Facilities and Staff
(Responses in Percentages)

Library Facilities and Staff	COSIP			:	COHSSIP		
	More than Adequate	Ade- quate	Inade- quate		More :than :Adequate	Adeq- uate	Inade- quate
(i) Books	-	100	-	-	93.70	6.30	
(ii) Journals	-	20.55	79.45	-	11.81	88.19	
(iii) Seating Arrange- ment	7.53	60.96	31.51	-	30.71	69.29	
(iv) Library staff	-	84.93	15.07	-	83.46	16.54	

(i) COSIP : The table 4.2B.1a shows that all the respondents report that library has been enriched in terms of advanced books and revised editions. It is substantiated by interviews that extra library cards have been issued to students for borrowing books from COSIP Book Bank whose number varies from 2 to 4 from

college to college. The majority of respondents report the inadequacy of standard foreign journals which is due to their high cost. The majority of respondents report sufficiency in library staff. In some of the colleges, part time library attendants have been employed on the total remuneration of Rs.50/- p.m. The majority of respondents report adequate seating arrangement for students in the library.

(ii) COHSSIP : The table 4.2B.1a reveals that the majority of respondents report the adequacy of books in the library. It means that the library has been enriched in terms of advanced books and revised editions. It is substantiated by interviews that extra library cards have been issued to students for borrowing books from COHSSIP Book Bank whose number varies from 2 to 4 from college to college. The majority of respondents report the inadequacy of standard journals which is due to their high cost. The majority of respondents report that the library staff is sufficient and in some colleges post-graduate students have been employed for part time library services on the remuneration of Rs. 50/- p.m. The majority of respondents feel the inadequacy of seating arrangement with respect to students' strength.

It is obvious from the above analysis that libraries have been enriched in terms of advanced books and revised editions under COSIP and COHSSIP. Part time attendants have been employed in the libraries. Inadequacy of journals has been noticed by the respondents of COSIP and COHSSIP which is due to their high cost.

The respondents of COSIP report adequate seating capacity for students in the library whereas, the majority of respondents of COHSSIP report inadequate seating capacity with respect to students' strength.

4.2B.1b Provision of Departmental Library : The COSIP and COHSSIP encourage the teachers to establish departmental libraries with the support of adequate funds. The departmental library makes standard books easily accessible to the students, thereby, enabling them to cultivate the habits of self-study. The table 4.2B.1b shows the percentage of respondents who report the provision of departmental libraries.

Table :4.2B.1b: Provision of Departmental Library
(Responses in Percentages)

Provision of Departmental Library	COSIP	COHSSIP
Yes	28.77	14.17
No	71.23	85.83

The table 4.2B.1b shows that the establishment of departmental libraries has been undertaken only to a very limited extent. There may be some factors responsible for not establishing departmental libraries which are discussed in table 4.2B.1c.

4.2B.1c Factors Responsible for Non-existence of Departmental Libraries : The table 4.2B.1c shows the percentage of respondents indicating the factors responsible for non-existence of departmental libraries.

Table :4.2B.1c: Factors Responsible for Non-Existence of Departmental Libraries

(Responses in Percentages)

Factors Responsible for Non-existence of Departmental Libraries	COSIP	COHSSIP
(i) Lack of accommodation	64.42	84.40
(ii) Lack of library assistant	54.81	77.98
(iii) Lack of funds	37.50	54.13

It is evident from the table 4.2B.1c, that the majority of respondents of COSIP and COHSSIP report the lack of accommodation and lack of library assistant for the establishment of departmental libraries. Only 37.50 percent of respondents of COSIP and the majority of respondents of COHSSIP also report the lack of funds for establishing departmental libraries.

4.2B.1d Open Access System in the Library : The table 4.2B.1d shows the percentage of respondents reporting about the open access system in the library.

Table :4.2B.1d: Open Access System in the Library
(Responses in Percentages)

Open Access System in the Library	COSIP	COHSSIP
Yes	34.93	28.35
No	65.07	71.65

The table 4.2B.1d makes it clear that open access system in the library is not popular at the undergraduate level. It is substantiated by interviews that library staff help the students in selecting books of their choice. The reason why the open access system has not been implemented or has been discontinued is the loss of books suffered by the library.

4.2B.1e Teachers' Perception of Use of Library Facilities : It is hoped that the students would make use of library facilities for collecting bibliographical notes; completing assignments; preparing papers for seminars, tutorials, group discussions and symposia; and preparing project reports/revising the discussion papers. The

table 4.2B.1e shows the teachers' perception of the use of library facilities by the students in terms of means.

Table :4.2B.1e: Means Showing Teachers' Perception of use of Library Facilities

Items	COSIP		COHSSIP	
	Means of Individual Items	Overall Mean	Means of Individual Items	Overall Mean
(i) In collecting bibliographical notes	4.48		3.87	
(ii) In completing assignments	3.61	4.20	4.06	4.24
(iii) In preparing papers for seminars, tutorials, group discussions, and symposia	4.22		4.47	
(iv) In preparing project reports/ revising discussion papers	4.50		4.57	

(i) COSIP : According to the table 4.2B.1e, the overall mean (4.20) indicates that the students make use of library facilities for consulting reference literature 'to much extent'. The means of individual items reveal that the students make use of library facilities : in collecting bibliographical notes (4.48) and in preparing project reports/revising discussion papers (4.50) 'to a great extent' and for the remaining items 'to much extent'.

(ii) COHSSIP : In the table 4.2B.1e, the overall mean (4.24) indicates that the students make use of library facilities for consulting reference literature 'to much extent'. The means of individual items reveal that the students make use of library facilities : in preparing papers for seminars, tutorials, group discussions and symposia (4.47) and in preparing project reports/ revising discussion papers (4.57) 'to a great extent' and for the remaining items 'to much extent'.

It is inferred from the above analysis that the respondents of COSIP and COHSSIP perceive that the students make use of library

facilities for consulting reference material to a considerable extent. They also perceive that the students make use of library resources in preparing project reports/revising discussion papers to an appreciable extent.

4.2B.2a Audio-Visual Aids : The audio-visual aids are defined as the auditory and visual materials or aids which a teacher uses for making his teaching effective and for achieving well defined instructional objectives. Mere verbal exposition of the content does not ensure the permanent gain of accurate knowledge; the development of desired skills; realisation of specific objectives; and consequent behavioural changes in students. Through audio-visual aids a large number of students can be brought into a variety of otherwise inaccessible processes, materials, events, situations etc. By supplementing verbal exposition with visual aids teaching becomes effective and the students gain knowledge through multi-sensory-media. The COSIP and COHSSIP provide funds to institutions for procuring and using audio-visual aids for the supporting instructional programme. The table 4.2B.2a shows the percentage of respondents indicating the availability of teaching aids.

Table :4.2B.2a: Availability of Audio-Visual Aids
(Responses in Percentages)

Audio-Visual Aids	Availability	
	COSIP	COHSSIP
(i) Charts, maps, diagrams, sketches, models etc.	91.78	33.86
(ii) Films, filmstrips, slides etc.	43.15	17.32
(iii) Cassette tapes, sound records etc.	26.03	22.04

(i) COSIP : The table 4.2B.2a reveals that a very high percentage of respondents reports the availability of charts, maps, diagrams, sketches, models etc. Only 43.15 percent of respondents report the availability of films, filmstrips, slides etc., and a lower percentage of respondents mentions the availability of cassette tapes, sound records etc. It is substantiated by interviews that opportunities have been provided to students for preparing charts, maps, diagrams, sketches, models, films, filmstrips, slides and for sound recording. It is reported by the Chemistry department of a college that it has procured ten tapes of a lecture series of 10 Noble laureates in the discipline and they are played for the benefit of the students. Through observation and interviews it was noticed that the number of tapes varies from 10 to 50 and the number of slides varies from 140 to 600 in different colleges. Filmstrips and slides have been purchased by the departments of Physics, Chemistry, Zoology, Botany, Geology and Microbiology in some of the colleges.

(ii) COHSSIP : The table 4.2B.2a represents a poor picture about the availability of teaching aids. The availability of charts, diagrams, maps, sketches, models etc. has been reported by 33.86 percent of respondents. It is substantiated by interviews that charts, maps, diagrams, models etc. have been developed as well as purchased ready-made by the respondents belonging to the departments of Psychology, Geography, Economics, Political Science, History, Sociology etc. A very low percentage of respondents procured films, filmstrips and slides. It is reported by the respondents of History

department of a college that the students prepared commentaries recorded on tapes for slides and filmstrips. A very low percentage of respondents mentions the availability of cassette tapes and sound records.

The percentage of respondents of COSIP indicating the availability of audio-visual aids is greater than the percentage of respondents of COHSSIP. It is worthy to note that in some of the COHSSIP disciplines a beginning has been made to procure audio-visual aids.

4.2B.2b Frequency of Using Audio-Visual Aids : It is expected from the teachers of COSIP and COHSSIP to use the audio-visual aids frequently for supporting instructional activities. The table 4.2B.2b shows the percentage of respondents indicating the frequency of using audio-visual aids.

(i) COSIP : The table 4.2B.2b indicates that the majority of respondents use chart, maps, diagrams, sketches, models etc., 'Occasionally' for supporting the instructional activities. The films, filmstrips, slides etc. are used 'seldom' by 29.45 percent of respondents. Similarly, the cassette tapes and sound records are not used frequently.

(ii) COHSSIP : The table 4.2B.2b reveals that 15.75 percent of respondent use sound records and cassette tapes 'often'. The other categories of teaching aids such as film, filmstrips, slides, charts, models, diagrams, sketches, models etc. are rarely used by the respondents.

Table :4.2B.2b: Frequency of Using Audio-Visual Aids

(Responses in Percentages)

Audio-Visual Aids	COSIP			COHSSIP						
	Always Often	Occasi- onally	Seldom Never	Always Often	Occasio- nally	Seldom Never				
i) Charts, diagrams, maps, sketches, models etc.	-	7.53	63.01	21.23	-	-	11.02	22.83	-	
ii) Films, filmstrips, slides etc.	-	-	5.48	29.45	8.22	-	-	3.94	13.39	-
iii) Cassette tapes, sound records	-	-	15.07	6.85	4.11	-	15.75	6.30	-	-

It is inferred from the responses and observations that audio-visual aids are hardly put to use by the respondents of COSIP and COHSSIP. Very often they are safely stored up but seldom taken out for instructional purposes.

4.2B.2c Availability of Equipment for Using Audio-Visual Aids : For using audio-visual aids such as films, filmstrips, slides, cassette tapes, sound records etc., there is the need of equipment such as film projector, slide projector, overhead projector, epidiascope, tape records, linguaphone etc. The COSIP and COHSSIP provide funds to the institutions for procuring them and expect the establishment of a common audio-visual centre in the institution. The table 4.2B.2c shows the percentage of respondents indicating the availability of audio-visual equipment.

Table :4.2B.2c: Availability of Equipment for Using Audio-Visual Aids

(Responses in Percentages)

Equipment for Using Audio-Visual Aids	COSIP	COHSSIP
(i) Film projector	68.49	33.86
(ii) Slide projector	53.42	5.51
(iii) Overhead projector	33.56	13.39
(iv) Epidiascope	17.81	20.47
(v) Tape-recorder	26.03	22.04
(vi) Linguaphone	-	4.72

(i) COSIP : The table 4.2B.2c reveals that the majority respondents report the availability of film projectors and slide projectors in this institutions. A low percentage of respondents report the availability of over-head projectors, epidiascopes and

tape-recorders in their institutions.

(ii) COHSSIP : From the table 4.2B.2c, it is found that a low percentage of respondents report the availability of film projectors, slide projectors, overhead projectors, epidiascopes, tape-recorders and linguaphones in their institutions.

It is inferred that colleges under COSIP report the availability of more audio-visual equipment in comparison to colleges under COHSSIP. During interviews the respondents of COSIP clarified that such audio-visual equipment were already available in Science laboratory.

4.2B.2d Adoption of Techniques while Making Use of Audio-Visual

Aids : For making an effective use of audio-visual aids, it is expected from the teachers to adopt a number of techniques such as making introductory comments in advance, explaining the meaning of new words, providing instruction sheet pertaining to specific points, reviewing the key points at the end of the session etc. The table 4.2B.2d shows the percentage of respondents adopting varied techniques while making use of audio-visual aids.

Table :4.2B.2d: Adoption of Techniques while Making the Use of Audio-Visual Aids
(Responses in Percentage)

Techniques adopted while making use of Audio-Visual Aids	COSIP	COHSSIP
(i) Making introductory comments in advance	62.33	28.34
(ii) Explaining the meaning of new words	55.48	21.26
(iii) Providing an instruction sheet to students pertaining to the teaching points	10.10	7.09
(iv) Reviewing the key-points at the end of the session	59.59	17.32

From the table 4.2B.2d, a trend emerges that the majority of respondents of COSIP and a low percentage of respondents of COHSSIP for effective learning by the students follow the practice of making introductory comments in advance, explaining the meaning of new words and reviewing the key points at the end of the session while making use of audio-visual aids.

4.2B.2e Follow up Activities of Audio-Visual Aids : It is expected of the teachers to assess the students' achievement from the use of audio-visual aids. For this purpose teachers may use a number of techniques such as objective type tests, verbalisation of the content, discussions, assignments etc. The table 4.2B.2e shows the percentage of respondents adopting a variety of activities as follow up of the use of audio-visual aids.

Table :4.2B.2e: Follow up Activities of Audio-Visual Aids
(Responses in Percentages)

Type of Follow up Activities	COSIP	COHSSIP
(i) Objective type tests	-	-
(ii) Verbalization of the content	-	-
(iii) Discussions	11.64	14.17
(iv) Assignments	15.75	9.45
(v) Any other	-	-

The table 4.2B.2e reflects that the practice of conducting follow up activities of the use of audio-visual aids is not popular and needs to be strengthened.

4.2B.2f Teachers' Perception of Effectiveness of Audio-Visual Aids:

Teachers' perception of effectiveness of audio-visual aids is measured in terms of their utility to students in preparing reports based on guest lectures; listening to recorded lectures borrowed from abroad or other departments; understanding working conditions in various vocations in India and abroad; and understanding conditions in far off countries or lands. According to the table 4.2B.2b, the percentage of respondents of COSIP and COHSSIP making use of audio-visual aids varies. The items (i) and (ii) of table 4.2B.2f have been responded to by 21.92 percent of teachers of COSIP and 22.04 percent of teachers of COHSSIP and the items (iii) and (iv) of the same table have been responded to by 91.78 percent of teachers of COSIP and 33.86 percent of teachers of COHSSIP who make of varied types of audio-visual aids; The table 4.2B.2f shows the teachers' perception of effectiveness of audio-visual aids in terms of means.

Table :4.2B.2f: Means Showing Teachers' Perception of Effectiveness of Audio-Visual Aids

Items	Means of Individual Items	
	COSIP	COHSSIP
(i) In preparing reports based on taped lectures	2.37	3.07
(ii) In listening to recorded lectures borrowed from abroad or other departments	3.16	4.18
(iii) In understanding working conditions in various vocations in India and abroad	3.00	3.37
(iv) In understanding conditions in far-off countries or lands	2.64	3.14

The overall mean against these items is usable, hence it has not been calculated

(i) COSIP : According to the table 4.2B.2f, the means of individual items reveal that the audio-visual aids are helpful to students: in listening to recorded lectures borrowed from abroad or other departments (3.16); in understanding working conditions in various vocations in India and abroad (3.00); and in understanding conditions in far-off countries or lands (2.64) 'to some extent' and for the remaining item 'to a little extent'.

(ii) COHSSIP : According to the table 4.2B.2f, the means of individual items, reveal that audio-visual aids are helpful to students in listening to recorded lectures borrowed from abroad or other departments (4.18) 'to much extent' and for the remaining items 'to some extent'.

It is inferred from the above analysis that audio-visual aids are found to be of limited help to the students for their learning.

4.2C Accommodation Facilities for Teaching-Learning Process

The COSIP and COHSSIP do not have any provision for use of funds by the colleges for augmentation of physical facilities such as building construction, repairing or purchasing of furniture etc. There is a need of proper accommodation facilities for conducting teaching-learning process effectively. It is hypothesised that the deficiency of accommodation affects teaching-learning process to a marked extent. The table 4.2C shows the percentage of respondents reporting about the accommodation facilities for teaching-learning process.

Table :4.2c: Accommodation Facilities for Teaching-Learning Process
(Responses in Percentages)

Types of Rooms	COSIP			COHSSIP		
	Not Handi- capped	Not enough rooms	Handicapped by Rooms too small	Not handi- capped	Not enough rooms	Handicapped by Rooms too small
(i) Lectures	54.12	32.19	4.79	51.18	41.73	7.09
(ii) Tutorials, seminars, group discussions and symposia	56.85	34.24	-	52.76	40.95	6.30
(iii) Workshop activities	47.95	-	-	No provision of workshop activities		
(iv) Demonstration	Either laboratory or classroom			Either laboratory or classroom		
(v) Audio-Visual Aids	39.04	-	4.11	19.69	-	2.36
(vi) Laboratory activities	63.70	-	-	5.51	-	-

(i) COSIP : It is evident from the table 4.2c that the majority of respondents do not feel handicapped with regard to accommodation facilities for delivering lectures; for organising tutorials, seminars, group discussions and symposia; and for conducting laboratory activities. The respondents report that demonstration of instructional material is either done in laboratories or classrooms. It is to be noted that 32.19 percent of respondents feel shortage of rooms as a constraint in delivering lectures effectively and 34.24 percent of respondents experience difficulties in conducting small group discussions. The respondents who conduct laboratory activities, workshop activities and make use of audio-visual aids do not feel handicapped with regard to accommodation for such activities.

(ii) COHSSIP : The table 4.2c makes it clear that the majority of respondents do not feel handicapped with regard to accommodation facilities for delivering lectures and for conducting small group discussion sessions. It is to be noted that 41.73 percent of respondents state that they are handicapped by shortage of rooms with regard to delivering lectures. It is substantiated by interviews that due to shortage of rooms classes were combined and individual attention towards the students was not paid in such classes. 40.95 percent of respondents experience difficulties in organising small group discussions due to shortage of rooms. The respondents belonging to Psychology and Geography disciplines do not feel handicapped

with regard to accommodation facilities for conducting laboratory activities. Demonstration of instructional material is done either in classrooms or in laboratories.

It is inferred from the above analysis that the majority of respondents of COSIP and COHSSIP do not feel handicapped with regard to accommodation facilities for delivering lectures and organising small group discussions. However, there are considerable percentages of respondents of COSIP and COHSSIP (about 30 percent and 40 percent respectively) who feel handicapped by shortage of rooms for delivering lectures and conducting group discussions effectively. During interviews most of the teachers suggested that in programmes like COSIP and COHSSIP there should be some provision for grants for physical facilities also.

4.2 D Field Trips

Field trip is a popular and effective means of imparting practical orientation in disciplines. It enriches instruction by providing opportunities to relate the theoretical aspects of study to the practical realities of life. The field trips make the learners aware of the advancements in their fields of study and related areas. The learners get acquainted with the resources and culture of their country. The COSIP and COHSSIP expect the organisation of field trips and community study which permit the students to analyse the problems in a unstructured ways; in the process they are expected to exercise judgement and come to conclusions. The programmes for field trips are evolved taking into consideration the need for outdoor learning experiences and

their relationship with curricular activities. The respondents have been asked : 'Please check and put a tick mark (✓) against each of the locations where you have organised field trips'. The table 4.2D.1a shows the percentage of respondents indicating the organisation of fieldtrips at the various locations.

Table :4.2D.1a: Organisation of Field Trips Locationwise
(Responses in Percentages)

Locations for Organisation of Field Trips	COSIP	COHSSIP
(i) Rural areas	-	21.26
(ii) Social Service Centres, panchayat ghar, municipal corporation, hospital etc.	-	11.02
(iii) Places of historical importance	-	9.45
(iv) Commercial centres	-	11.02
(v) Industrial centres	17.13	7.87
(vi) Botanical gardens	8.22	-
(vii) Ponds/ sea shores	11.64	-
(viii) Instrumentation centres	11.64	-
(ix) Laboratories of national importance	24.66	-

(i) COSIP : It is evident from the table 4.2D.1a, that the selection of locations for organisation of field trips has been made as per nature of the discipline. The respondents belonging to Chemistry, Physics and Mathematics disciplines prefer to organise field trips to laboratories of national importance, instrumentation centres and industrial centres whereas the respondents belonging to Zoology, Botany, Micro-biology disciplines

prefer to organise field trips to botanical gardens and to nearby ponds or seashore.

(ii) COHSSIP : The table 4.2D.1a shows much variation in the percentages of respondents selecting locations for field trips. The respondents belonging to Sociology and Languages prefer to organise field trips to rural areas for making the students aware of the social conditions and culture of the people whereas the respondents belonging to History discipline choose places of historical importance. The respondents belonging to Economics and Commerce disciplines take the students to commercial and industrial centres for making them aware of the working conditions, duties, and responsibilities of the personnel working there. The respondents belonging to Political Science and Psychology disciplines take the students to social service centres.

4.2D.1b Frequency of Organising Field Trips : The table 4.2D.1b shows the percentage of respondents indicating the frequency of organising field trips.

From the table 4.2D.1b on the next page, a trend emerges that normally the students are taken out for field trips once in a year in most of the disciplines. The reasons why more field trips are not organised are evidently the short of time and funds.

4.2D.1c Teachers' Perception of Effectiveness of Field Trips :

Teachers' perception of effectiveness of field trips is determined in terms of their helpfulness to the students : in relating theoretical aspects of study to practical realities of life; in gaining experiences about the advancements in the discipline; in

Table :4.2D.1b: Frequency of Organising Field Trips
(Responses in Percentages)

Locations	Frequency of organising field trips per year					
	COSIP		COHSSIP			
	Three or more time	Two Times	Once	Three or more time	Two Times	Once
(i) Rural areas	-	-	-	3.15	18.11	
(ii) Social service centres, panchayat ghar, municipal corporation, hospital	-	-	-	4.72	6.30	
(iii) Places of historical importance	-	-	-	-	9.45	
(iv) Commercial centres	-	-	-	-	11.02	
(v) Industrial centres	-	-	17.13	-	7.87	
(vi) Botanical gardens	8.22	-	-	-	-	
(vii) Ponds/seashores	-	6.16	5.48	-	-	
(viii) Instrumentation Centres	-	-	11.64	-	-	
(ix) Laboratories of national importance	-	-	24.66	-	-	

making them aware of the resources and advancements of the country; and in analysing problems and drawing conclusions. The table 4.2D.1c shows the perception of 58.90 percent of respondents of COSIP and 51.18 percent of respondents of COHSSIP who have organised field trips at various locations in their disciplines about their effectiveness in terms of means.

Table :4.2D.1c: Means Showing Teachers' Perception of Effectiveness of Field Trips

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
i) In relating theoretical aspects of study to practical realities of life	4.47		4.20	
ii) In gaining experiences about the advancements in the discipline	4.56	4.45	4.49	4.31
iii) In making them aware of the resources and advancements of the country	4.42		4.32	
iv) In analysing problems and drawing conclusions	4.35		4.22	

(i) COSIP : According to table 4.2D.1c, the overall mean (4.45) indicates that field trips are helpful to students in providing varied learning experiences 'to a great extent'. The means of the individual items reveals that field trips are helpful to students : in relating theoretical aspects of study to practical realities of life (4.47); and in gaining experiences about the advancements in the discipline (4.56) 'to a great extent'

and for the remaining items 'to much extent'.

(ii) COHSSIP : According to table 4.2D.1c, the overall mean (4.31) indicates that field trips are helpful to students in providing varied learning experiences 'to much extent'. The means of individual items reveal that field trips are helpful to students in gaining experiences about the advancements in the discipline (4.49) 'to a great extent' and for the remaining items 'to much extent'.

It is obvious from the above analysis that the respondents of COSIP who organise field trips find them productive to a greater extent in terms of varied learning experiences gained by the students in comparison to the respondents of COHSSIP. The respondents belonging to both the programme agree that field trips are helpful to students in gaining experiences about the advancements in the discipline to an appreciable level.

4.2 E Guest Lectures

The COSIP and COHSSIP have provision for guest lecture in all disciplines in participating colleges. The major objective of guest lectures is to bring the students in contact with renowned scholars and to make students aware of recent developments in their respective disciplines and also of the inter-relationships among different disciplines. The guest lectures help students : (a) to understand the corpus of knowledge in its totality; and (b) to take up, interdisciplinary projects. The table 4.2E.1a shows the percentage of respondents who organise

guest lectures in their respective disciplines.

Table :4.2E.1a: Organisation of Guest Lectures
(Responses in Percentages)

Organisation of Guest Lecture	COSIP	COHSSIP
Yes	46.58	58.27
No	53.42	41.73

The table 4.2E.1a shows that 46.58 percent of respondents of COSIP and the majority of respondents of COHSSIP organise guest lectures in their respective disciplines. During interviews it was disclosed that the respondents belonging to COSIP generally arrange guest lectures in Chemistry, Physics, Zoology and Botany. The respondents of COHSSIP organise guest lectures in English and regional languages, Sociology, Economics, Psychology, History, Geography etc. It means that guest lectures are more popular under COHSSIP than COSIP.

4.2E.1b Teachers' Perception of Effectiveness of Guest Lectures :

Teachers' perception of effectiveness of guest lectures is measured in terms of their helpfulness to students : in understanding fundamental concepts in a discipline; in getting them acquainted with recent developments in a discipline; in understanding interrelationships among different disciplines; and in taking up small research projects based on interdisciplinary approach. The table 4.2E.1b shows the perception of 46.58 percent of teachers of COSIP and 58.27 percent of teachers of COHSSIP about

the effectiveness of guest lectures in terms of means.

Table :4.2E.1b: Means Showing Teachers' Perception of Effectiveness of Guest Lectures

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
i) In understanding fundamental concepts in a discipline	3.76		3.58	
ii) In getting acquainted with recent developments in a discipline	3.56		3.20	
		3.43		3.35
iii) In understanding interrelationships among different disciplines	3.32		3.35	
iv) In taking up small research projects based on interdisciplinary approach	3.08		3.26	

(i) COSIP : According to table 4.2E.1b, the overall mean (3.43) indicates that guest lectures are helpful to students in understanding the corpus of knowledge in its totality 'to some extent'. The means of individual items reveals that guest lectures are helpful to students : in understanding fundamental concepts in a discipline (3.76) and in getting acquainted with recent developments in a discipline (3.56) 'to much extent' and for the remaining items 'to some extent'.

(ii) COHSSIP : According to table 4.2E.1b, the overall mean (3.35) points out that guest lectures are helpful to students in understanding the corpus of knowledge in its totality 'to some extent'. The means of individual items reveal that guest lectures are helpful to students: in understanding fundamental concepts

in a discipline (3.58) 'to much extent' and for the remaining items 'to some extent'.

The findings indicate that the programmes of quest lectures have a limited impact on students' learning. It may be due to unstructured nature of guest lectures and lack of students' interest.

4.2 F Remedial Teaching Programme

The remedial teaching programme is arranged for those ill-equipped students who are unable to cope with the regular classroom teaching and remain disadvantaged. Students' inadequacies are observed in three areas : (i) personal maladjustment ; (ii) linguistic deficiency; and (iii) deficiency in specific areas of study. The problem of maladjustment is due to their cultural deprivation, inability to adjust themselves effectively with the college environment, feeling of inferiority etc. The linguistic deficiency relates to their inability to communicate effectively with others and to understand lectures and discussions. The deficiency in specific areas of study refers to their difficulty in understanding the concepts and procedures in a discipline. The COSIP and COHSSIP lay much emphasis on arrangement of remedial teaching programme, which can bring improvement in students' deficiencies. The respondents have been asked : 'please put a tick mark (✓) against each of the remedial teaching programmes which you have organised in your discipline for academically weaker students'. The Table 4.2F.1a shows the percentage of respondents organising varied types of remedial teaching programmes.

Table :4.2F.1a: Arrangement for Remedial Teaching Programmes

(Responses in Percentages)

Remedial Teaching Programme	COSIP	COHSSIP
i) Programmes of individual coaching outside the class	10.27	10.24
ii) Arrangement for extra periods of instruction	2.74	5.51
iii) Programme of providing graded bibliographical notes and lecture abstracts	13.01	15.76
iv) Programme of easy and direct assignments	13.01	15.76

(i) COSIP : The table 4.2F.1a shows that only 10.27 percent of respondents provide individual coaching outside the class to the academically weaker students and 2.74 percent of respondents make arrangement for extra periods of instructions for them. It is further, analysed that the respondents who provide individual coaching outside the class and take extra periods for instruction for academically weaker students give them bibliographical notes and lecture abstracts. The respondents also give easy and direct assignments to academically weaker students.

(ii) COHSSIP : The table 4.2F.1a shows that a very low percentage of respondents provides individual coaching outside the class to academically weaker students and makes arrangement for extra periods of instruction. It is further found that the

respondents who make arrangement for remedial programme for academically weaker students give them graded bibliographical notes and lecture abstracts and easy and direct assignments.

It is obvious from the above analysis that remedial teaching programmes are organised by a very low percentages of respondents of COSIP and COHSSIP. It means that one of the important objectives of COSIP and COHSSIP, i.e. to motivate teachers to organise remedial teaching programme for academically weaker students, has not met with success.

4.2F.1b Teachers' Perception of Effectiveness of Remedial Teaching

Programme : The table 4.2F.1b shows the perception of teachers of COSIP and COHSSIP who organised remedial teaching programmes as mentioned in table 4.2F.1a, about the effectiveness of such programmes in terms of means.

Table :4.2F.1b: Means Showing Teachers' Perception of Effectiveness of Remedial Teaching Programme

Remedial Teaching Programme	Means of Individual Items	
	COSIP	COHSSIP
i) Programme of individual coaching outside the class	4.60	4.46
ii) Arrangement for extra periods of instruction	4.00	4.29
iii) Programme of providing graded bibliographical notes and lecture abstracts	4.26	4.15
iv) Programme of easy and direct assignment	4.21	4.80

The overall mean against these four items is not usable, hence it has not been calculated

(i) COSIP : According to the table 4.2F.1b, the means of individual items reveal that the academically weaker students have benefitted from the programme of individual coaching out side the class (4.60) 'to a great extent' and from the remaining programmes 'to much extent'.

(ii) COHSSIP : According to the table 4.2F.1b, the means of individual items reveal that the academically weaker students have benefitted from the programme of individual coaching out side the class (4.46) 'i and from easy and direct assignment (4.80) 'to a great extent' and from the remaining programmes 'to much extent'.

It is obvious from the above analysis that though the remedial teaching programmes are organised by a very low percentage of respondents of COSIP and COHSSIP, they find that these programmes are of much help to the academically weaker students in overcoming their deficiencies.

4.2 G Special Programmes for Gifted Students

The COSIP and COHSSIP suggest the organisation of various activities for helping talented students in unfolding their potential. The gifted students can be identified on the basis of their performance in examination, skills in conducting workshop and laboratory activities, abilities in organising group work, aptitude for creative writing etc. The teachers are expected to identify gifted students equipped with varied abilities and skills and assign to them appropriate tasks for

promoting their innate talents. The table 4.2G.1a shows the percentage of teachers organising activities for gifted students.

Table :4.2G.1a: Organisation of Special Programmes for Gifted Students

(Responses in Percentages)

Special Programmes for Gifted Students	COSIP	COHSSIP
i) Developing instructional material such as charts, maps, diagrams, sketches, models, bibliographical notes etc.	54.79	33.86
ii) Designing and assembling equipment for new apparatus	12.33	-
iii) Improvising and repairing instruments	28.08	-
iv) Operating electrical gadgets	29.45	22.05
v) Preparing model answers for selected questions	16.44	26.77
vi) Assisting weaker students in their study	4.80	7.09
vii) Making arrangement of field trips	58.91	51.18
viii) Organising :		
(a) guest lectures	46.58	51.18
(b) departmental seminars	56.85	44.09
(c) interdepartmental seminars	19.86	4.72
(d) intercollegiate seminars	14.38	3.94

(i) COSIP : The table 4.2G.1a shows that the majority of respondents assign tasks to gifted students for developing instructional material such as charts, diagrams, maps, sketches, models, bibliographical notes etc.; for making arrangement of field trips; and for organising departmental seminars. 46.58 percent of respondents entrust the responsibility for organising

guest lectures to gifted students and then the percentage of respondents goes on decreasing. It is clear from the table that the respondents organise a number of activities for fostering the innate talents of gifted students.

(ii) COHSSIP : The table 4.2G.1a reveals that the majority of respondents entrust the responsibility for organising guest lectures and field trips to gifted students. Only 44.09 percent of respondents assign the tasks for organising departmental seminars to gifted students and then the percentage of respondents goes on decreasing.

It is obvious from the above analysis that the respondents of COSIP and COHSSIP have devised various organisational and advanced academic activities to gifted students for fostering their innate talents.

4.2G.1b Teachers' Perception of Students' Contribution Towards the Success of Special Programmes : The success of special programmes relies upon the devotion and hard work of the students. It is hoped that the gifted students would contribute to the best of their abilities for making the programmes a success. The table 4.2G.1b shows the perception of teachers of COSIP and COHSSIP who organised special programmes mentioned in the table 4.2G.1a, about the success of the programmes in terms of means.

(i) COSIP : According to the table 4.2G.1b, the means of individual items reveal that the gifted students contribute 'to a great extent' : in developing instructional material such as

Table :4.2G.1b: Means Showing Teachers' Perception of Students' Contribution Towards the Success of Special Programmes

Special Programmes	Means of Individual Items	
	COSIP	COHSSIP
i) Developing instructional material such as charts, maps, diagrams, sketches, models, bibliographical notes etc.	4.58	4.47
ii) Designing and assembling equipment for new apparatus	4.22	-
iii) Improvising and repairing instruments	4.27	-
iv) Operating electrical gadgets	4.60	4.57
v) Preparing model answers for selected questions	4.46	4.18
vi) Assisting weaker students in their study	3.86	3.89
vii) Making arrangement of field trips	4.21	4.57
viii) Organising :		
(a) guest lectures	4.35	4.34
(b) departmental seminars	4.17	4.63
(c) interdepartmental seminars	3.93	3.86
(d) intercollegiate seminars	4.05	3.80

The overall mean against these items is not usable, and it has not been calculated.

charts, maps, diagrams, sketches, models, bibliographical notes etc. (4.58) ; in operating electrical gadgets (4.60); and in preparing model answers for selected questions (4.46); and for the remaining items 'to much extent'.

(ii) COHSSIP : According to the table 4.2G.1b, the means of individual items reveal that the gifted students contribute 'to a great extent' : in developing instructional material such

as charts, maps, diagrams, sketches, models, bibliographical notes etc. (4.47); in operating electrical gadgets (4.57); in making arrangement of field trips (4.57) and in organising departmental seminars (4.63); and for the remaining items 'to much extent'.

The above analysis makes it clear that the gifted students contribute to the success of most of the special programmes to a considerable extent. The respondents of COSIP and COHSSIP agree that the gifted students contribute to an appreciable extent towards the success of some specific tasks such as developing instructional material and operating electrical gadgets.

4.2 H Evaluation Procedure

One of the major objectives of COSIP and COHSSIP is to bring about reform in the examination system. The University Grants Commission (1973, 76) circulated 'A Plan of Action' to all the universities for introducing reform in the examination system with the recommendations of adoption of internal assessment, question bank, credit system and grading system. The COSIP and COHSSIP also expect the development of question bank in each discipline and adoption of internal assessment in selected colleges, if not (a) by university stipulation, at least (b) by instituting a certificate of their own. Two components of the evaluation system are survey^{ed} and discussed hereunder :

4.2H.1a Question Bank : The concept of question bank has been evolved to eliminate the defects of setting question papers in the present system of examination, to ensure maintenance of

uniformity of standards in question papers, and to prepare a large collection of scientifically developed questions of prescribed syllabus covering all the instructional objectives to be achieved. The questions are framed by the teachers according to units and the objectives to be achieved. The table 4.2H.1a shows the percentage of respondents reporting the development of question bank in their disciplines.

Table :4.2H.1a: Development of Question Bank
(Responses in Percentages)

Development of Question Bank	COSIP	COHSSIP
Yes	23.29	16.53
No	76.71	83.47

It is obvious from the table 4.2H.1a that only 23.29 percent of respondents of COSIP and 16.53 percent of respondents of COHSSIP report the development of question bank in their disciplines. This indicates that the development of question bank in disciplines has not become an accomplished reality. The need for training in development of question bank was pointed by the respondents belonging to both the programmes during interviews.

4.2H.1b Type of Questions Framed for Question Bank : It is expected that a question bank should contain a variety of items, i.e. objective type, short answer type and essay type. The table 4.2H.1b shows the percentage of respondents indicating the type of questions framed by question bank.

Table :4.2H.1b: Type of Questions framed for Question Bank
(Responses in Percentages)

Type of Questions	COSIP	COHSSIP
i) Objective type	2.05	2.36
ii) Short answer type	-	-
iii) Essay type	-	-
iv) All the above three types	21.23	14.17

It is obvious from the table 4.2H.1b that the respondents of COSIP and COHSSIP who developed question bank in their disciplines, have framed all the three type of questions i.e. objective type, short answer type and essay type. It means that they are interested to assess students' skills of answering to a variety of questions. It is disclosed during interviews that under COHSSIP the question banks have been developed in Psychology, Sociology, History and Economics disciplines.

4.2H.1c Contributors of Questions for Question Bank : It is expected that the development of a question bank would be a collaborative effort of all the staff members in a discipline of the college and also the staff members of the neighbouring institutions. The table 4.2H.1c shows the percentage of respondents reporting about the contributors of questions for question bank.

According to the table 4.2H.1c on the next page, the main contributors of questions for the enrichment of question bank are the staff members of the respective disciplines of the colleges and

Table :4.2H.1c: Contributors of Questions for Question Bank

(Responses in Percentages)

Contributors of Questions for Question Bank	COSIP	COHSSIP
i) Staff members of the same discipline of the college	21.92	12.60
ii) Staff members of the same discipline from neighbouring colleges	-	-
iii) Both the above	1.37	3.94

the intercollegiate cooperation in this activity is minimal.

4.2H.1d Analysis of Items of Question Bank : A question bank is a pool of scientifically prepared items. The items of a question bank are analysed in terms of answers given by the students. Easy and tough items which are either answered by 100 percent students or by none should be excluded. At the same time, the items should be in a position to discriminate between bright, average and poor students. The table 4.2H.1d shows the percentage of respondents who analyse question papers in terms of difficulty level and discriminatory values.

Table :4.2H.1d: Analysis of Items of Question Bank

(Responses in Percentages)

Analysis of Answer papers in terms of	COSIP	COHSSIP
i) difficulty level of items	4.11	10.24
ii) discriminatory value of items	-	-
iii) both the above values	19.18	6.30

It is evident from the table 4.2H.1d that 19.18 percent of respondents of COSIP and 6.30 percent of respondents of COHSSIP validate the questions of a question bank in terms of difficulty level and discriminatory values. It is substantiated by interviews that the respondents of COSIP and COHSSIP determine the difficulty level and discriminatory values of items of objective type items only.

4.2H.1e Frequency of Revising Items of Question Bank : It is hoped that a question bank should be continuously revised, modified and enriched for avoiding it becoming a stagnant pool of items. The table 4.2H.1e shows the percentage of respondents reporting the frequency of revising question bank.

Table :4.2H.1e: Frequency of Revising Items of Question Bank
(Responses in Percentages)

Frequency of Revising Items of Question Bank	COSIP	COHSSIP
Always	-	-
Often	-	-
Occasionally	10.96	11.81
Seldom	7.53	4.72
Never	4.79	-

From the table 4.2H.1e, a trend emerges that the items of question bank are not regularly revised.

4.2H.1f Stages of Supplying Questions from the Question Bank :

It is expected from the teachers that they would supply the duplicated copies of questions from the question bank to the students in their respective disciplines so as to enable them to study the subject-matter in depth and to answer questions in the internal and external examinations properly. The table 4.2H.1f shows the percentage of respondents who supply questions from question bank to students at various stages.

Table :4.2H.1f: Stages of Supplying Questions from the Question Bank

(Responses in Percentages)

Stages of Supplying Questions from the Question Bank	COSIP	COHSSIP
i) In advance of each unit	-	-
ii) At the end of each unit	-	-
iii) After finishing 50% of the course	6.85	1.57
iv) At the end of the course	16.43	14.96
v) Not at all		

From the table 4.2H.1f, a trend emerges that the questions from question bank are supplied to the students at the end of the course. It is thought that at this stage the students have a better grasp of the subject-matter and understanding of the questions becomes easy.

4.2H.1g Teachers' Perception of Effectiveness of Question Bank :

Teachers' perception of effectiveness of question bank is measured in terms of its helpfulness to students : in presenting a

comprehensive picture of the syllabus; in developing the habits of studying the subject-matter indepth; in making them understand questions in the examination easily; in getting them acquainted with a variety of questions; and in providing them opportunity to discuss difficult questions with the teachers and students. The table 4.2H.1g shows the perception of 23.29 percent of teachers of COSIP and 16.53 percent of teachers of COHSSIP about the effectiveness of question bank in terms of means.

Table :4.2H.1g: Means Showing Teachers' Perception of Effectiveness of Question Bank

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
i) In presenting a comprehensive picture of the syllabus	4.38		4.71	
ii) In developing the habits of studying the subject-matter in depth	4.71		4.48	
iii) In making them understand questions in examination easily	4.62		4.67	
iv) In getting them acquainted with a variety of questions	4.79	4.47	4.52	4.52
v) In providing them opportunity to discuss difficult questions with				
(a) the teachers	4.18		4.24	
(b) the students	4.12		4.52	

(i) COSIP : According to the table 4.2H.1g, the overall mean (4.47) points out that the question bank is helpful to students in improving their study habits and developing the skills of answering specifically in the examination 'to a great extent'.

The means of individual items reveal that the question bank is helpful to students : in developing the habits of studying the subject-matter in depth (4.71); in making them understand questions in the examination easily (4.62); and in getting them acquainted with a variety of questions (4.79) 'to a great extent'; and for the remaining items 'to much extent'.

(ii) COHSSIP : According to the table 4.2H.1g, the overall mean (4.52) indicates that the question bank is helpful to students in improving their study habits and developing the skills of answering specifically in the examination 'to a great extent'. The means of individual items, reveal that except for one item, the question bank is helpful to students 'to a great extent'. The question bank is found to be helpful to students in providing them opportunity to discuss difficult questions with the teachers (4.24) 'to much extent'.

It is inferred that the question bank wherever it has been developed, has contributed to the improved evaluation techniques. It has helped the students in acquiring better study skills and greater confidence in participating in examinations.

4.2H.2a Internal Assessment System : Internal assessment provides opportunities to teachers to assess students' performance continuously through diversified activities. It emphasises not only testing of cognitive abilities of students but also their affective abilities and psychomotor skills. It considers terminal examination of students as a part of overall assessment. With the strong recommendations and policies of the U.G.C., most of

the universities have adopted internal assessment system and thereby the same policy is followed by the affiliated colleges. The COSIP^{and COHSSIP} expect the enrichment in activities of internal assessment where it already exists and adoption of internal assessment where it does not exist by instituting a certificate indicating students' participation in various activities. The table 4.2H.2a shows the percentage of respondents adopting specified policies for internal assessment.

Table :4.2H.2a: Policy Adopted for Internal Assessment
(Responses in Percentages)

Policy Adopted for Internal Assessment	COSIP	COHSSIP
i) following the university stipulation	54.80	47.24
ii) By awarding a certificate of the institution	21.92	18.11
iii) Both	-	-

(i) COSIP : The above table reveals that 76.72 percent of respondents follow internal assessment system. There are 54.80 percent of respondents who follow the university stipulation for internal assessment. These respondents belong to the colleges affiliated to the universities of Madras, Poona and Osmania. The percentage of marks allotted for internal assessment varies from 20 to 50 depending upon the university. There are 21.92 percent of respondents belonging to the colleges affiliated to the University of Bombay and Guru Nanak Dev University, Amritsar who have instituted the certificate of their colleges for internal assessment.

(ii) COHSSIP: The table 4.2H.2a reveals that 65.35 percent of respondents follow internal assessment system. There are 47.24 percentage of respondents who follow the university stipulation for internal assessment. These respondents belong to the colleges affiliated to Gujarat University, Ahmedabad, University of Madras, Sardar Patel University, Vallabh Vidyanagar, South Gujarat University, Surat. The percentage of marks allotted for internal assessment varies from 20 to 50. There are 18.11 percent of respondents who report that their institutions have instituted a certificate for internal assessment. It shows the enthusiasm of the respondents for adoption of internal assessment.

The above analysis reflects that the majority of respondents of COSIP and COHSSIP have adopted internal assessment for assessing students' achievement. It is quite interesting to note **respondents of** that some of the COSIP and COHSSIP colleges have instituted a certificate for internal assessment which indicate the popularity of the system.

4.2H.2b Activities for Internal Assessment : Internal assessment is not to be understood as merely increasing the frequency of paper-pencil tests. It should encompass a number of activities which lead towards fuller development of students' personality. The table 4.2H.2b shows the percentage of respondents organising various activities for internal assessment.

(i) COSIP : The table 4.2H.2b on the next page indicates that the major activities conducted for internal assessment are : assignments, quizzes and periodic tests. It is substantiated by

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Table :4.2H.2b: Activities for Internal Assessment
(Responses in Percentages)

Activities for Internal Assessment	COSIP	COHSSIP
i) Assignments	76.72	65.35
ii) Seminars	22.60	28.35
iii) Tutorials	32.19	41.73
iv) Group discussion	-	21.26
v) Symposia	-	8.66
vi) Quizzes	56.85	60.63
vii) Periodic tests	76.72	65.35
viii) Designing and assembling equipment for new Apparatus	12.33	-
ix) Repairing and improvising the apparatus	19.86	-
x) Any other	-	-

interviews ~~that~~ announced and unannounced quizzes are conducted to test the students' abilities and skills. The other activities which are conducted by varying low percentages of respondents are : tutorials, seminars, designing and assembling equipment, and improvising and repairing the apparatus.

(ii) COHSSIP : It is seen from table 4.2H.2b that the majority of respondents give weightage to assignments, periodic tests and quizzes for internal assessment. The other activities by which students' performance is assessed for internal assessment are their participation in seminars, tutorials, group discussions and symposia.

It is inferred from the above analysis that the major activities conducted by the respondents of COSIP and COHSSIP for internal assessment are assignments, periodic tests and quizzes (announced and unannounced both).

4.2H.2c Teachers' Perception of Effectiveness of Internal

Assessment : Teachers' perception of effectiveness of internal assessment is measured in terms of its helpfulness to students in developing regular study habits among them and in getting assessed their performance through a variety of activities. The table 4.2E.2c shows the perception of 76.72 percent of teachers of COSIP and 65.35 percent of teachers of COHSSIP about the effectiveness of internal assessment in terms of means.

Table :4.2H.2c: Means Showing Teachers' Perception of Effectiveness of Internal Assessment

Items	COSIP		COHSSIP	
	Means of Individ- ual Items	Over- all Mean	Means of Individ- ual Items	Over- all Mean
i) In developing regular study habits	4.33		4.48	
ii) In ensuring better assessment of their performance	4.37		4.31	
iii) In improving their marks or grades	4.77	4.16	4.52	4.35
iv) In guiding the preparation for subsequent periodic tests	4.37		4.41	
v) In providing them opportunity for exposing in a variety of situations	3.78		4.34	
vi) In enabling them to reduce undue emphasis on the final examination	3.33		4.04	

(i) COSIP : According to the table 4.2H.2c, the overall mean (4.16) indicates that the internal assessment is helpful to students in improving their study habits 'to much extent'. The means of individual items reveal that the internal assessment is helpful to students in improving their marks or grades (4.77) 'to a great extent' in enabling them to reduce undue emphasis on the final examination (3.33) 'to some extent' and for the remaining items 'to much extent'.

(ii) COHSSIP : According to table 4.2H.2c, the overall mean (4.35) indicates that the internal assessment is helpful to students in improving their study habits 'to much extent'. The means of individual items reveal that the internal assessment is helpful to students : in developing regular study habits (4.48) and in improving their grades or marks (4.52) 'to a great extent'; and for the remaining items 'to much extent'.

From the above analysis it is clear that internal assessment facilitated assessment of students' abilities and achievement in a continuous manner through a variety of non-traditional activities. It also motivated the students to be prompt and regular in their academic work. Naturally, this led to improvement in the marks or grades obtained by the students.

4.2 I Revision and Enrichment of Syllabus

The COSIP and COHSSIP expect that those who teach the classes should actively participate in curriculum planning. There is a provision of organisation of departmental, interdepartmental and intercollegiate conferences for revising and updating the syllabus

and sending it to universities for its final approval for implementation. The syllabus is to be relevant to the present needs, related with past and projecting for future. The table 4.2I.1a shows the percentage of respondents whose departments attempted to revise the syllabus.

Table :4.2I.1a: Revision and Enrichment of Syllabus
(Responses in Percentages)

Provision of Syllabus	COSIP	COHSSIP
Yes	38.36	33.08
No	61.64	66.92

It is obvious from the table 4.2I.1a that a low percentage of respondents of COSIP and COHSSIP reports that their departments attempted to revise the syllabus. It means that this important component of COSIP and COHSSIP has not received due attention. During interviews it was found that the Heads of the departments who were members of the Boards of Studies and Executive Bodies of the universities motivated their staff members to make efforts for revision and modernisation of the syllabi. The majority of respondents pointed out : 'We are not authorised to revise and modernise the syllabus. It is the responsibility of the university'.

4.2I.1b Members of Syllabus Revising Committee : It is hoped that the revision of syllabus ^{should} be a collaborative effort in which a proper representation of experts, staff members of the college and staff members of neighbouring institutions in the discipline is sought. A question has been asked to the respondents who attempted to revise the syllabus : 'Who were the members of the committee revising

syllabus ? (check more than one)' The table 4.2I.1b shows the respondents' responses.

Table :4.2I.1b: Members of Syllabus Revising Committee
(Responses in Percentages)

Members of Syllabus Revising Committee	COSIP	COHSSIP
i) Experts in the discipline	8.22	4.72
ii) Staff members of the college in the discipline	30.82	23.63
iii) Staff members of neighbouring affiliated colleges in the discipline	11.64	14.96
iv) All the above three	7.53	9.45

From the table 4.2I.1b, a trend emerges that staff-members of the college in the discipline were the main participants in syllabus revising committee. A very low percentage of respondents of COSIP and COHSSIP reported that experts in the discipline, staff members of the college in the discipline and staff-members of neighbouring affiliated colleges were invited to participate in syllabus revising committee. It means that the practice of inviting experts and staff-members of neighbouring affiliated colleges for syllabus revising committee has not become popular.

4.2I.1c Time Taken by the Universities for Approving Revised

Syllabus : The concerned departments of the colleges send the revised draft of the syllabus to their universities for getting its final approval for implementation. The universities take their own time for approving the revised syllabus by calling the meeting of Board of Studies or Academic Council for discussion and

the final decision is taken by the Syndicate or Executive Council of the university. The table 4.2I.1c shows the percentage of respondents reporting the varying duration of time taken by the university for approving the revised syllabus.

Table :4.2I.1c: Time Taken by the Universities for Approving the Revised Syllabus

(Responses in Percentages)

Duration of Time	COSIP	COHSSIP
(i) One year or more	-	-
(ii) Between 8 months and a year	8.90	13.39
(iii) Between 4 months and 8 months	15.07	11.02
(iv) Four months or less	14.38	8.66

(i) COSIP : The table 4.2I.1c indicates that 14.38 percent of respondents report that the university took four months or less for approving the revised syllabus. These were the respondents belonging to the autonomous colleges who enjoyed full freedom for revising the syllabi and getting the approval from the university. Only 15.07 percent of respondents reported that the universities took between 4 months and 8 months for approving the revised syllabus.

(ii) COHSSIP : The table 4.2I.1c shows that 13.39 percent of respondents report that the universities took between 8 months and a year for approving the revised syllabus. Only 8.66 percent of respondents belonging to autonomous colleges reported that the university took 4 months or less for approving the revised syllabus

It is inferred that the syllabus revised by autonomous colleges get approved in a shorter duration in comparison to other affiliated colleges.

4.2I.1d Acceptance of Revised Syllabus by the Universities : The table 4.2I.1d shows the portion of revised syllabus as accepted by the universities.

Table :4.2I.1d: Acceptance of Revised Syllabus by the Universities

(Responses in Percentages)

Acceptance of Revised Syllabus by the Universities	COSIP	COHSSIP
(i) 75% or more	18.49	22.83
(ii) Between 50% and 75%	15.07	10.24
(iii) Between 25% and 50%	4.79	-
(iv) 25% or below	-	-
(v) Not at all	-	-

(i) COSIP : According to the table 4.2I.1d, 18.49 percent of respondents report that the universities have accepted more than 75 percent of the revised syllabus. There were 15.07 percent of respondents who reported that the universities accepted between 50 percent and 75 percent of the revised syllabus for implementation.

(ii) COHSSIP : According to table 4.2I.1d, 22.83 percent of respondents report that the universities have accepted more than 75 percent of the revised syllabus. It means that the universities are interesting in seeking teachers' participation in curriculum planning.

4.2I.1e Teachers' Perception of Effectiveness of Revised

Syllabus : Teachers' perception of effectiveness of revised syllabus is determined in terms of its enrichment : for imparting upto date knowledge; for providing more opportunities for independent study to students ; for including more job-oriented units and for bridging the gap between theory and practice. The table 4.2I.1e shows the perception of 38.36 percent of respondents of COSIP and 33.08 percent of respondents of COHSSIP about the effectiveness of revised syllabus in term of means.

Table :4.2I.1e: Means Showing Teachers' Perception of Effectiveness of Revised Syllabus

Items	COSIP		COHSSIP	
	Means of Individual Items	Overall Mean	Means of Individual Items	Overall Mean
i) To impart upto date knowledge	3.55		4.24	
ii) To provide more opportunities for independent study	4.16		4.12	
iii) To include more job-oriented units	2.84	3.50	1.71	3.32
iv) To bridge the gap between theory and practice	3.43		3.21	

(i) COSIP : According to the table 4.2I.1e, the overall mean (3.50) indicates that the syllabus has been revised and modernised 'to much extent'. The means of individual items reveal that the revised syllabus attempted : to impart upto date knowledge (3.55) and to provide more opportunities for independent study to

students (4.16) 'to much extent' and for the remaining items 'to some extent'.

(ii) COHSSIP : The table 4.2I.1e reveals that the overall mean (3.32) points out that the syllabus has been revised and modernised 'to some extent'. The means of the individual items indicate that the revised syllabus attempted : to impart upto date knowledge (4.24) and to provide more opportunities to students for independent study (4.12) 'to much extent'; to bridge the gap between theory and practice (3.21) 'to some extent' and to include more job-oriented units (1.71) 'to a little extent'.

The above analysis makes it clear that the teachers of COSIP and COHSSIP are satisfied with the revised syllabus to a limited extent. It was suggested by the teachers that fundamental changes are required in the traditional syllabus which will be possible only through a series of planned change in the curriculum.

4.2J Publication of News Bulletin

The University Grants Commission has assigned the responsibility of publishing news bulletins to some selected university departments and colleges for disseminating the activities initiated by the participating colleges in COSIP and COHSSIP. Besides, the U.G.C. expects the publication of newsbulletins by the participating individual colleges. The newsbulletins would make known the innovative ideas, practices and,news instructional materials developed and motivate non-participating colleges to come forward to accept the challenge of quality improvement. The table 4.2J.1a

shows the percentage of respondents reporting the publication of news bulletins in their department.

Table :4.2J.1a: Publication of News Bulletin
(Responses in Percentages)

Publication of News Bulletin	COSIP	COHSSIP
Yes	19.18	25.98
No	80.82	74.02

(i) COSIP : The table 4.2J.1a shows that only 19.18 percent of respondents report the publication of news bulletins in their departments/colleges. The news bulletins are published at the college level as well as at the departmental level in a college. It is found that two colleges published news bulletins describing the progress made by all the departments under the title 'COSIP Scientific Projects' and 'COSIP News Bulletin'. The publication of news bulletins by the individual departments has been made under various titles such as 'Naturalist (Botany department)'; 'Chemica (Chemistry department)'; 'Physica (Physics department)'; 'Biologica (Biology department)' etc. The publication of news bulletins is mostly in duplicated form. They mainly contain project reports.

(ii) COHSSIP : The table 4.2J.1a shows that 25.98 percent of respondents report the publication of news bulletins in their departments/colleges. The news bulletins are published at the college level as well as at the departmental level in a college. It is substantiated by interviews that a college publishes

'COHSSIP Newdletter' sponsored by the U.G.C. It is found that a college has published a book based on seminars and guest lecture under the title 'Equality, Liberty and Justice'. The individual departments of various colleges publish newsbulletins with titles such as 'Rajneeti (Political Science department)'; 'Punjabica (Punjabi department)'; 'Journal of English Language (English department)'; 'Journal of History (History department)'; 'Journal of Hindi (Hindi department)'; 'Ankur (Economics department)' etc.

It is inferred that a limited percentage of respondents of COSIP and COHSSIP has started the publication of newsbulletin in their departments/colleges. It seems that the practice of publishing news bulletins from the participating colleges in COSIP and COHSSIP has not become popular. It may be due to the lack of interest of the teaching community and lack of facilities at their disposal.

4.2J.1b Frequency of Publication of News Bulletin : The table 4.2J.1b shows percentage of respondents indicating the frequency of publication of news bulletin.

Table :4.2J.1b: Frequency of Publication of News Bulletin
(Responses in Percentages)

Frequency of Publication in News Bulletin	COSIP	COHSSIP
Yearly	19.18	25.98
Half yearly	-	-
Quarterly	-	-
Monthly	-	-

It is obvious from the above table that the news bulletins are published annually. The interviews helped me to find out the shortage of news bulletins and other items as the main reasons for not bringing out the news bulletins publication frequently.

4.2J.1c Contributors of Articles/Project Reports for News

Bulletins : As a channel of communication for innovative ideas and practices the news bulletin published at the department/college level is expected to include articles, reports and notes by the teachers, students and experts from the participating and non-participating institutions. The table 4.2J.1c shows the percentage of respondents indicating the type of persons contributing articles/project reports for publication in the news bulletin.

Table :4.2J.1c: Contributors of Articles/Project Reports for News Bulletin

(Responses in Percentages)

Contributors of Articles/Project Reports for News Bulletin	COSIP	COHSSIP
i) Scholars of other institutions	-	-
ii) Teachers of the institution only	15.75	17.32
iii) Students of the institution only	15.75	17.32
iv) All the above three	3.42	8.66

The table 4.2J.1c makes it evident that the teachers and students of the participating colleges are the main contributors of articles/project reports for publication in the news bulletin.

4.2J.1d Language of Publication of News Bulletin : For communica-

ting the innovative practices and ideas to the colleges located

in various part of India, it should be published in such a language as could be read and understood by all the colleges. The table 4.2J.1d shows the language of publication of news bulletin.

Table :4.2J.1d: Language of Publication of News Bulletin
(Responses in Percentages)

Language of Publication of News Bulletin	COSIP	COHSSIP
i) English	19.18	23.62
ii) Vernacular	-	2.36
iii) Both	-	-

The table 4.2J.1d shows that news bulletins are published in English language so that they could be understandable to other colleges. Only 2.36 percent of respondents ^{of CoHSSIP} publish news bulletins in Hindi and Punjabi.

4.2J.1e Teachers' Perception of Effectiveness of News Bulletin:

Teachers' perception of effectiveness of news bulletin is determined in terms of development of higher abilities and skills among the students in understanding the language of the standard journals and contributing articles to them. The table 4.2J.1e shows the perception of 19.18 percent of respondents of COSIP and 25.98 percent of respondents of COHSSIP about the effectiveness of news bulletin in terms of means.

(i) COSIP : According to the table 4.2J.1e on the next page, the overall mean (3.44) indicates that the news bulletin is helpful to students in cultivating higher intellectual abilities

Table :4.2J.1e: Means Showing Teachers' Perception of Effectiveness of News Bulletin

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
i) In enabling them to understand the language of the journal	3.86		3.94	
ii) In preparing an abstract of an article/research paper of the journal	3.11		3.76	
iii) In substantiating by research evidences the papers prepared for seminars, tutorials, group discussions at symposia		3.44		3.78
iv) In developing skills for contributing articles to the journals	3.29		3.85	
	3.50		3.58	

and skills for reading and contributing articles to standard journals 'to some extent'. The means of individual items reveal that the news bulletin is helpful to students : in enabling them to understand the language of the journal (3.86) and developing skills for contributing articles to them (3.50) 'to much extent' and for the remaining items 'to some extent'.

(ii) COHSSIP : According to the table 4.2J.1e, the overall mean (3.78) reflects that the news bulletin is helpful to students in cultivating higher intellectual abilities and skills for reading and contributing articles to standard journals 'to much extent' which is further, substantiated by the means of individual items.

The above analysis reflects that the respondents of COSIP and COHSSIP perceive that the news bulletin is helpful to students in cultivating higher intellectual abilities and skills for understanding and contributing articles to the standard journals to a considerable extent.

4.2 K Job-Oriented Courses

The University Grants Commission expects that the colleges should start job-oriented courses under COSIP and COHSSIP. The colleges are permitted to institute and award their own certificate for job-oriented courses. The major objectives of starting job-oriented courses are : to provide employment orientation to academic studies; to impart vocational skills among the students; and to acquaint them with the requirements and conditions for joining various professions. The table 4.2K.1a shows the percentage of the respondents who started job-oriented courses in their disciplines.

Table :4.2K.1a: Job-Oriented Courses
(Responses in Percentages)

Starting of Job-Oriented Courses	COSIP
Yes	21.23
No	78.77

The table 4.2K.1a makes it clear that job-oriented courses have been started by the respondents of COSIP only. Only 21.23 percent of respondents report that they have started job-oriented courses in their disciplines. Such initiations have been taken by the respondents belonging to Physics, Chemistry, Zoology and Botany departments. In Physics application-oriented learning experiences are provided in photography, designing and fabrication of electric equipments, servicing and maintenance of electronic equipments, fabrication of solar cookers, water heater, slot machines etc. In Chemistry the students are trained in areas such

as preparation of Aspirin, Antifebrin, Pieric Acid, simple dyes, synthetic organic compounds etc. In Botany the students are provided training in the preparation of jams, jelleys, squash and permanent slides, preservation of food items etc. In Zoology, skeleton preparation, blood testing, maintenance of aquarium etc. are taught to the students. During interviews it was clarified that these application oriented courses did not lead to any diploma.

4.2K.1b Teachers' Perception of Effectiveness of Job-Oriented

Courses : Teachers' perception of effectiveness of such job-oriented courses is measured in terms of their helpfulness to students in orienting them towards particular vocations; making them appreciate the dignity of labour and making them familiar with the requirements and conditions of such vocations. The table 4.2K.1b shows the perception of 21.23 percent of teachers of COSIP about the effectiveness of job-oriented courses in terms of means.

Table :4.2K.1b: Means Showing Teachers' Perception of Effectiveness of Job-Oriented Courses

Items	COSIP	
	Means of Individual Items	Over-all Mean
i) help the students in getting acquainted with the nature and conditions of preferred vocation	3.45	3.16
ii) from the basis of a particular vocation	3.13	
iii) lead the students towards self-employment	2.29	
iv) make the students appreciate the dignity of labour	3.77	

The above table shows that the overall mean (3.16) indicates that job-oriented courses are perceived to be helpful to students in developing confidence among them to meet job-requirements 'to some extent'. The means of individual items reveal that these job-

oriented courses : help the students in getting acquainted with the nature and conditions of preferred vocation (3.45) and make the students appreciate the dignity of labour (3.77) 'to much extent'; form the basis for a particular career (3.13) 'to some extent' ; and lead the students towards self-employment (2.29) 'to a little extent'. It means that these job-oriented courses are perceived to be of limited help to students for providing the basis for a vocation.

4.2L Teachers' Perception of Effectiveness of COSIP and COHSSIP Towards Miscellaneous Items : The COSIP and COHSSIP have been initiated to provide varied learning experiences to the students for cultivating in them values and skills needed for solving problems in practical life situations. The table 4.2L shows the perception of 100 percent of respondents of COSIP and COHSSIP about the effectiveness of these programmes towards a set of miscellaneous items in terms of means.

Table :4.2L: Means Showing Teachers' Perception of Effectiveness of COSIP and COHSSIP Towards Miscellaneous Items

Items	Means of Individual Items	
	COSIP	COHSSIP
i) In improving their marks/grades in the final examination	4.17	4.23
ii) In getting them positions in the university examination	4.05	3.98
iii) In getting them positions in competitive examinations such as I.A.S., I.P.S., Engineering, Banking etc.	3.33	2.73
iv) In enabling them to face interviews for job confidently	3.27	3.56
v) In enabling them to get a job	3.15	2.58

The overall mean against these items is not usable, hence it has not been calculated.

(i) COSIP : According to the table 4.2L, the means of Individual items reveal that the COSIP is found helpful to students in improving their marks/grades in the final examination (4.17); and in getting them positions in the university examination (4.05) 'to much extent' and for the remaining items 'to some extent'.

(ii) COHSSIP : According to the table 4.2L, the means of individual items indicate that the COHSSIP is found helpful to students in improving their marks / grades in the final examination (4.23) ; in getting them positions in the university examination (3.98) and in enabling them to face interviews for jobs confidently (3.56) 'to much extent'; and for the remaining items 'to some extent'.

The above analysis reflects that the COSIP and COHSSIP facilitated the students to improve their marks/grades and to get them position in the university final examination to a considerable extent. During interviews it was pointed out that however, the programmes could not improve the overall pass percentage of the colleges. The COSIP and COHSSIP has not been found of much help in preparing the students for competitive examination such as I.A.S., I.P.S., Engineering, Banking etc. and in getting jobs.

Section Three

4.3 Students' Reactions Towards the Activities of COSIP and COHSSIP

In the earlier sections, a discussion has been made about the organisation of various activities under COSIP and COHSSIP. It has been found that the organisation of activities varied from college to college, department to department in a college, and even individual to individual in a department. The teachers' perception of effectiveness of activities of COSIP and COHSSIP have been studied and discussed in previous sections. The students are the major beneficiaries and main participants of the activities of COSIP and COHSSIP. The students' reactions towards the effectiveness of activities of COSIP and COHSSIP were studied with the aid of a questionnaire. The students were asked to put a tick mark (✓) against the activities which were organised by the teachers in their institutions and if, some of the activities were not organised, they were to leave the responses blank. Students' responses have been analysed in terms of means indicating the levels of effectiveness of activities.

Section A

4.3A.1 Duplicated Material : The items pertaining to duplicated material have been responded to by 72.31 percent of students of COSIP and 85.83 percent of students of COHSSIP respectively. The table 4.3A.1 on the next page shows the students' reactions towards the effectiveness of duplicated material in terms of means.

Table :4.3A.1: Means Showing Students' Reactions Towards the Effectiveness of Duplicated Material

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
i) In exploring library resources	4.73		4.63	
ii) In making a choice of a book's edition and content	4.62	4.58	4.33	4.41
iii) In preparing your own notes in detail	4.48		4.21	
iv) In studying the subject-matter in depth	4.49		4.47	

(i) COSIP : According to the table 4.3A.1, the overall mean (4.58) indicates that the duplicated material is helpful to the students in having easy access to library resources and in supplementing the class lectures 'to a great extent' which is further, substantiated by the means of the individual items.

(ii) COHSSIP : According to the table 4.3A.1, the overall mean (4.41) reveals that duplicated material is helpful to students in having easy access to library resources and in supplementing the class lectures 'to much extent'. The means of individual items reveal that the duplicated material is helpful to the students; in exploring library resources (4.63); and in studying the subject-matter in-depth (4.47) 'to a great extent' ; and for the remaining items 'to much extent'.

The above analysis makes it clear that the students of COSIP find the duplicated material helpful in having easy access to

library resources and in supplementing the class lectures to an appreciable extent whereas the students of COHSSIP find its helpfulness to a considerable extent. The students belonging to both the programmes feel that the duplicated material is helpful to them to an appreciable extent in exploring the library resources and in studying the subject-matter indepth.

4.3A.2 Assignment : The items pertaining to assignments have been responded to by 83.85 percent of students of COSIP and 75.83 percent of students of COHSSIP respectively. The table 4.3A.2 shows the students' reactions towards the effectiveness of assignments in terms of means.

Table :4.3A.2: Means Showing Students' Reactions Towards the Effectiveness of Assignments

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Means
i) Expressing independently	3.81		3.85	
ii) Answering in a precise and orderly manner	4.39	4.18	4.24	4.26
iii) Organising and interpreting facts systematically	4.59		4.21	
iv) Summarising different thoughts critically	3.94		4.73	

(i) COSIP : In the table 4.3A.2, the overall mean (4.18) reveals that the assignments are helpful to students in developing the habits of answering specifically to the point 'to much extent'. The means of individual items reveal that the assignments

are helpful to students in developing the habits of :
organising and interpreting facts, systematically (4.59) 'to
a great extent'; and for the remaining items 'to much extent'.

(ii) COHSSIP : According to the table 4.3A.2, the overall
mean (4.26) indicates that assignments are helpful to students
in developing the habits of answering specifically to the
point 'to much extent'. The means of individual items reveal
that assignments are helpful to students in developing the
habits of : summarising different thoughts critically (4.73)
'to a great extent', and for the remaining items 'to much
extent'.

It is obvious from the above analysis that the assignments
are found to be helpful to the students of COSIP and COHSSIP
to a considerable extent in developing the habits of answering
specifically to the point and in promoting self-study habits in
them. The students of COSIP find the assignments of an appreciable
help in developing the skills of organising and interpreting
the facts systematically whereas the students of COHSSIP find
them of great help in summarising different thoughts critically.

4.3A.3 Discussion Methods : The items pertaining to discussion
methods such as seminars, tutorial, group discussion and
symposium have been responded to by 100 percent students of
COSIP and COHSSIP^{respectively}. It means that every student attends at least
a discussion method out of the four mentioned. The table 4.3A.3
shows the students' reactions towards the effectiveness of

discussion methods in terms of means.

Table :4.3A.3: Means Showing Students' Reactions Towards the Effectiveness of Discussion Methods

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
i) In supplementing class lecture	4.60		4.60	
ii) In discussing difficult topics	4.68		4.58	
iii) In exchanging different view points	3.98	4.26	4.48	4.38
iv) In gaining experience to present the papers	3.99		4.30	
v) In facing interrogation	3.86		3.96	
vi) In developing the power of expression	4.35		4.70	
vii) In arranging the content of the paper logically and adequately	4.27		4.42	
viii) In revising the reports or papers through the suggestions made by the group	4.32		4.00	

(i) COSIP : According to the table 4.3A.3, the overall mean (4.26) indicates that the discussion methods are helpful to students in developing their higher mental abilities and skills and in enabling them to learn the content through interactive process 'to much extent'. The means of individual items reveal that the discussion methods are helpful to students : in supplementing class lecture (4.60); and in discussing difficult

topics (4.68) 'to a great extent' ; and for the remaining items 'to much extent'.

(ii) COHSSIP : The overall mean (4.38) shows that the discussion methods are helpful to students in developing their higher intellectual abilities and skills and in enabling them to learn the content through interactive process 'to much extent'. The means of individual items reveal that discussion methods are helpful to students : in supplementing class lecture (4.60); in discussing difficult topics (4.58); in exchanging different view points (4.48); and in developing power of expression (4.70) 'to a great extent' and for the remaining items ('to much extent').

It is obvious from the above analysis that the discussion methods are found to be of a considerable help to students in developing in them higher intellectual abilities and skills of interactive learning. The discussion methods provide the opportunities to students to supplement class lectures and to discuss difficult topics to an appreciable extent. The students of COHSSIP find the discussion methods of great help in developing power of expression and in exchanging different view points.

4.3A.4 Workshop Activities : The workshop activities have been started by the teachers belonging to COSIP only, as mentioned in earlier sections. The percentage of students of COSIP who responded to the items of workshop activities varies. The first item of the table 4.3A.4 has been responded to by 69.23 percent of students, second item by 28.46 percent of students, third item by 20.38 percent of students and fourth item by 51.92 percent of

students respectively. The students' reactions towards the effectiveness of workshop activities are shown in the table 4.3A.4 in terms of means.

Table :4.3A.4: Means Showing Students' Reactions Towards the Effectiveness of Workshop Activities

Workshop Activities	COSIP
	Means of Individual Items
i) Preparing charts, diagrams, maps, sketches, models etc.	4.58
ii) Repairing and improvising the apparatus	3.98
iii) Designing and assembling equipment for new apparatus	4.40
iv) Operating electrical gadgets	4.69

The overall mean against these items is not usable, hence it has not been calculated.

It is obvious from the table 4.3A.4 that workshop activities are found helpful to students in developing in them the skills of : preparing charts, models, maps, diagrams, sketches etc. (4.58) and operating electrical gadgets (4.69) 'to a great extent' ; and for the remaining items 'to much extent'. It means that workshop activities are helpful to students in developing psychomotor skills in them to an appreciable extent.

4.3A.5 Project Work : The items pertaining to small research projects have been responded to by 71.54 percent of students of COSIP and 31.67 percent of students of COHSSIP. It means that the

majority of students of COSIP and a low percentage of students of COHSSIP gained experience in conducting small research projects. The students' reactions towards the effectiveness of project work are exhibited in the table 4.3A.5.

Table :4.3A.5: Means Showing Students' Reactions Towards the Effectiveness of Project Work

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
i) In adopting a scientific procedure for solving problems	4.74		4.39	
ii) In applying appropriate techniques for taking observations/ collecting data	4.26		3.96	
iii) In tabulating and analysing the data mathematically/statistically	4.57	4.58	3.59	3.99
iv) In verifying and generalising the results	4.73		4.01	

(i) COSIP : According to the table 4.3A.5, the overall mean (4.58) indicates that project work is helpful to students in developing the spirit of scientific enquiry in them 'to a great extent'. The means of individual items reveal that project work is helpful to students : in adopting a scientific procedure for solving problems (4.74); in tabulating and analysing the data mathematically / statistically (4.57); and in verifying and generalising the results (4.73) 'to a great extent' ; and for the remaining item 'to much extent'.

(ii) COHSSIP : According to the table 4.3A.5, the overall mean (3.98) reveals that the project work is helpful to students in cultivating a spirit of scientific enquiry in them 'to much extent'. This has been, further, substantiated by the means of individual items.

It is obvious from the above analysis that the students involved in COSIP are deriving maximum advantage from the project work and they testify their utility. The same is true of COHSSIP students to a lesser degree.

4.3A.6 Library Facilities : The items pertaining to the use of library facilities have been responded to by 100 percent students of COSIP and COHSSIP ^{respectively}. The table 4.3A.6 shows the students' reactions about the use of library facilities in terms of means.

Table :4.3A.6: Means Showing Students' Reactions Towards the Use of Library Facilities

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
i) In collecting bibliographical notes	4.27		4.48	
ii) In completing assignments	4.43	4.50	4.31	4.39
iii) In preparing papers for seminars, tutorials, group discussions and symposia	4.65		4.55	
iv) In preparing project reports/ revising discussion papers	4.66		4.22	

(i) COSIP : According to the table 4.3A.6, the overall mean (4.50) signifies that the students make use of library facilities for

consulting advanced books and journals 'to a great extent'. The means of individual items show that the students utilise library facilities 'to a great extent' : in preparing papers for seminars, tutorials, group discussions and symposia (4.65); and in preparing project reports/revising discussion papers (4.66); and for the remaining items 'to much extent'.

(ii) COHSSIP : According to the table 4.3A.6, the overall mean (4.39) indicates that the students make use of library facilities for consulting advanced literature 'to much extent'. The means of individual items reveal that the students make use of library resources ; in collecting bibliographical notes (4.48); and in preparing papers for seminars, tutorials, group discussions and symposia (4.55) 'to a great extent'; and for the remaining items 'to much extent'.

It is obvious from the above analysis that the students of COSIP are found to be utilising library resources to a great extent for consulting advanced literature in comparison to the students belonging to COHSSIP. The students belonging to both the programmes make use of library resources in preparing papers for discussion to an appreciable extent.

4.3A.7 Audio-Visual Aids : The number of students responding to the items relating to audio-visual aids varies from item to item. The items (i) and (ii) of the table 4.3A.7 have been responded to by 39.23 percent of students of COSIP and 40.84 percent of students of COHSSIP; and the items (iii) and (iv) by 92.32 percent of students of COSIP and 57.92 percent of students

of COHSSIP respectively. The students' reactions towards the effectiveness of audio-visual aids in terms of means are shown in the table 4.3A.7.

Table :4.3A.7: Means Showing Students' Reactions Towards the Effectiveness of Audio-Visual Aids

Items	Means of Individual Items	
	COSIP	COHSSIP
i) In preparing reports based on taped lectures	1.79	2.41
ii) In listening to recorded lectures borrowed from abroad or other departments	2.02	2.97
iii) In understanding working conditions in various vocations in India and abroad	3.23	2.43
iv) In understanding conditions in far off countries or lands	2.92	2.19

The overall mean against these items is not usable, hence it has not been calculated.

(i) COSIP : The means of individual items reveal that the audio-visual aids are helpful to students : in understanding working conditions in various vocations in India and abroad (3.23); and in understanding conditions in far off countries or lands (2.92) 'to some extent'; and for the remaining items 'to a little extent'.

(ii) COHSSIP : According to the table 4.3A.7, the means of the individual items reveal that the audio-visual aids are helpful to students; in listening to recorded lectures borrowed

from abroad or other departments (2.97) 'to some extent'; and for the remaining items 'to a little extent'.

The above analysis presents a very disappointing picture about the helpfulness of audio-visual aids to students. The students of COSIP and COHSSIP find the audio-visual aids of a very limited use for their study purposes.

4.3A.8 Field Trips : The items pertaining to field trips have been responded to by 67.69 percent of students of COSIP and 70 percent of students of COHSSIP. The table 4.3A.8 shows the students' reactions' reactions towards the effectiveness of field trips in terms of means.

Table :4.3A.8: Means Showing Students' Reactions Towards the Effectiveness of Field Trips

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
i) In relating theoretical aspects of study to practical realities of life	4.82		4.27	
ii) In gaining experience about the advancement in the discipline	4.57	4.63	4.69	4.49
iii) In making them aware of the resources and advancements of the country	4.73		4.64	
iv) In analysing problems and drawing conclusions	4.38		4.36	

(i) COSIP : According to the table 4.3A.8, the overall mean (4.63) points out that field trips are helpful to students

in gaining varied learning experiences 'to a great extent'. The means of the individual items reveal that field trips are helpful to students : in relating theoretical aspects of study to practical realities of life (4.82) ; in gaining experience about the advancements in the discipline (4.57); and in making them aware of the resources and advancements of the country (4.73) 'to a great extent' ; and for the remaining items 'to much extent'.

(ii) COHSSIP : In the table 4.3A.8, the overall mean (4.49) reflects that field trips are helpful to students in gaining varied learning experiences 'to a great extent'. The means of individual items reveal that field trips are helpful to students : in gaining experience about the advancements in the discipline (4.69); in making them aware of the resources and advancements of the country (4.64) 'to a great extent'; and for the remaining items 'to much extent'.

The above analysis makes it clear that field trips are helpful to the students of COSIP and COHSSIP in gaining practical orientation to their studies to an appreciable extent. The students of COSIP and COHSSIP become aware of the resources and advancements of the country in their disciplines and related areas through field trips.

4.3A.9 Guest Lectures : The items pertaining to guest lectures have been responded to by 61.15 percent of students of COSIP and 76.25 percent of students of COHSSIP. The table 4.3A.9 shows the students' reactions towards the effectiveness of field trips in terms of means.

Table :4.3A.9: Means Showing Students' Reactions Towards the Effectiveness of Guest Lectures

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual items	Over-all Mean
i) In understanding fundamental concepts in a discipline	4.12		3.83	
ii) In getting acquainted with recent developments in a discipline	3.43		3.92	
		3.41		3.49
iii) In understanding the inter-relationship among different disciplines	3.25		3.22	
iv) In taking up small research projects based on inter-disciplinary approach	2.84		2.99	

(i) COSIP : In the table 4.3A.9, the overall mean (3.41) indicates that guest lectures are helpful to students in understanding the corpus of knowledge in its totality 'to some extent'. The means of the individual items reveal that the guest lectures are helpful to students : in understanding fundamental concepts in a discipline (4.12) 'to much extent'; and for the remaining items 'to some extent'.

(ii) COHSSIP : The overall mean (3.49) reflects that guest lectures are helpful to the students in understanding the corpus of knowledge in its totality 'to much extent'. The means of individual items reveal that guest lectures are helpful to students : in understanding fundamental concepts in a discipline (3.83); and in getting acquainted with recent developments in a

discipline (3.92) 'to much extent'; and for the remaining items 'to some extent'.

It is clear from the above analysis that great lectures are found to be of limited help to the students of COSIP, however, the students of COHSSIP are deriving considerable benefits from them. The students belonging to both the groups find the guest lectures of a considerable help in understanding fundamental concepts in a discipline.

4.3A.10 Question Bank : The items pertaining ^{to} the question bank have been responded to by 39.62 percent of students of COSIP and 28.33 percent of students of COHSSIP ^{respectively}. The students' reactions towards the effectiveness of question bank in terms of means are shown in the table 4.3A.10.

Table :4.3A.10: Means Showing Students' Reactions Towards the Effectiveness of Question Bank

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
i) In presenting a comprehensive picture of the syllabus	4.54		4.28	
ii) In developing the habits of studying the subject-matter in depth	4.60		4.49	
iii) In understanding questions in examinations easily	4.44	4.44	4.53	4.38
iv) In getting acquainted with a variety of questions	4.49		4.50	
v) In providing opportunity to discuss difficult questions with				
(a) the teachers	4.15		4.16	
(b) the students	4.39		4.29	

(i) COSIP : The overall mean (4.44) indicates that question bank is helpful to students in improving their study habits and developing the skills of answering specifically in the examination 'to much extent'. The means of individual items reveal that question bank is helpful to students : in presenting a comprehensive picture of the syllabus (4.54) ; in developing the habits of studying the subject-matter in-depth (4.60) ; and in getting acquainted with a variety of questions (4.49) 'to a great extent' ; and for the remaining items 'to much extent'.

(ii) COHSSIP : According to the table 4.3A.10, the overall mean (4.38) signifies that the question bank is helpful to students in improving their study habits and developing the skills of answering specifically in the examination 'to much extent'. The means of individual items reveal that the question bank is helpful to students : in developing the habits of studying the subject-matter in depth (4.49); in understanding questions in examinations easily (4.53) ; and in getting acquainted with a variety of questions (4.50) 'to a great extent'; and for the remaining items 'to much extent'.

The items relating to the helpfulness of question bank have been responded to only by less than 40 percent of students of COSIP and COHSSIP. This shows that the practice of developing and supplying items from the bank to the students has not become popular in many disciplines. However, those students who make use of question bank do find it helpful to an appreciable extent

in studying the subject-matter in depth and in becoming familiar with the pattern of questions in the examination and thereby, improving their performance.

4.3A.11 Internal Assessment : The items pertaining to internal assessment have been responded to by 76.92 percent of students of COSIP and 66.67 percent of students of COHSSIP ^{respectively}. The students belong to both types of colleges who follow the university stipulation for internal assessment and who have instituted their own certificate for it. The table 4.3A.11 shows the students' reactions towards the effectiveness of internal assessment in terms of means.

Table :4.3A.11: Means Showing Students' Reactions Towards the Effectiveness of Internal Assessment

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
i) In developing regular study habits	4.74		4.59	
ii) In ensuring better assessment of your performance	4.54		4.54	
iii) In improving grades or marks	4.27	4.48	4.84	4.55
iv) In guiding the preparation for the subsequent periodical tests	4.68		4.46	
v) In providing opportunity for exposing in a variety of activities	4.61		4.54	
vi) In reducing undue emphasis on the final examination	4.01		4.31	

(i) COSIP : The overall mean (4.48) indicates that the internal assessment is helpful to students in getting their

performance assessed continuously through diversified activities 'to a great extent'. The means of individual items reveal that the internal assessment is helpful to students : in developing regular study habits (4.74); in ensuring better assessment of their performance (4.54); in guiding the preparation for the subsequent periodical tests (4.68); and in providing opportunity for exposing in a variety of activities (4.61) 'to a great extent' ; and for the remaining items 'to much extent'.

(ii) COHSSIP : According to the table 4.3A.11, the overall mean (4.55) shows that internal assessment is helpful to students in getting their performance assessed continuously through diversified activities 'to a great extent'. The means of individual items reveal, that except for one item internal assessment is helpful to students in getting assessed their performance continuously 'to a great extent'. The internal assessment is helpful to students; in reducing undue emphasis on the final examination (4.31) 'to much extent'.

The students of COSIP and COHSSIP find the internal assessment helpful in getting their performance assessed continuously through diversified activities to an appreciable extent. They find that the internal assessment is helpful to them in reducing undue emphasis on the final examination to a considerable extent.

4.3A.12 Revised Syllabus : The items pertaining to revised syllabus have been responded to by 42.31 percent of students ^{of COSIP} and 38.33 percent of students of COHSSIP. The table 4.3A.12 shows the

students' reactions towards the effectiveness of revised syllabus in terms of means.

Table :4.3A.12: Means Showing Students' Reactions Towards the Effectiveness of Revised Syllabus

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
i) Imparts upto date knowledge	3.41		3.26	
ii) Provides more opportunities for independent study	4.10		3.86	2.86
iii) Includes more job-oriented unit	2.15	3.20	1.87	
iv) Bridges the gap between theory and practice	3.14		2.43	

(i) COSIP : The overall mean (3.20) indicates that the syllabus has been revised 'to some extent'. The means of individual items reveal that the revised syllabus : provides more opportunities for independent study (4.10) 'to much extent' ; imparts upto date knowledge (3.41) and bridges the gap between theory and practice (3.14) 'to some extent', and for the remaining item 'to a little extent'.

(ii) COHSSIP : According to the table 4.3A.12, the overall mean (2.86) reveals that the syllabus has been revised 'to some extent'. The means of individual items reveal that the revised syllabus : provides more opportunities for independent study (3.86) 'to much extent' ; imparts upto date knowledge (3.26) 'to some extent'; and for the remaining items 'to a little extent'.

It is clear from the above analysis that the students do not find significant changes in the revised syllabus, but, only certain modifications and alterations. They are happy that the revised syllabus help them in independent study to a considerable extent. The revised syllabus provides practical orientation to their studies to a limited extent. They are quick enough to notice that the revised syllabus has not provided job orientation.

4.3A.13 News Bulletin : The items pertaining to news bulletin has been responded to by 26.15 percent of students of COSIP and 21.25 percent of students of COHSSIP ^{respectively}. It indicates that the publication of news bulletin has been started only by a few departments/institutions, as mentioned in section two. The table 4.3A.13 shows the students' reactions towards the effectiveness of news bulletin in terms of means.

Table :4.3A.13: Means Showing Students' Reactions Towards the Effectiveness of News Bulletin

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
i) In enabling to understand the language of the journal	4.28		4.55	
ii) In preparing an abstract of an article/research paper of the journal	3.90	3.78	4.25	4.18
iii) In substantiating by research evidences the papers prepared for seminars, tutorials, group discussions and symposia	3.51		3.88	
iv) In developing skills of contributing articles to the journal	3.34		4.02	

(i) COSIP : The overall mean (3.78) indicates that the news bulletin is found helpful to students in cultivating the habits of reading standard journals 'to much extent'. The means of individual items, except for one item, reveal that the news bulletin is helpful to students in developing the habits of reading journals 'to much extent'. The news bulletin is found helpful to students in developing in them skills of contributing articles to the journals 'to some extent'.

(ii) COHSSIP : According to the table 4.3A.13, the overall mean (4.18) shows that the news bulletin is found helpful to students in cultivating the habits of reading standard journals 'to much extent'. The means of the individual item reveal that the news bulletin is found helpful to students in enabling them to understand the language of the journal (4.55) 'to a great extent'; and for the remaining items 'to much extent'.

Though, the items pertaining to news bulletin have been responded to by a limited percentage students of COSIP and COHSSIP. However, they find news bulletin helpful in cultivating the habits of reading scientific news and papers and also training them in preparing papers for publication to a considerable extent.

4.3A.14 Job-Oriented Courses : The ^{items pertaining to job-oriented} courses have been responded to by 45.77 percent of students of COSIP only. The table 4.3A.14 on the next page shows the students' reactions towards the effectiveness of job-oriented courses in terms of means.

Table :4.3A.14: Means Showing Students' Reactions Towards the Effectiveness of Job-Oriented Courses

Items	COSIP	
	Means of Individual Items	Over-all Mean
i) In getting acquainted with the nature and conditions of preferred vocation	2.90	
ii) In forming the basis of a particular vocation	1.87	2.25
iii) In leading towards self-employment	1.70	
iv) In appreciating the dignity of labour	2.54	

According to the table 4.3A.14, the job oriented courses are found helpful to students to a little ^{extent} in providing them orientation towards job. It means that the job-oriented courses provided to the students do not lead them towards any vocation. Much efforts have not been done in training the students towards vocations. Such a type of courses need to be strengthened.

Section B

4.3B.1 Language Laboratory : The items pertaining to language laboratory have been responded to by the students who offered English language as a subject of study at the undergraduate level and have such facility. Only 12.50 percent of students responded to the items pertaining to the utility of language laboratory. The table 4.3B.1 exhibit the students' reactions towards the effectiveness of language laboratory in terms of means.

Table :4.3B.1: Means Showing Students' Reactions Towards the Effectiveness of Language Laboratory

Items	COHSSIP	
	Means of Individual Items	Over-all Mean
i) In modifying your pronunciation	4.47	
ii) In learning spaces between words and sentences	4.00	
iii) In learning new words	4.17	4.15
iv) In developing fluency in speaking	4.43	
v) In learning appropriateness of words	3.67	

The table 4.3B.1 indicates that language laboratory is found helpful to students in improving their communication skills to a considerable extent. The language laboratory is found helpful to the students in modifying their pronunciation to an appreciable extent.

4.3B.2 Laboratory Activities : The items pertaining to laboratory activities have been responded to by 100 percent of students of COSIP and 8.33 percent of students of COHSSIP (Geography and Psychology disciplines). The table 4.3B.2 shows the students' reactions towards the use of acquired skills for performing laboratory activities independently in terms of means.

(i) COSIP : According to the table 4.3B.2 on the next page, the overall mean (4.15) indicates that the students are able to make use of acquired skills of performing laboratory activities independently 'to much extent'. The means of individual items reveal

Table :4.3B.2: Means Showing Students' Reactions Towards the Use of Acquired Skills for Performing Laboratory Activities Independently

Items	COSIP		COHSSIP	
	Means of Individual Items	Over-all Mean	Means of Individual Items	Over-all Mean
i) In checking the working conditions of the apparatus and tools	4.50		4.65	
ii) In rectifying defects of the apparatus in laboratory situations	2.74		1.85	
iii) In improvising apparatus if necessary	2.99		2.80	
iv) In sketching the arrangement of the apparatus at the outset	4.18		3.45	
v) In setting up the apparatus with ease	4.33		4.20	
vi) In taking measurements and reading instruments accurately and checking up their observation at every step	4.53	4.15	3.95	3.96
vii) In taking precautions in handling instruments and doing experiment	4.25		4.15	
viii) In performing the experiment with reasonable speed and accuracy, so as to complete it in time	3.97		3.85	
ix) In performing the experiment with neatness	4.60		4.65	
x) In dismantling and cleaning the apparatus and putting them in proper place	4.73		4.60	
xi) In tabulating observation meaningfully	4.50		4.60	
xii) In summarising observations leading to generalisation	4.14		4.55	
xiii) In representing the observations by diagrams or graphs	4.14		4.10	
xiv) In calculating and finalising the results mentioning units	4.51		4.05	

Activities

that while performing laboratory/independently the students are able to make use of acquired skills 'to a great extent'; in checking the conditions of the apparatus and tools (4.50); in taking

measurements and reading instruments accurately and checking up their observation at every step (4.53) ; in performing the experiment with neatness (4.60); in dismantling and cleaning the apparatus and putting them in proper place (4.73) ; in tabulating observation meaningfully (4.50) ; and in calculating and finding the results mentioning units (4.51). The students are able to make use of acquired skills in rectifying defects of the apparatus in laboratory situations (2.74); and in improvising the apparatus if necessary (2.99) 'to some extent; and for the remaining items 'to much extent'.

(ii) COHSSIP : According to the table 4.3B.2, the overall mean (3.96) reveals that the students are able to make use of required skills of performing laboratory activities independently 'to much extent'. The means of individual items reveal that while conducting laboratory independently the students are able to make use of acquired skills 'to a great extent' : in checking the working conditions of the apparatus and tools (4.65); in performing the experiment with neatness (4.65); in dismantling and cleaning the apparatus and putting them in proper place (4.60); in tabulating observations meaningfully (4.60); and in summarising observations leading to generalisations (4.55). The students are able to make use of acquired skills : in improvising apparatus if necessary (2.80) 'to some extent' ; in rectifying defects of the apparatus in laboratory situations (1.85) 'to a little extent'; and for the remaining items 'to much extent'.

It is clear from the above analysis that the students of COSIP and COHSSIP are able to make use of acquired skills of performing laboratory activities independently to a considerable extent. They are able to make use of acquired skills : in checking

the working condition of the apparatus and tools ; in performing the apparatus with neatness; in dismantling and cleaning the apparatus and putting them in proper place ; and tabulating the observations meaningfully to an appreciable extent.

4.3B.3a Remedial Teaching Programme : The table 4.3B.3a shows the percentage of students who have attended a variety of remedial teaching programme.

Table :4.3B.3a: Remedial Teaching Programme
(Responses in Percentages)

Remedial Teaching Programme	COSIP	COHSSIP
i) Programme of individual coaching outside the class	14.62	11.67
ii) Arrangement for extra periods of instruction	4.62	5.83
iii) Programme of providing graded bibliographical notes and lecture abstracts	19.23	17.50
iv) Programme of easy and direct assignments	19.23	17.50

(i) COSIP : The table 4.3B.3a shows that only 14.62 percent of students report that they have attended the programme of individual coaching outside the class and 4.62 percent of students have attended extra periods of instruction. It is further, analysed that graded bibliographical notes and lecture abstracts; and easy and direct assignments have been given to the students who attended either the programme of individual coaching outside the class or extra period of instruction.

(ii) COHSSIP : The table 4.3B.3a shows that only 11.67 percent of students report that they have attended the programme of individual coaching outside the class and 5.83 percent of students

have attended extra periods of instruction. The graded bibliographical notes and lecture abstracts have been provided to the students who attended either the programme of individual coaching outside the class or extra periods of instruction.

It is obvious from the above analysis that a very low percentage of students of COSIP and COHSSIP attended the remedial teaching programme. The programme of providing individual coaching outside the class to the students seem to be more popular than the programme of extra periods of instruction. The students have been given graded bibliographical notes and lecture abstracts; and easy and direct assignments in remedial programmes.

4.3B.3b Students' Reactions Towards the Effectiveness of Remedial Teaching Programme : A question has been asked to the students who attended the remedial teaching programme : 'To what extent have you been benefitted by such type of programmes ?' The table 4.3B.3b shows the students' reactions towards the effectiveness of remedial teaching programme in terms of means.

Table :4.3B.3b: Means Showing Students' Reactions Towards the Effectiveness of Remedial Teaching Programme

Remedial Teaching Programme	Means of Individual Items	
	COSIP	COHSSIP
i) Programme of individual coaching outside the class	4.60	4.61
ii) Arrangement for extra periods of instruction	4.25	4.14
iii) Programme of providing graded bibliographical notes and lecture abstracts	3.82	4.19
iv) Programme of providing easy and direct assignments	4.09	4.38

The overall mean is not usable, hence it has not been calculated

(i) COSIP : According to the table 4.3B.3b, the means of individual items reveal that the students have been benefitted from : the programme of individual coaching outside the class (4.60) 'to a great extent'; and from the remaining remedial teaching programme 'to much extent'.

(ii) COHSSIP : In the table 4.3B.3b, the means of individual items reveal that the students have been benefitted from : the programme of individual coaching outside the class (4.61) 'to great extent' and from the remaining programme 'to much extent'.

It is obvious from the above analysis that though, the remedial teaching programmes have been attended by a very low percentage of students of COSIP and COHSSIP, they find that these programmes are of much help in coping the classroom teaching. The students of COSIP and COHSSIP have been benefitted from the programme of individual coaching outside the class to a great extent.

4.3B.4a Special Programmes for Gifted Students : The students have been asked : 'To put a tick mark (✓) in column I against the programmes in which you have been invited to participate. (Check more than one)'. The table 4.3B.4a shows the percentage of students who have been invited to participate in special programmes.

Table :4.3B.4a: Students' Participation in Special Programmes
(Responses in Percentages)

Special Programmes	COSIP	COHSSIP
i) Developing instructional material such as charts, maps, diagrams, sketches, models, bibliographical notes etc.	69.23	35.83
ii) Designing and assembling equipment for new apparatus	20.00	Not applicable
iii) Improvising and repairing instruments	28.46	Not applicable
iv) Operating electrical gadgets	13.46	9.17
v) Preparing model answers for selected questions	19.23	28.33
vi) Assisting weaker students in their study	7.31	9.58
vii) Making arrangement of field trips	18.46	16.25
viii) Organising :		
(a) guest lectures	18.46	19.17
(b) departmental seminars	13.08	22.08
(c) interdepartmental seminars	12.31	8.75
(d) intercollegiate seminars	12.31	7.50

(i) COSIP : It is evident from the table 4.3B.4a, that the majority of students are invited to participate in developing instructional material such as charts, maps, diagrams, sketches, models, bibliographical notes etc. Only 28.46 percent of students are entrusted the responsibility of improvising and repairing instruments; and 20 percent of students are assigned the tasks of designing and assembling equipment for new apparatus and then the percentage of students who are invited for participation in varied special programmes goes on decreasing.

(ii) COHSSIP : The table 4.3B.4a shows that the low percentage of students are invited to participate in varied special programmes.

Only 35.83 percent of students are invited to participate in developing instructional material such as charts, maps, diagrams, sketches, models, bibliographical notes; and 28.33 percent of students are assigned the tasks of preparing model answers for selected questions and then the percentage of students participating in varied special programmes goes on decreasing.

4.3B.4b Students' Contribution Towards the Success of Special Programmes

A question has been asked to the students who have been invited to participate in special programmes : 'To what extent do you contribute towards the success of special programmes ?' The table 4.3B.4b shows the students' contribution towards the success of special programmes in terms of means.

Table :4.3B.4b: Means Showing Students' Contribution Towards the Success of Special Programmes

Special Programmes	Means of Individual Items	
	COSIP	COHSSIP
i) Developing instructional material such as maps, diagrams, sketches, models, bibliographical notes etc.	4.57	4.64
ii) Designing and assembling equipment for new apparatus	4.44	Not applicable
iii) Improvising and repairing instruments	4.45	Not applicable
iv) Operating electrical gadgets	4.51	4.09
v) Preparing model answers for selected questions	3.96	4.21
vi) Assisting weaker students in their study	3.63	4.26
vii) Making arrangement of field trips	4.71	4.69
viii) Organising :		
(a) guest lectures	4.13	4.78
(b) departmental seminars	4.24	4.24
(c) interdepartmental seminars	4.16	4.28
(d) intercollegiate seminars	3.78	3.72

The overall mean against these items is not usable, hence it is not calculated.

(i) COSIP : According to the table 4.3B.4b, the means of individual items reveal that the students contribute towards the success of : developing instructional material such as charts, maps, diagrams, sketches, models, bibliographical notes etc.(4.57); improvising and repairing instruments (4.45); operating electrical gadgets (4.51); and making arrangement of field trips (4.71) 'to a great extent'; and for the remaining programmes 'to much extent'.

(ii) COHSSIP : In table 4.3B.4b, the means of individual items reveal that the students contribute towards the success of : developing instructional material such as charts, maps, diagrams, sketches, models, bibliographical notes etc. (4.64); making arrangement for field trips (4.69) ; and organising guest lectures (4.78) 'to a great extent'; and for the remaining items 'to much extent'.

It is obvious from the above analysis that the students of COSIP and COHSSIP contribute to an appreciable extent in developing instructional material such as charts, maps, diagrams, sketches, models, bibliographical notes etc. and in making arrangement of field trips. They contribute towards the success of varied programmes to a considerable extent.

Section Four

4.4 Problems Faced by the Principals in the Implementation of COSIP and COHSSIP

The principals play a pivotal role in implementing the innovative programmes and practices in the institutions. The COSIP and COHSSIP have been innovative in nature. When a new programme is introduced in educational institutions it experiences

many constraints from various quarters. Some of the staff-members may turn away or adopt a passive attitude towards innovative practices; some of the senior members due to fear of shift of their dominance over the old routine practices may resist; and lack of professional competence among the staff-members may affect the proper implementation of the programme. Besides, there may be certain other factors which create hinderances for the proper implementation of innovative practices such as lack of motivation among the students for participation in various non-graded activities, affiliating nature of the universities, delay in getting funds from the resource system etc. Here, an attempt is being made to study the problems faced by the principals in implementing COSIP and COHSSIP. The numbers of colleges selected for studying COSIP, COHSSIP, and having both COSIP and COHSSIP together are 9, 8 and 4 respectively. The principals' agreement or disagreement with the problems has been studied on a 5-point scale with the aid of a questionnaire. The summated scores against each item is calculated and ranks have been assigned for indicating the severity of problems. The table 4.4 shows the problems faced by the Principals in implementing COSIP and COHSSIP.

According to the table 4.4, the ranks 1 and 3 have been assigned to items 13 and 3 respectively by the respondents belonging to the colleges having COSIP, and COHSSIP, and COSIP and COHSSIP together. The items are related to the problems of irregular disbursement of funds by the resource system and teachers' expectation of remuneration for doing extra work. It

Table :4.4: Problems Faced by The Principals in the Implementation of COSIP and COHSSIP

Items	Problems faced byt the Principals in Implementation				Total			
	COSIP		COHSSIP					
	Score Rank	Score Rank	Score Rank	Score Rank				
1. Most of the teachers are unfamiliar with modern methods of instruction	25	9	23	11	8	11	56	10
2. The teachers are not interested in doing extra work	24	11	19	14	8	11	51	11.5
3. The teachers expect remuneration for doing extra work	33	3	31	3	15	3	79	2
4. There is a lack of motivation among the teachers for organising varied activities	28	7	35	2	12	6	75	3.5
5. The teachers do not guide the students in the library	19	14	23	11	7	14	49	13
6. There is a rival group in the staff who creates hindrance to the implementation of any innovation	18	15.5	17	16	6	16	41	16
7. Library facilities are not properly utilised by the students	22	12	18	15	7	14	47	15
8. Books are stolen from the library	21	13	21	13	9	9	51	11.5
9. There is a lack of motivation among the students for participating in various activities	36	2	26	6.5	10	8	72	6
10. The students are more examination oriented, hence, offer little co-operation for non-graded activities	32	4.5	30	4	13	4.5	75	3.5
11. The students are not interested to study beyond university prescribed syllabus	29	6	24	8.5	11	7	64	8

(Continued...)

(Table 4.4 continued)

	Problems faced by the Principals in Implementation							
	COSIP	COHSSIP	Both together		Total			
	Score Rank	Score Rank	Score Rank	Score Rank	Score Rank			
12. The university's rigid curriculum does not allow the introduction of any innovative activity	25	9	26	6.5	17	2	68	7
13. The U.G.C. does not disburse the grants in time	41	1	37	1	18	1	96	1
14. There is an unsatisfactory teacher-student ratio	32	4.5	28	5	13	4.5	73	5
15. There is a lack of physical facilities for performing various types of activities	25	9	24	8.5	8	11	57	9
16. There are constraints in adjusting various programmes in daily routine time	18	15.5	23	11	7	14	48	14

Correlation between the problems faced by the principals in implementing COSIP and COHSSIP (ρ) = .84

Correlation between the problems faced by the principals in implementing COHSSIP and both COSIP and COHSSIP together (ρ) = .88

Correlation between the problem faced by the principals in implementing COSIP and both COSIP and COHSSIP together (ρ) = .81

indicates that irregular disbursement of funds by the resource system produces hinderances for the proper functioning of the programme. The payment of remuneration to teaching staff out of the programmes' funds is strictly prohibited by the U.G.C. which is again a severe problem faced by the respondents.

A slight difference is observed in higher ranks assigned to items 10 and 14 by the respondents belonging to the three groups. These items indicate that the students are more examination oriented, hence offer little cooperation for non-graded activities. The respondents find that there is an unsatisfactory teacher-student ratio for the implementation of innovative activities. It means that the teaching staff has not been appointed in proportion with the expansion of students' enrolments. These are also the severe problems faced by the principals in implementing the innovative practices.

A slight difference is observed in the lowest rank assigned to item 6. The respondents do not feel that rival group in the staff creates problems in the proper implementation of innovative practices. By observing the table, a trend emerges that there is a high degree of closeness between the problems faced by either any two groups of respondents, which is further substantiated by the coefficients of correlation between the groups. It means that the nature of problem faced by either groups of respondents for implementing COSIP, COHSSIP, and both COSIP and COHSSIP is similar.

The most severe problems faced by the whole group in implementing COSIP, COHSSIP and both COSIP and COHSSIP together are listed below in their rank order :

- (i) The U.G.C. does not disburse the grants in time
- (ii) The teachers expect remuneration for doing extra work.
- (iii) There is a lack of motivation among the teachers for organising varied activities.
- (iv) The students are more examination oriented, hence, offer little co-operation for non-graded activities.
- (v) There is an unsatisfactory teacher-student ratio
- (vi) There is a lack of motivation among the students for participating in various activities.
- (vii) The university's rigid curriculum does not allow the introduction of any innovative activity.

It was pointed out during interviews that incentives either in terms of recognition, promotion or remuneration to teachers are essential for seeking their full co-operation in implementing innovative activities. Academic autonomy should be provided to the institution for the success of innovative activities. There should be some provision of funds for physical development of the institutions.

Section Five

4.5 Utilisation of Funds for the Implementation of COSIP and COHSSIP

The University Grants Commission provided 100 percent financial assistance to selected colleges for the implementation of COSIP and COHSSIP. The U.G.C. supplied guidelines to the colleges for the utilisation of funds for initiating a variety of innovative activities (discussed in chapter I). It is mentioned specifically that the expenditure out of COSIP and COHSSIP funds should be incurred for the academic growth of the institutions and not for

their physical development. Broadly speaking, the funds were to be utilised by the colleges : (a) for academic growth of students i.e. for enriching library with advanced books and journals; for equipping laboratories with advanced instruments and apparatus; for supporting instructional activities with teaching aids; for providing diversified learning experiences to students through organisation of field trips, guest lectures, etc.; (b) for faculty development i.e. for the organisation of departmental, interdepartmental and intercollegiate programmes and for sending the teachers to advanced learning centres for short term courses so as to equip them better knowledge and skills for conducting high quality instructional activities; and (c) for appointment of teaching assistants (tutors), technical assistants for laboratory purposes, remuneration to office staff and part time student assistants. The role of tutors is to assist the teachers as well as students in their academic activities but not to take the regular classes. The U.G.C. does not permit the institutions to appoint regular staff-members under the programmes. It is attempted here, to analyse, how the colleges utilised the funds granted for the implementation of COSIP and COHSSIP. The utilisation of funds by the colleges for the implementation of COSIP and COHSSIP is studied in two ways. (Detailed reports of the individual colleges pertaining to the expenditure incurred by them out of COSIP and COHSSIP funds are shown in Appendix B).

4.5.1 Overall Utilisation of Funds

The overall utilisation of funds by the colleges granted for the implementation of COSIP and COHSSIP is shown in tables 4.5.1a and 4.5.1b respectively and is discussed hereunder.

(i) COSIP : From the table 4.5.1a, it is observed that there are three types of colleges : (a) Colleges which were unable to make full use of the grants for the implementation of the programme; (b) colleges which utilised nearly the total amount of funds received for the implementation of the programme ; and (c) colleges which spent in excess of the grants received from the resource system for the implementation of the programme.

Seven colleges out of 12 have not been able to make full use of the grants received from the U.G.C. for the implementation of the programme. It reflects that these colleges lack in proper planning of the programme and its innovative activities which ultimately, leads towards under-utilisation of sanctioned grants.

Two colleges out of 12 utilised nearly the total amount of funds granted for the implementation of the programme. It shows the commitment and proper planning of the institutions for initiating innovative activities for making the programme a success.

Three colleges out of 12 spent the amount in excess for making the programme a success. It indicates that these colleges have advance planning for bringing about qualitative improvement in teaching-learning and evaluation processes and are ready to accept the challenges with commitment to contribute economically from their side.

Table :4.5.1a: Overall Utilisation of Funds for the Implementation of COSIP

Name of the Colleges	Duration of the Programme	Total grants received by the Colleges) (Rupees)	Expenditure Incurred by the Colleges (Rupees)	Balance (Rupees)
1. Ahmednagar College, Ahmednagar	1970-71 to 1978	5,00,000=00	4,58,891=36	41,108=64
2. D.A.V. College, Jullunder	1970-71 to 1979	5,00,000=00	4,79,335=92	20,664.08
3. D.N. College, Meerut	1972-73 to 1979	2,36,000=00	2,36,349=80	- 349.80 (Nearly equal)
4. Ferguassen College, Poona	1971-72 to 1979	5,00,000=00	5,09,272=68	- 9,272=68 (Excess)
5. Loyola College, Madras	1971-72 to 1979	3,80,000=00	3,64,126=26	15,873=74
6. Madras Christian College, Jambaram	1971-72 to 1979	5,00,000=00	4,42,678=45	57,321=55
7. Maharaja Singh College, Saharanpur	1975-76 to 1979	3,00,000=00	1,51,595=41	1,48,404=59
8. Maharaja College, Jaipur	1971-72 to 1979	3,00,000=00	3,19,721=25	-19,721=25 (Excess)
9. New Science College, Hyderabad	1970-71 to 1979	5,00,000=00	4,25,322=66	74,677=34
10. Ramnarayan Ruia College, Bombay	1971-72 to 1979	2,50,000=00	2,54,101=01	- 4,101=01 (Excess)
11. * Sophia College for Women, Bombay	1971-72 to 1979	4,40,000=00	4,36,822=52	3,177=48
12. Vivekananda College, Madras	1976-77 to 1979	2,00,000=00	1,99,832=23	167=77 (Nearly equal)
13. Women Christian College, Madras	Total	46,06,000=00	42,44,604=81+	3,61,395=19 (Balance)
			33,444=74 *	* 33,444=74 (Excess)

*The asterisk figures represent the greater expenditure incurred by the colleges than received from the U.G.C. for implementation of COSIP

**The figures represent the account of utilisation of funds for the first phase of 1971-72 and account of the follow up phase from 1976 to 1979 was not available.

Table :4.5.1b: Overall Utilisation of Funds for the Implementation of COHSSIP

Name of the Colleges	Duration of the Programme	Total Grants Received by the Colleges (Rupees)	Expenditure incurred by the Colleges (Rupees)	Balance (Rupees)
1. Kanodia Mahila Mahavidyalaya, Jaipur	1977-78 to 1979	1,00,000=00	1,07,066=25	-7,066=25 (Excess)
2. Khalsa College, Amritsar	1977-78 to 1979	1,87,000=00	1,57,922=79	29,077=21
3. L.D. Arts College, Ahmedabad	1977-78 to 1979	The record was not available		
4. Loyola College, Madras	1975-76 to 1979	80,000=00	17,914=84	62,085=16
5. M.T.B. College, Surat	1977-78 to 1979	1,47,000=00	1,43,437=68	3,562=32
6. N.A. and T.V.Patel Arts College Vallabh Vidyanagar	1975-76 to 1979	76,000=00	85,556=59	-9,556=59 (Excess)
7. R.G. College, Meerut	1975-76 to 1979	1,15,000=00	1,15,415=26	-415=26 (Nearly equal)
8. Ramnarain Ruia College, Bombay	1975-76 to 1979	1,43,000=00	1,27,120=79	15,879=21
9. S.D. College, Ambala Cantt.	1977-78 to 1979	87,000=00	81,767=73	5,232=27
10. Sophia College for Women, Bombay	1975-76 to 1979	1,40,000=00	1,38,192=83	1,807=17
11. Stella Maris College, Madras	1977-78 to 1979	81,300=00	69,393=68	11,904=32
12. Vivekanand College, Madras	1975-76 to 1979	1,43,000=00	1,42,732=32	-267=68 (Nearly equal)
	Total	12,99,300=00	11,69,484=66+ 17,038=10 *	1,29,815=34+ *17,038=10 (Excess)

* The asterisk figures represent the greater amounts spent by the colleges than received from the U.G.C. for the implementation of COHSSIP.

(ii) COHSSIP : According to the table 4.5.1b, seven colleges out of 11 were unable to make full use of the grants received from the U.G.C. for the implementation of the programme. It means that these colleges lack in the proper planning and initiation of activities for making the programme a success. It leads towards wastage of the financial assistance.

Two colleges out of 11, made use of nearly the total amount of grant received from the resource system. It shows the commitment of these institutions and their ability to execute the programme.

Two colleges, out of 11 incurred expenditure in excess of the amount they obtained from the resource system for the implementation of the programme. It means that they are resourceful colleges with high commitment to the programme and active interest in implementing it.

It becomes obvious from the above analysis that the majority of colleges which implement COSIP and COHSSIP were not able to make full use of the grants received from the University Grants Commission, which indicates lack of proper planning for initiation of innovative activities and lack of enthusiasm in implementing the programme.

4.5.2 Itemwise Utilisation of Funds

The itemwise utilisation of funds specially granted to the colleges for the implementation of COSIP and COHSSIP is shown in table 4.5.2. The figure 4.5.1 drawn for presenting (p.) the expenditure incurred in implementing COSIP and COHSSIP under the broad categories such as academic growth of students; honorarium and salary for teaching staff, tutors and part time assistants,

Table :4.5.2: Itemwise Utilisation of Funds

Items	COSIP		COHSSIP	
	Number of Colleges utilised the Grants for the Items	Expenditure incurred by the Colleges (Rupees)	Number of Colleges utilised the Grants for the Items	Expenditure incurred by the colleges (Rupees)
1. Books and Journals	12	5,53,252.36(12.93)	11	4,19,757.35(35.38)
2. Laboratory equipments including specimen	12	20,67,722.46(48.33)	1	4,727.95(0.40)
3. Language laboratory	-	-	(Geography and Psychology) 3(Complete) + 2(Sound & Record)	78,300.20(6.60)
4. Workshop equipment and glass blowing Unit	9	2,35,947.19(5.51)	-	-
5. Audio-Visual Aids	7	83,921.65(1.96)	9	24,546.79(2.07)
6. Aquarium	1	14,836.50(0.35)	-	-
7. Museum	1	15,092.00(0.35)	-	-
8. Musical instruments	-	-	1	3,000.00(0.25)
9. Calculator	1	633.02(0.02)	1	4,213.00(0.36)
10. Film Projector	-	-	2	20,456.30(1.72)
11. Slide projector	1	1,550.00(0.04)	1	6,720.00(0.57)
12. Teakwood box for projector	1	326.00(0.008)	-	-
13. Overhead projector	1	7,226.30(0.17)	2	6,203.54(0.52)
14. Projection lamp	1	517.22(0.012)	-	-
15. Tape recorder with tapes	-	-	3	5,270.00(0.44)
16. Epidiascope	-	-	2	17,043.58(1.44)

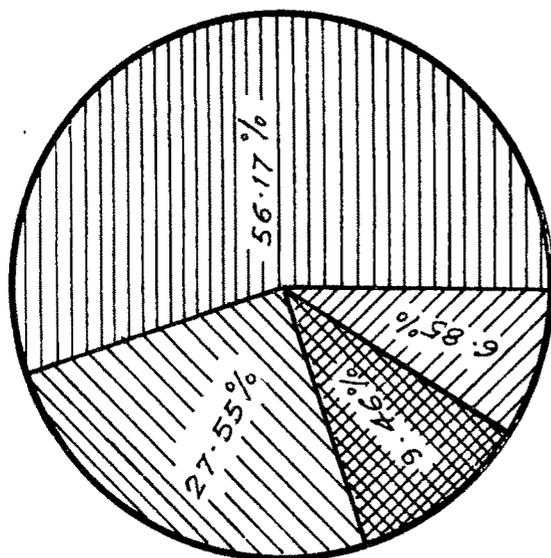
(Continued....)

(Table 4.5.2 continued)

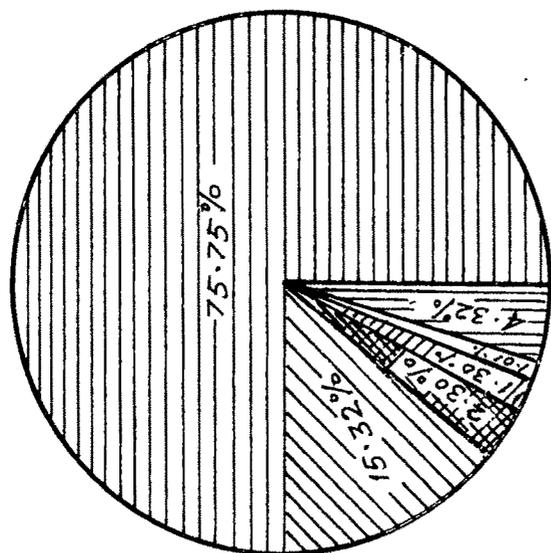
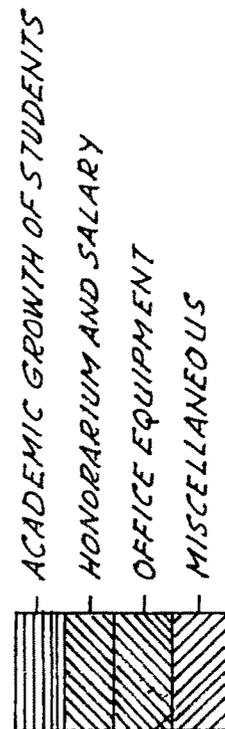
Items	COSIP		COHSSIP	
	Number of Colleges utilised the Grants for the Items	Expenditure incurred by the Colleges (Rupees)	Number of Colleges utilised the Grants for the Items	Expenditure incurred by the Colleges (Rupees)
17. Audio-Visual equipment for six lecture theatres	1	73,961.72 (1.73)	-	-
18. Survey projects and field trips	11	1,22,415.43 (2.86)	8	30,125.13 (2.54)
19. Guest lectures	10	63,418.76 (1.48)	7	29,614.93 (2.50)
20. Establishment of examination Cell	-	-	1	16,359.74 (1.38)
21. Type writer	5	13,625.96 (0.32)	6	23,101.86 (1.95)
22. Duplicating machine	4	41,692.77 (0.90)	8	89,043.63 (7.51)
23. Part time technical assistants	2	3,350.00 (0.08)	-	-
24. Honorarium paid to office staff	2	9,932.88 (0.23)	7	43,747.97 (3.69)
25. Part time student assistants	-	-	1	4,930.00 (0.43)
26. Salary paid to tutors	-	-	10	2,78,025.24 (23.43)
27. Honorarium paid to teaching staff and appointment of lecturers	11	6,41,994.27(15.01)	-	-
28. Staff development programme	10	98,561.89 (2.30)	-	-
29. Building and furniture repairing	4	43,148.71 (1.01)	-	-
30. Miscellaneous including stationery, postage, cyclostyling etc.	11	1,84,922.28 (4.32)	11	81,335.55 (6.85)
Total		42,78,049.55		11,86,522.76

(i) The figures in brackets represent the expenditure in terms of Percentages

(ii) The record of utilisation of funds for one COSIP and one COHSSIP Colleges was not available.



COSIP



COHSSIP

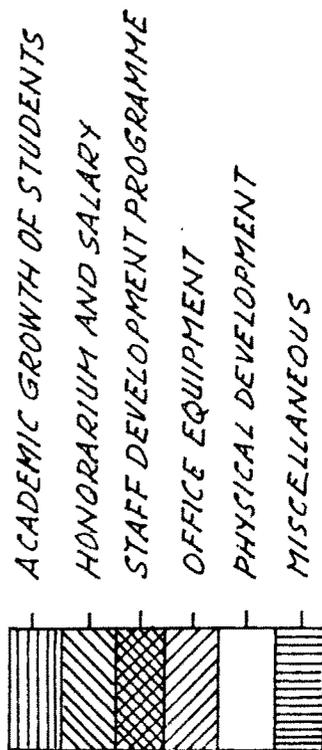


FIG. 4.5.1 PERCENTAGE DISTRIBUTION OF EXPENDITURE INCURRED FOR COSIP AND COHSSIP

staff development programme; office equipments; physical development of the colleges and miscellaneous items.

(i) COSIP : It is obvious from Figure 4.5.1 that the colleges utilised 75.75 percent of the total expenditure for academic growth of the students of which the details are given in table 4.5.2 i.e. for equipping laboratories with advanced instruments and apparatuses ; for enriching library facilities in terms of advanced books and journals ; for establishing workshops and glass blowing units ; for procuring audio-visual aids such as charts, diagrams, maps, sketches, models, films, filmstrips, slides, recorded tapes ; for maintaining museum and aquarium ; for procuring audio-visual apparatus such as slide projector ; teak-wood box for projector, projection lamp ; equipping lecture theatres with audio visual apparatus for conducting instructional activities (by only one college) ; for arranging survey projects and field trips ; for extending guest lectures etc.

A sum of 15.32 percent of total expenditure was utilised for paying honoraria to teaching staff, office staff and part-time technical assistants. The payment of remuneration to teaching staff out of COSIP funds was not permissible.

The colleges made use of a meagre amount i.e. 2.30 percent of total expenditure for staff development programme (i.e. for organising departmental, interdepartmental and intercollegiate programmes and sending teachers to advanced learning centres.

A sum of 1.30 percent of the total expenditure was utilised for purchasing typewriters, duplicating machine etc. Amounts of 1.01 percent and 4.32 percent of total expenditure were utilised for physical development of the college and for miscellaneous

purposes such as stationery, postal charges, conveyance charges, refreshment for guest speakers etc.

(ii) COHSSIP : The Figure 4.5.1 makes it clear that the colleges utilised 56.17 percent of the total expenditure for academic growth of students of which the details are given in table 4.5.2; for enriching libraries with advanced books and journals; for equipping laboratories with advanced instruments and apparatus (for Geography and Psychology); for establishing language laboratories ; for procuring audio-visual aids such as charts, maps, diagrams, sketches, models, slides, filmstrips, taped lectures etc. ; for procuring audio-visual apparatuses such as film projectors, slide projectors, overhead projectors, tape recorders, epidiroscope etc., for procuring musical instruments; for arranging survey projects and field trips; for arranging guest lectures ; for establishing examination cell etc.

A sum of 27.55 percent of the total was used for paying salary to tutors, part time student assistants and honorarium to office staff.

The colleges made use of 9.46 percent of the total expenditure for purchasing office equipment such as type writers and duplicating machines and 6.85 percent of the total expenditure for miscellaneous purposes such as postal charges, stationery, conveyance charges, refreshments etc.

It is noticed from the above analysis that the colleges having COSIP utilised greater percentage of expenditure for academic growth of students than the colleges having COHSSIP. Office equipment such as type writers and duplicating machines were procured

under the programmes. The colleges paid honoraria to teaching staff for extra work out of cosip funds which was against the policy of the University Grants Commission whereas the colleges having COHSSIP appointed tutors for extra work and paid them out of COHSSIP funds. Only a meagre amount out of COSIP funds was utilised for staff development programmes by the colleges whereas the colleges having COHSSIP did not utilise the money for this purpose

Section Six

4.6 Trend of Students' Achievement in Science, Humanities and Social Sciences at the Undergraduate Level after the Introduction of COSIP and COHSSIP

The COSIP and COHSSIP were initiated to bring about qualitative improvement in teaching-learning and evaluation processes in Science, Humanities and Social Sciences at the undergraduate level in the colleges. The colleges organised diverse activities envisaging quality improvement in teaching-learning process as have already been discussed. It is hypothesised that the percentage of students obtaining first division and the overall examination result of the colleges would improve and the percentage of students obtaining third division would decline at the undergraduate level after the introduction of COSIP and COHSSIP.

The examination results of the final year students in Science, Humanities and Social Sciences at the undergraduate level in colleges after the introduction of COSIP and COHSSIP have been collected (shown in Appendix C). The trend of students' achievement has been studied in terms of I, II, III divisions and the overall examination results of the college at the undergraduate level by plotting graphs. Thirteen graphs pertaining to final year students' achievement in Science after the introduction of COSIP and eleven graphs pertaining to final year students' achievement in Humanities and Social Sciences after the introduction of COHSSIP are shown on the pages that follow.

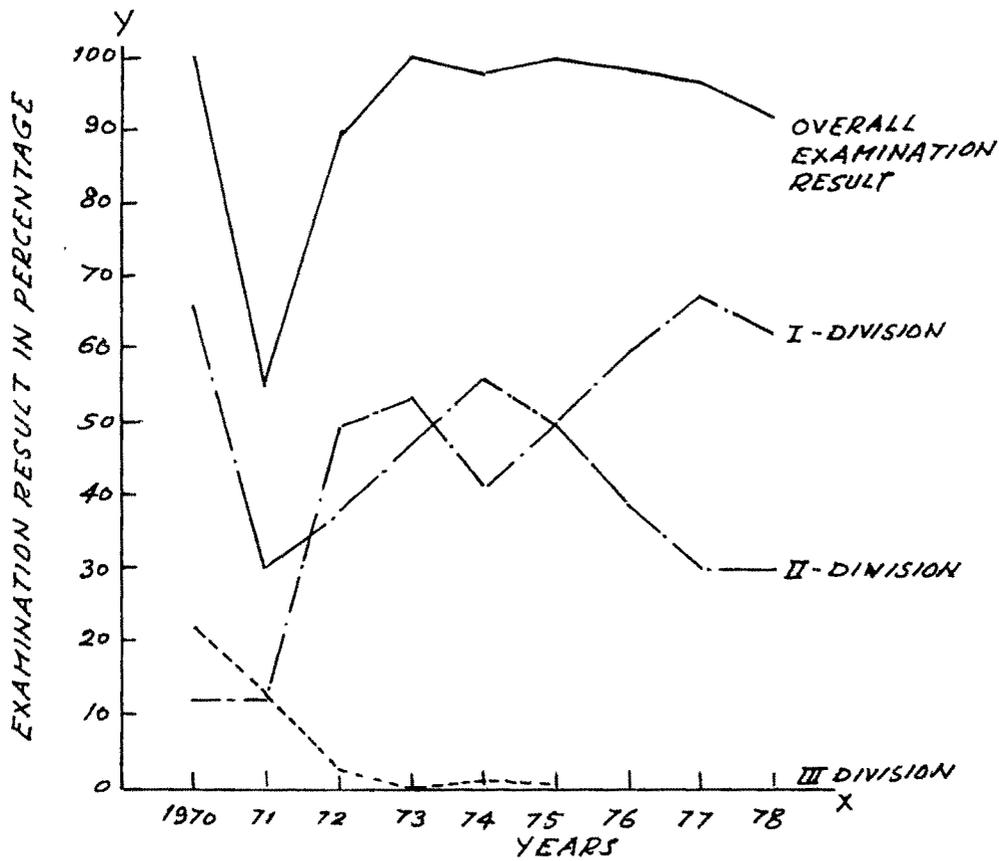


FIG. 4.6 A-1 STUDENTS' ACHIEVEMENT IN SCIENCE AFTER THE INTRODUCTION OF COSIP.

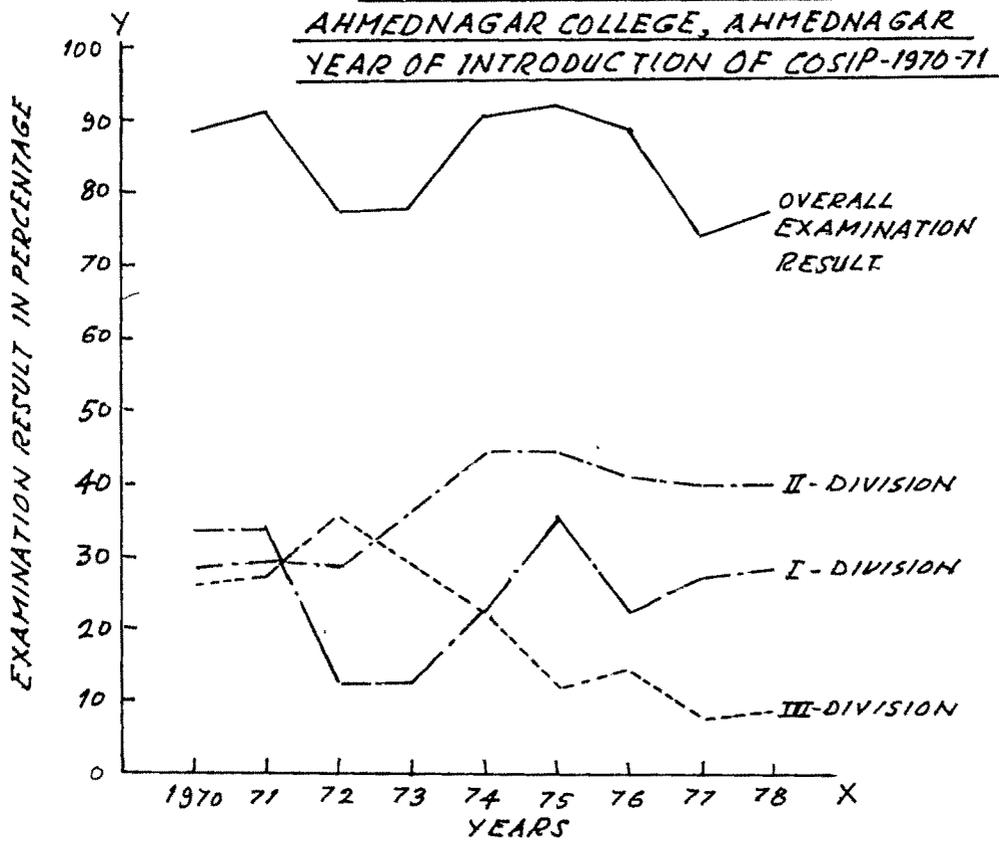


FIG. 4.6 A-2 STUDENTS' ACHIEVEMENT IN SCIENCE AFTER THE INTRODUCTION OF COSIP

D.A.V. COLLEGE, JULLUNDER, YEAR OF INTRODUCTION OF COSIP-1970-71

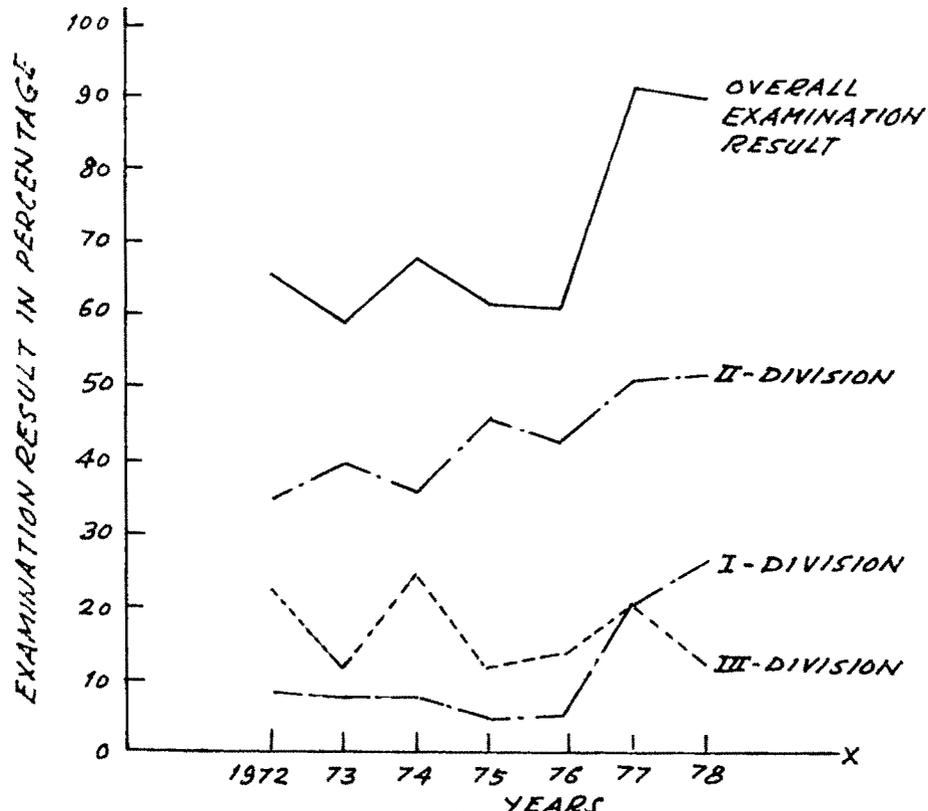


FIG. 4.6A.3 STUDENTS' ACHIEVEMENT IN SCIENCE AFTER THE INTRODUCTION OF COSIP
D.N. COLLEGE, MERRUT. YEAR OF INTRODUCTION OF COSIP-1972-73

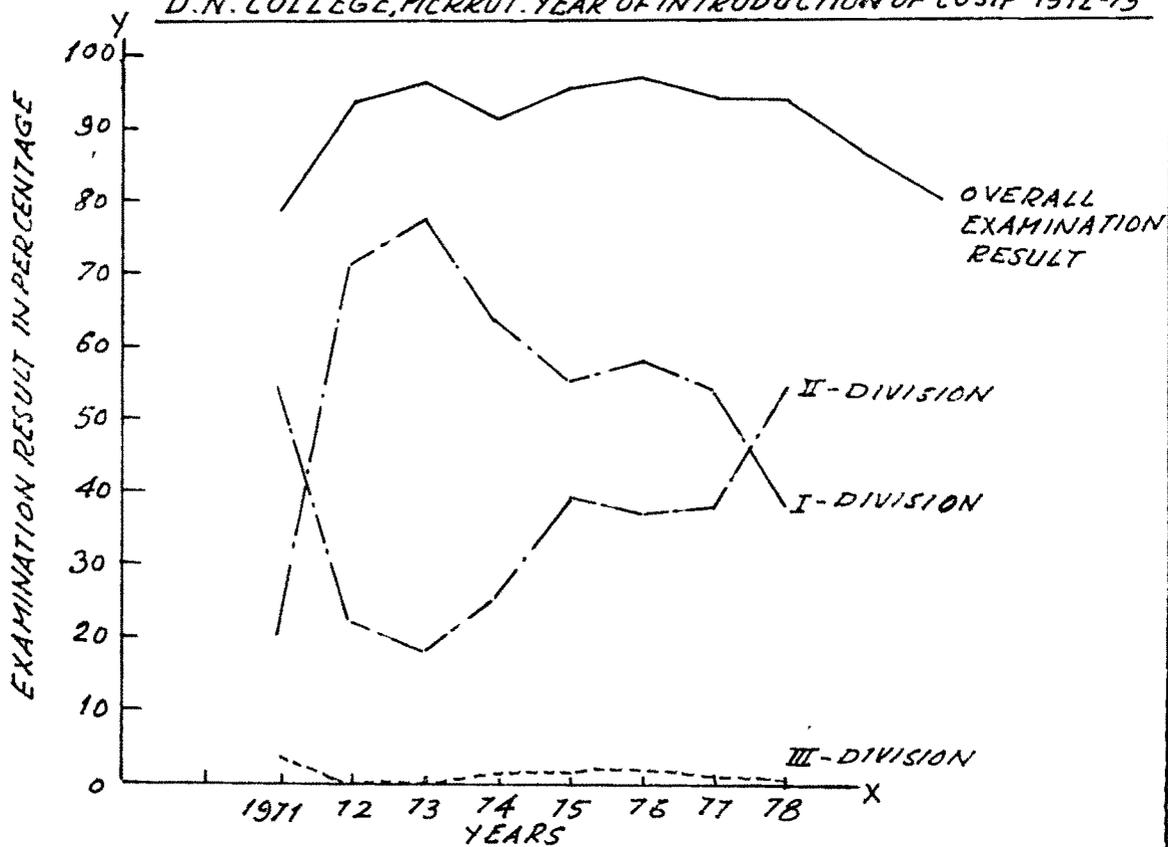


FIG. 4.6A.4 STUDENTS' ACHIEVEMENT IN SCIENCE AFTER THE INTRODUCTION OF COSIP
FERGUESON COLLEGE, POONA. YEAR OF INTRODUCTION OF COSIP-1971-72

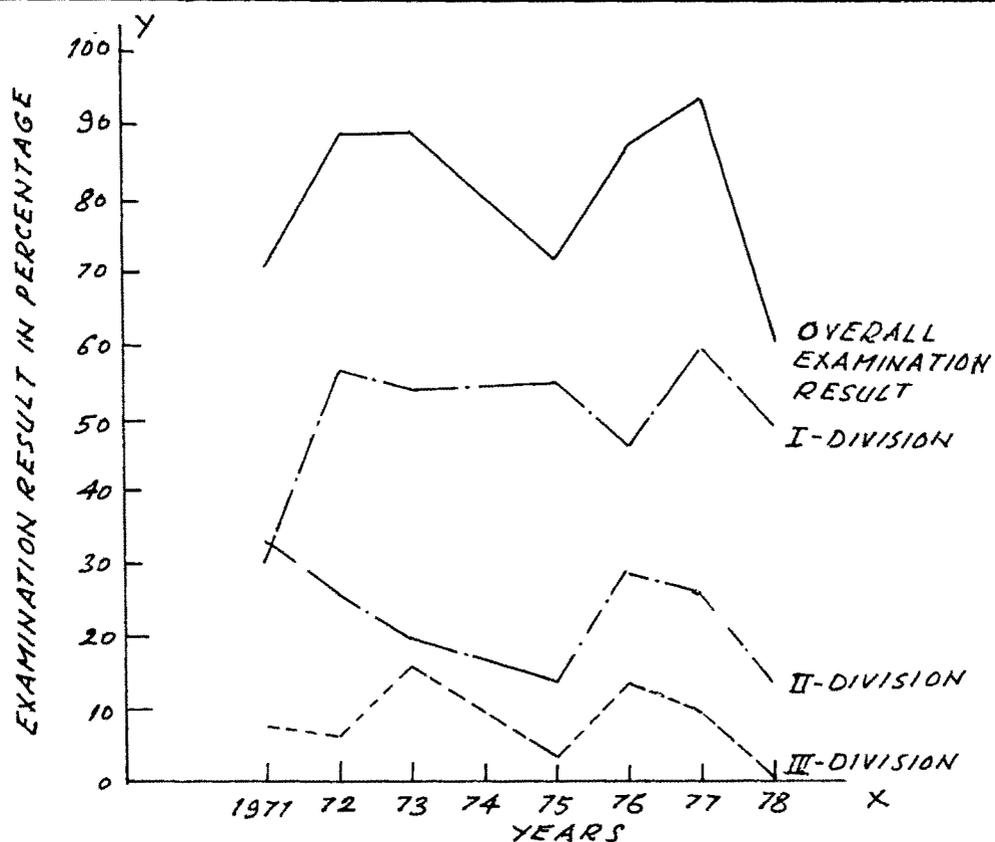


FIG. 4-6 A-5 STUDENTS' ACHIEVEMENT IN SCIENCE AFTER THE INTRODUCTION OF COSIP
LOYOLA COLLEGE, MADRAS
YEAR OF INTRODUCTION OF COSIP-1971-72

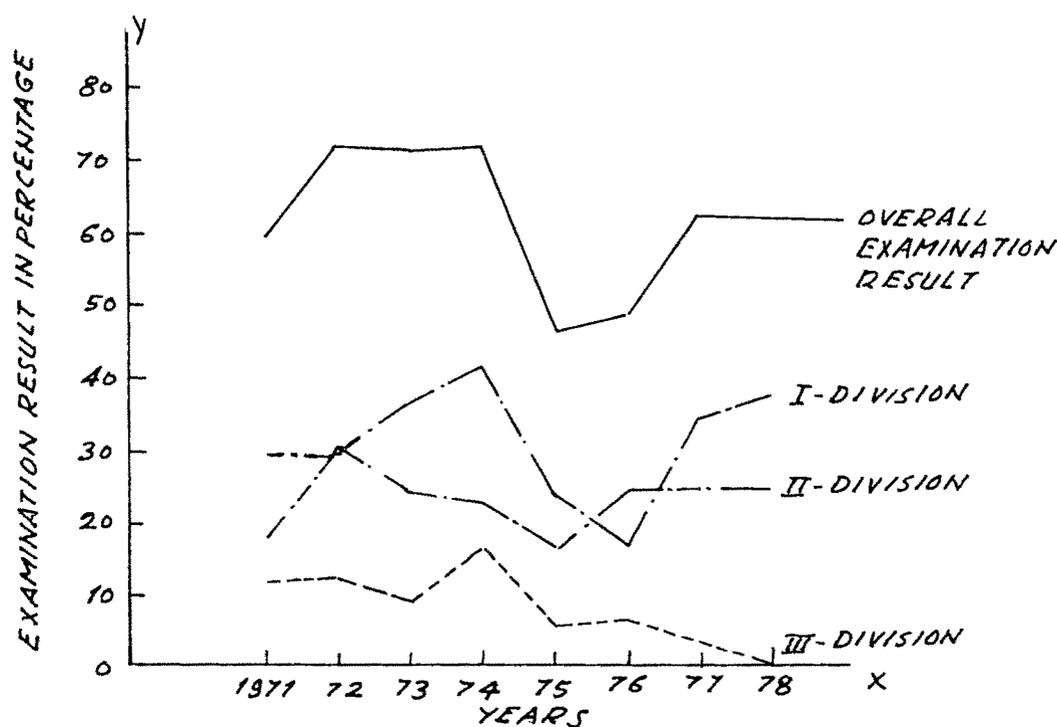


FIG. 4-6 A-6 STUDENTS' ACHIEVEMENT IN SCIENCE AFTER THE INTRODUCTION OF COSIP
MADRAS CHRISTIAN COLLEGE, TAMBARAM. YEAR OF INTRODUCTION
OF COSIP -1971-72

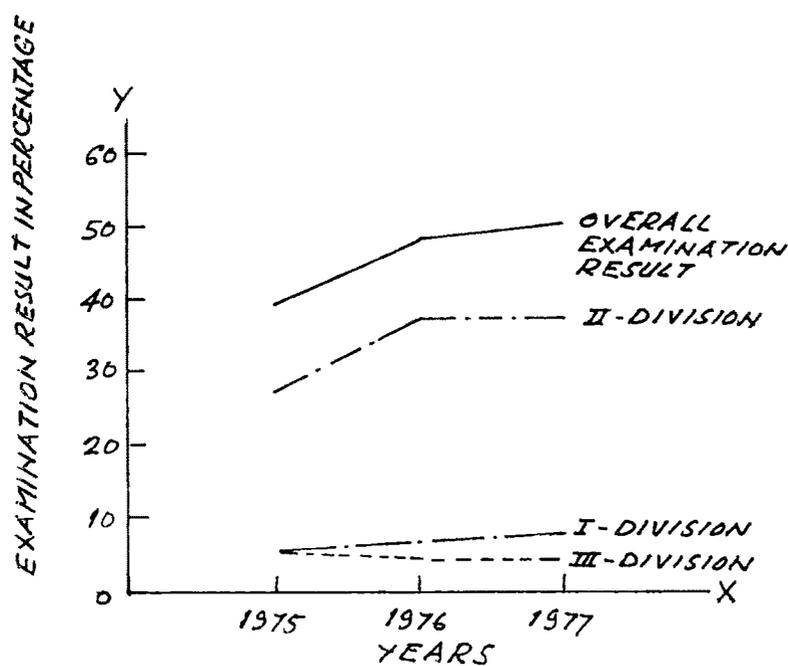


FIG. 4-6A-7 STUDENTS' ACHIEVEMENT IN SCIENCE AFTER THE INTRODUCTION OF COSIP MAHARAJ SINGH COLLEGE, SAHARANPUR YEAR OF INTRODUCTION OF COSIP-1975-76

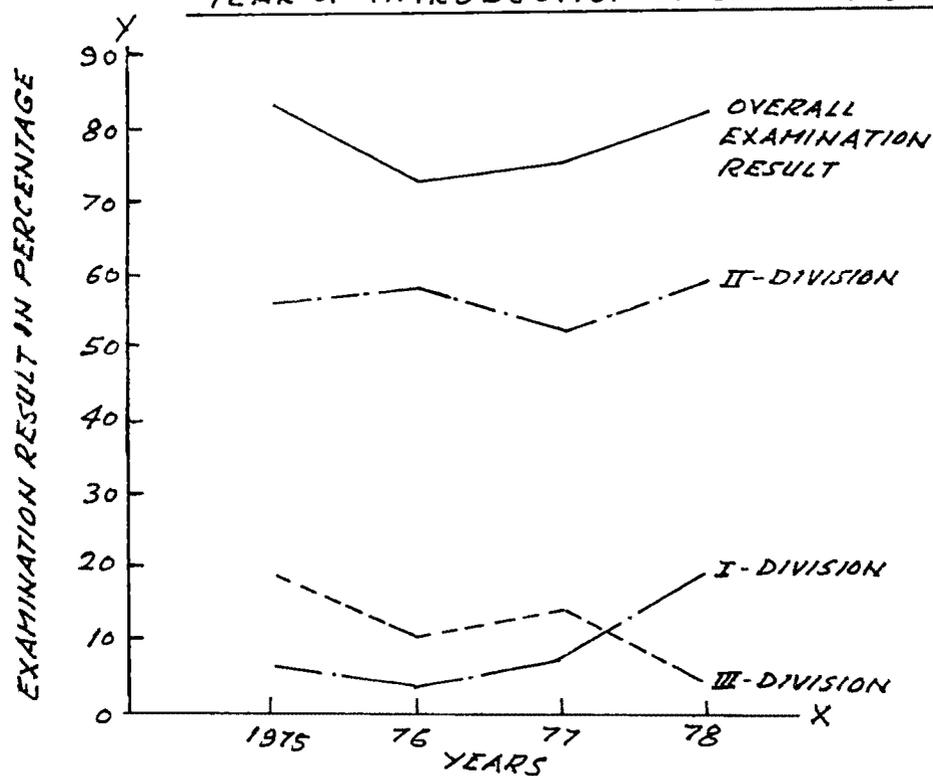


FIG. 4-6A-8 STUDENTS' ACHIEVEMENT IN SCIENCE AFTER THE INTRODUCTION OF COSIP MAHARAJA COLLEGE, JAIPUR YEAR OF INTRODUCTION OF COSIP-1975-76

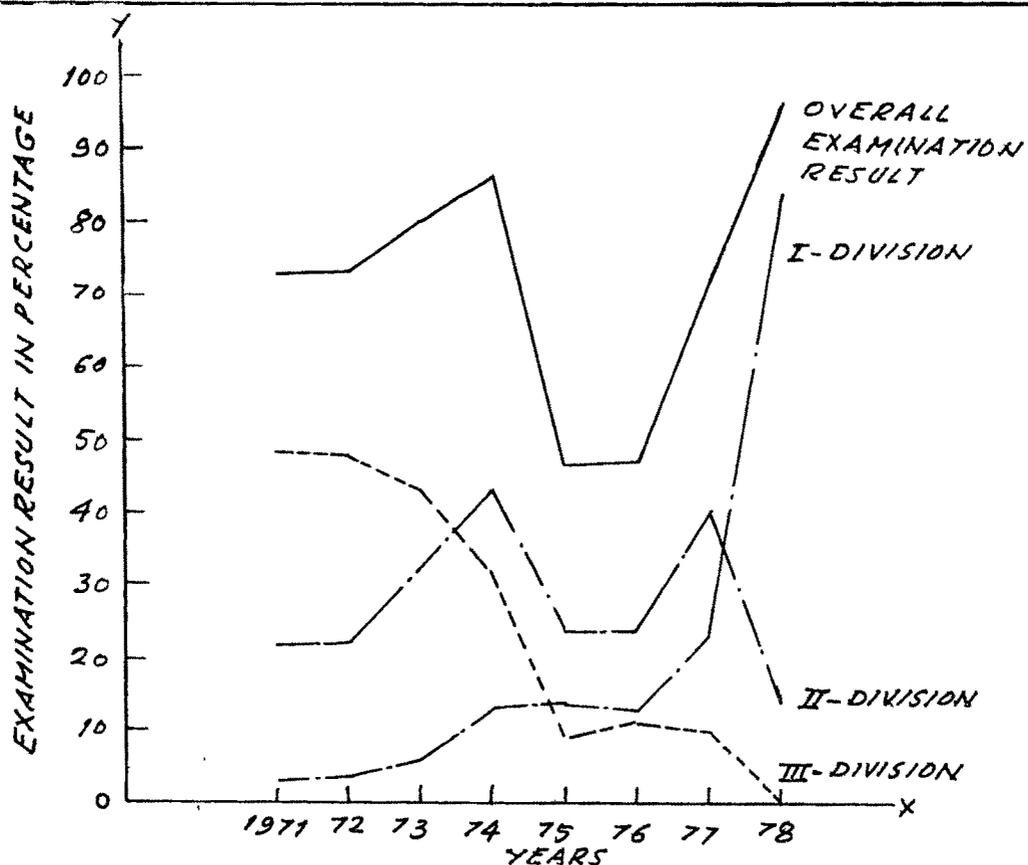


FIG. 4-6A-9 STUDENTS' ACHIEVEMENT IN SCIENCE AFTER THE INTRODUCTION OF COSIP NEW SCIENCE COLLEGE, HYDERABAD YEAR OF INTRODUCTION OF COSIP - 1971-72

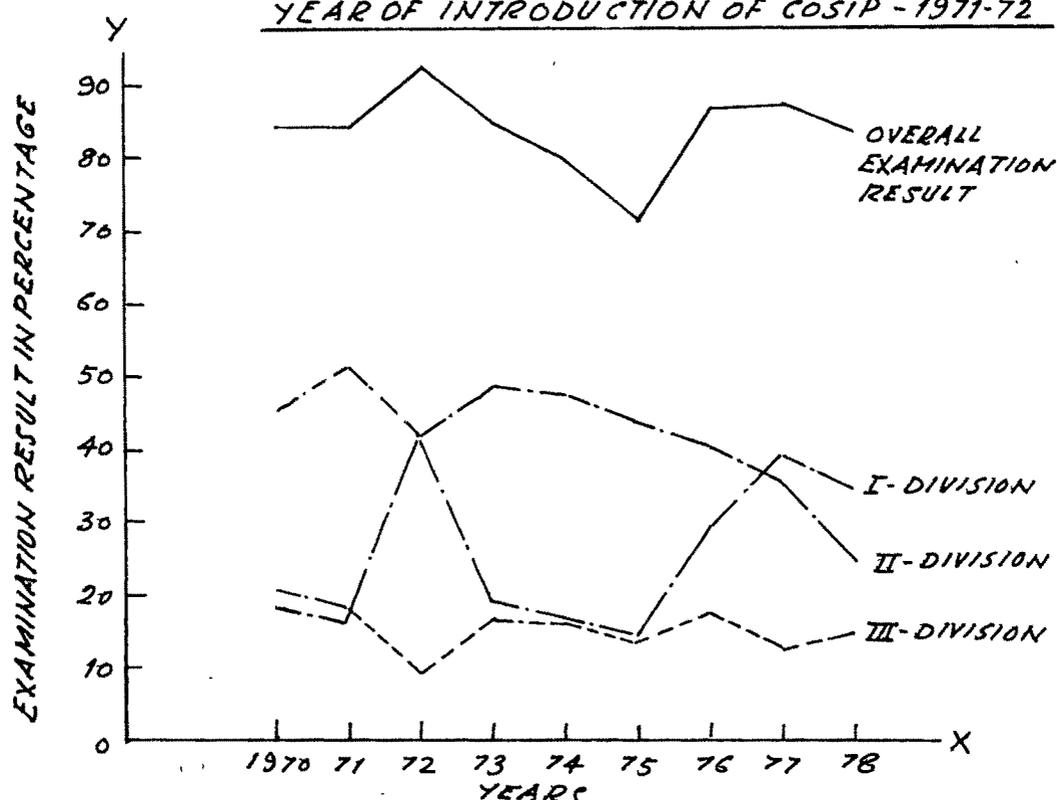


FIG. 4-6B-10 STUDENTS' ACHIEVEMENT IN SCIENCE AFTER THE INTRODUCTION OF COSIP RAMNARAIN RUIA COLLEGE, BOMBAY YEAR OF INTRODUCTION OF COSIP - 1970-71

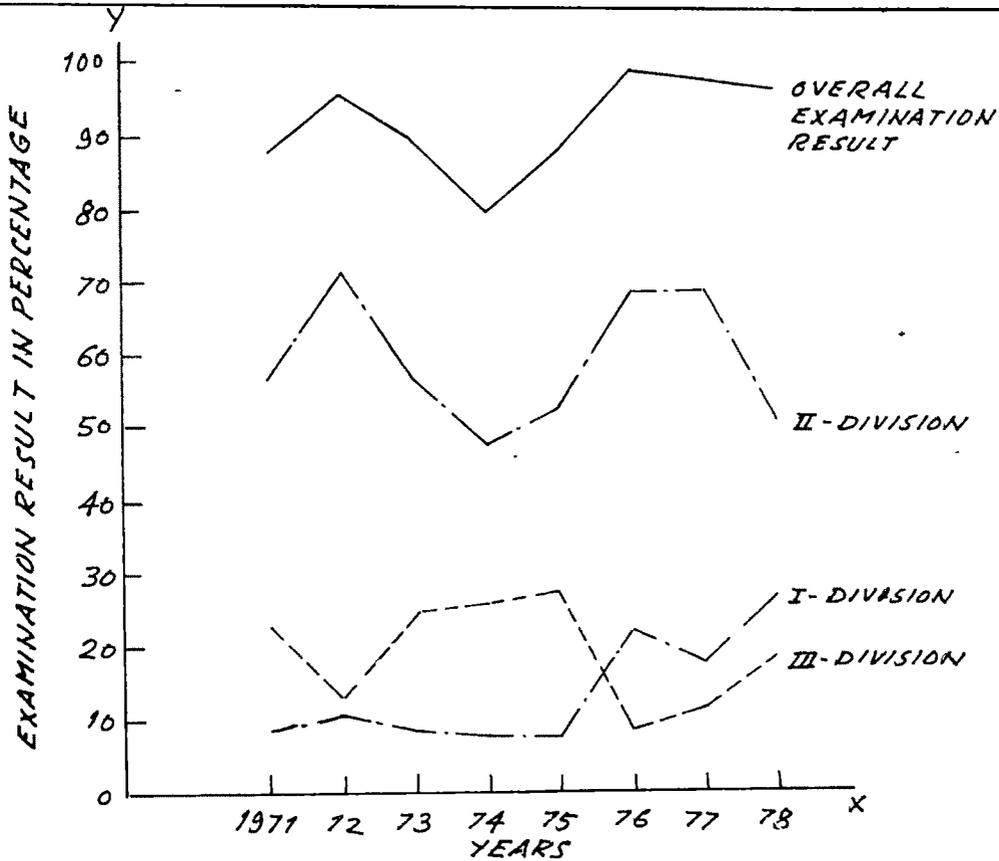


FIG. 4.6A.11 STUDENTS' ACHIEVEMENT IN SCIENCE AFTER THE INTRODUCTION OF COSIP SOPHIA COLLEGE FOR WOMEN, BOMBAY YEAR OF INTRODUCTION OF COSIP-1971-72

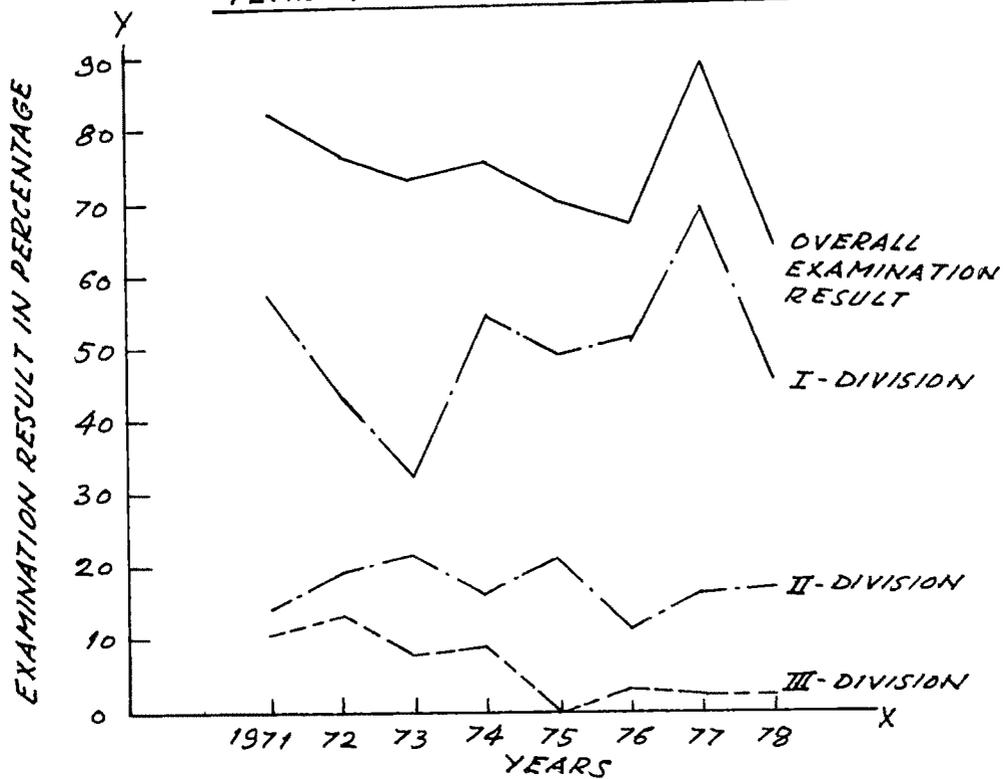


FIG. 4.6A.12 STUDENTS' ACHIEVEMENT IN SCIENCE AFTER THE INTRODUCTION OF COSIP VIVEKANANDA COLLEGE, MADRAS YEAR OF INTRODUCTION OF COSIP-1971-72

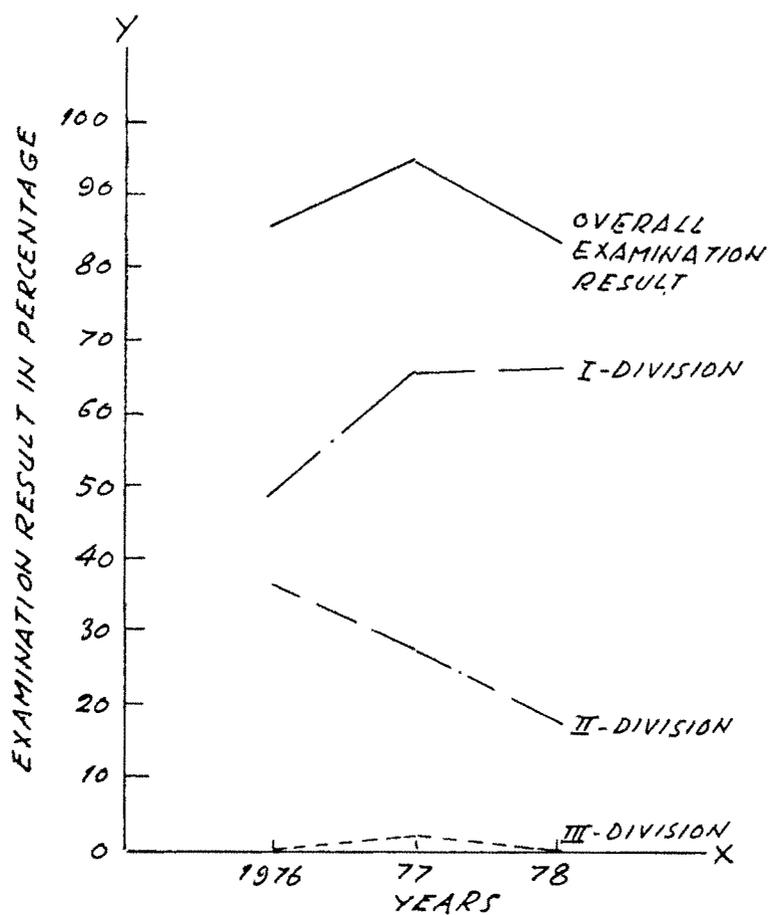


FIG 4.6A.13 STUDENTS' ACHIEVEMENT IN SCIENCE AFTER THE
INTRODUCTION OF COSIP
WOMEN CHRISTIAN COLLEGE, MADRAS.
YEAR OF INTRODUCTION OF COSIP-1976-77

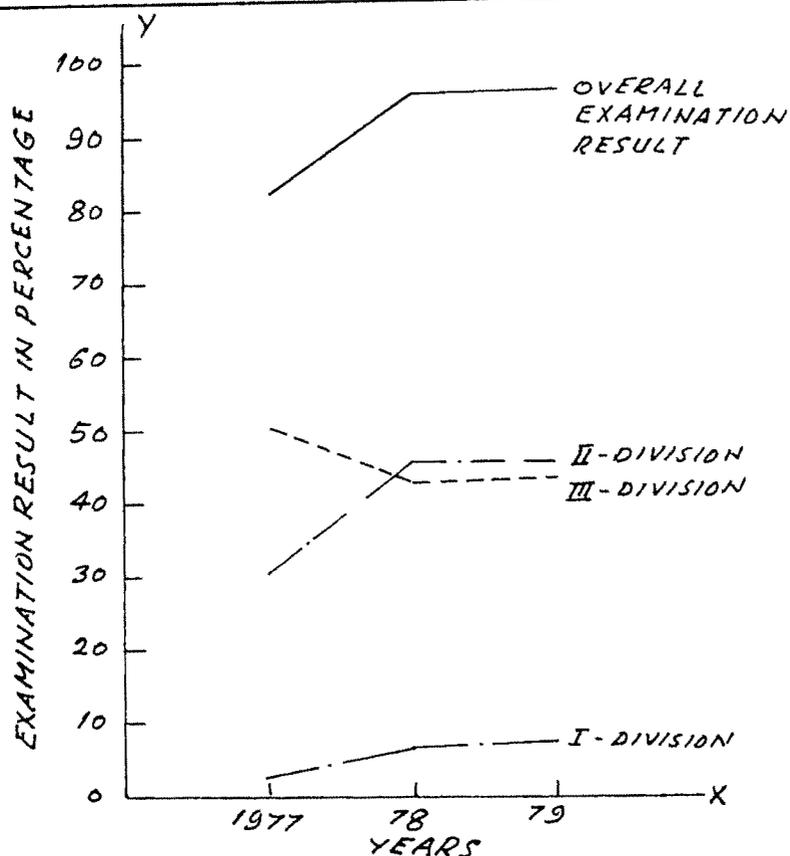


FIG. 4-6 B-1 STUDENTS' ACHIEVEMENT IN HUMANITIES AND SOCIAL SCIENCES AFTER THE INTRODUCTION OF COHSSIP
KANODIA MAHILA MAHAVIDYALAYA, JAIPUR
YEAR OF INTRODUCTION OF COHSSIP-1977-78

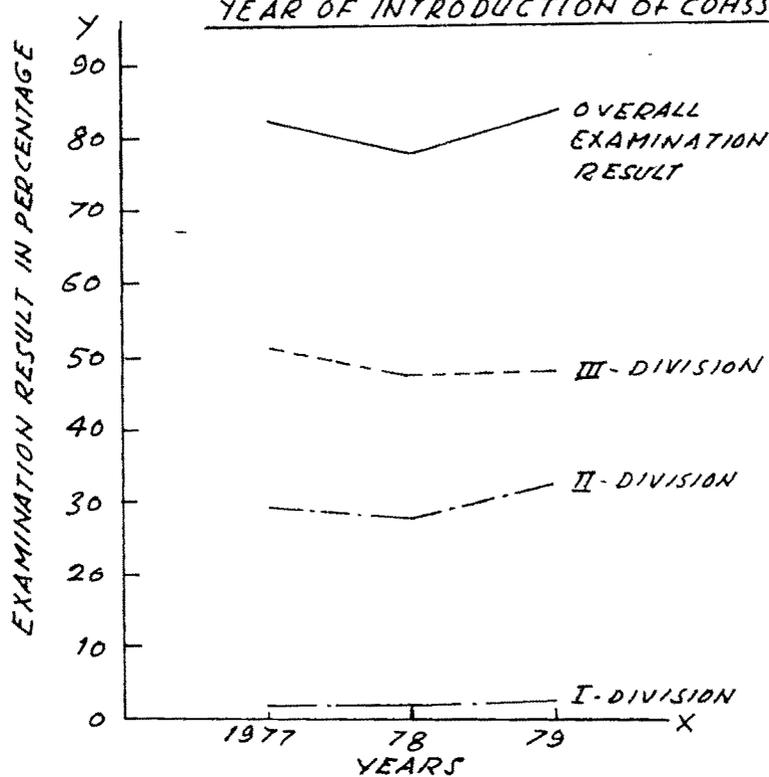


FIG. 4-6 B-2 STUDENTS' ACHIEVEMENT IN HUMANITIES AND SOCIAL SCIENCES AFTER THE INTRODUCTION OF COHSSIP
L.D. ARTS COLLEGE, AHMEDABAD, YEAR OF INTRODUCTION OF COHSSIP-1977-78

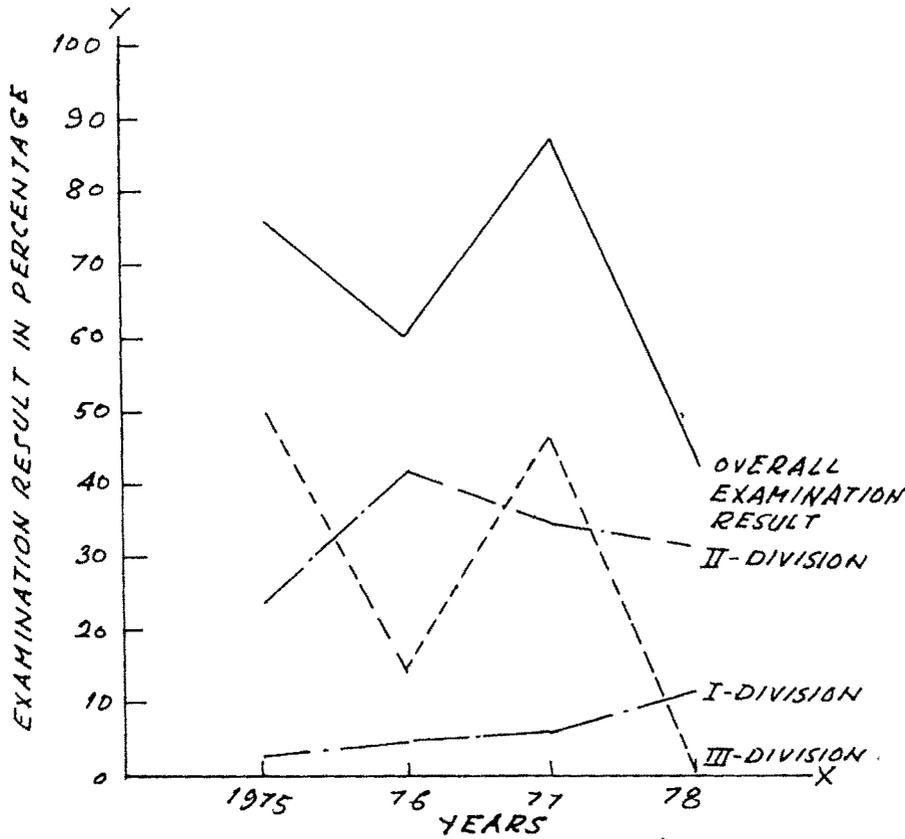


FIG. 4.6 B.3 STUDENTS' ACHIEVEMENT IN HUMANITIES AND SOCIAL SCIENCES AFTER THE INTRODUCTION OF COHSSIP

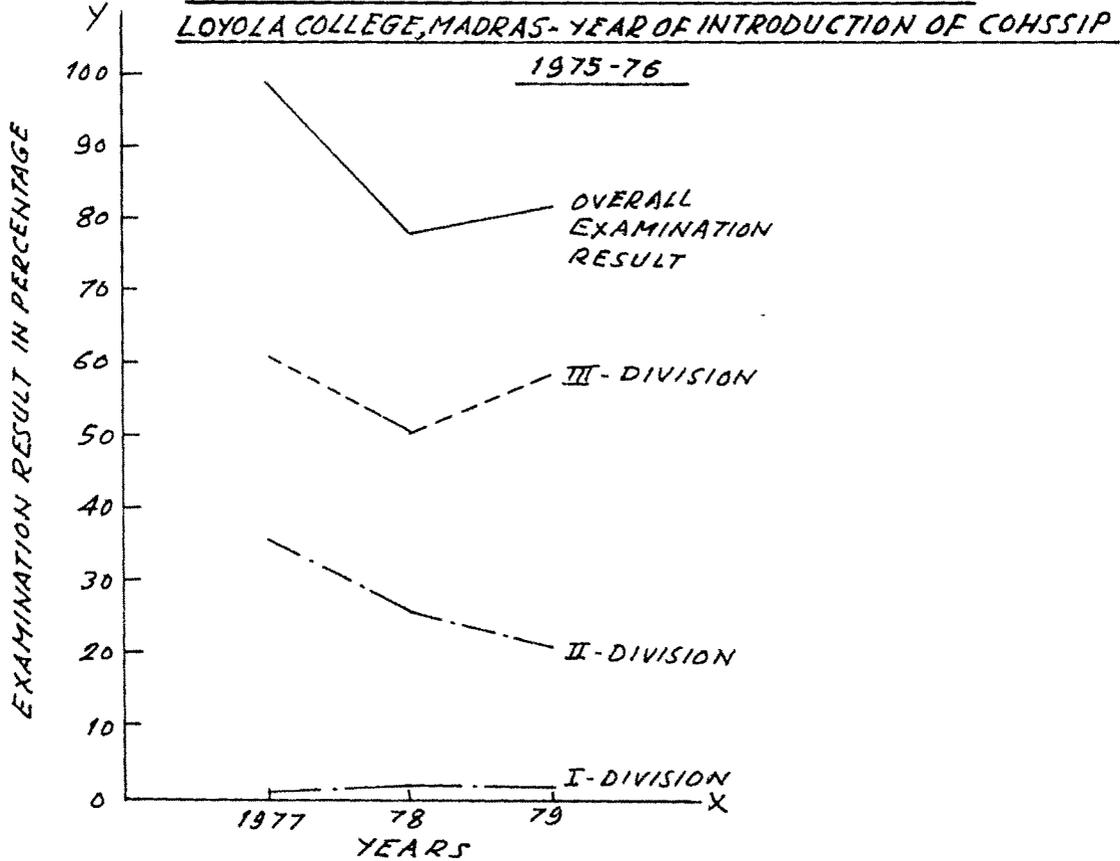


FIG. 4.6 B.4 STUDENTS' ACHIEVEMENT IN HUMANITIES AND SOCIAL SCIENCES AFTER THE INTRODUCTION OF COHSSIP

M.T.B. COLLEGE, SURAT - YEAR OF INTRODUCTION OF COHSSIP - 1977-78

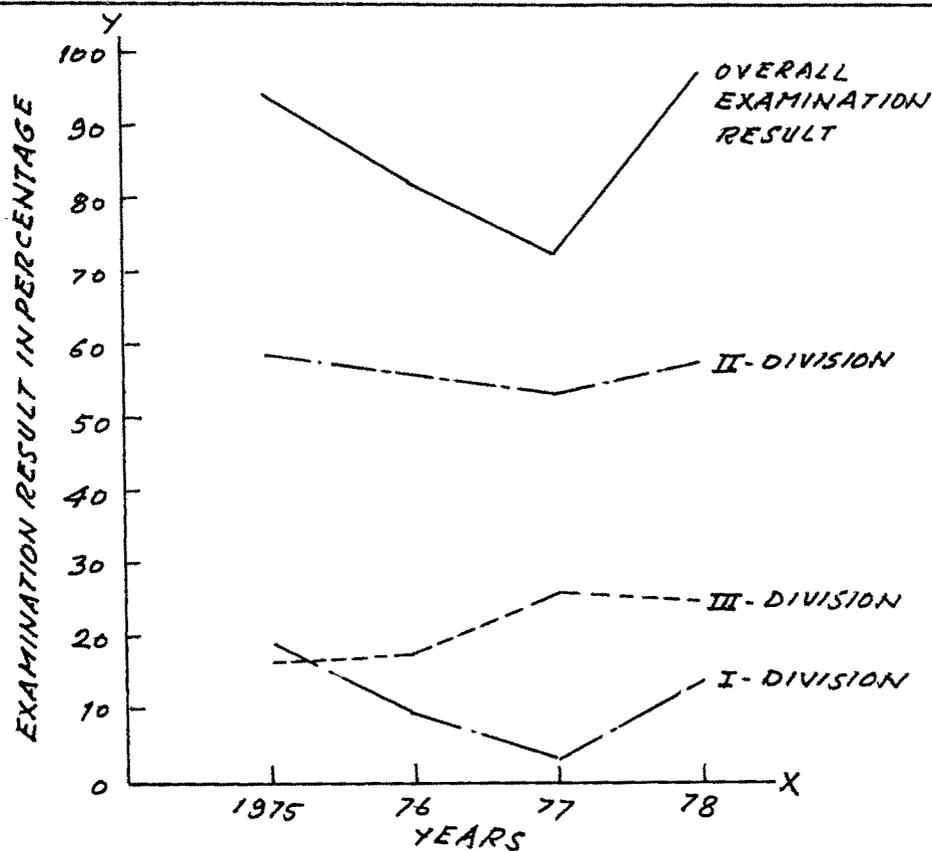


FIG. 4.6B.5 STUDENTS' ACHIEVEMENT IN HUMANITIES AND SOCIAL SCIENCES AFTER THE INTRODUCTION OF COHSSIP
N.A. AND T.V. PATEL ARTS COLLEGE, VALLABH VIDYANAGAR
YEAR OF INTRODUCTION OF COHSSIP-1975-76

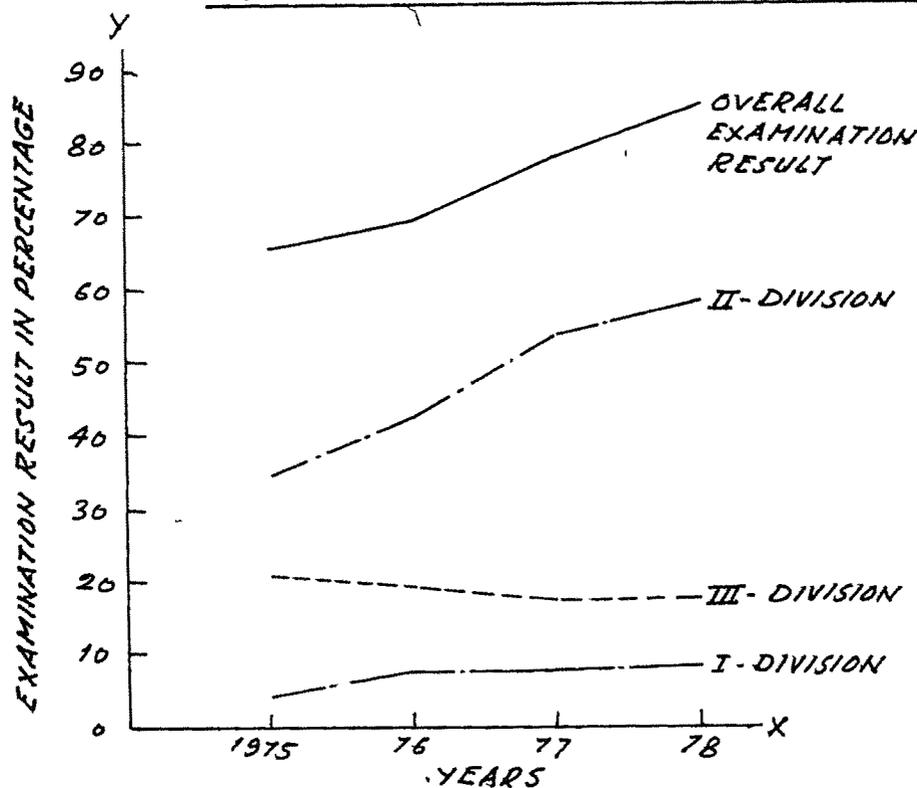


FIG. 4.6B.6 STUDENTS' ACHIEVEMENT IN HUMANITIES AND SOCIAL SCIENCES AFTER THE INTRODUCTION OF COHSSIP
R.G. COLLEGE, MEERUT
YEAR OF INTRODUCTION OF COHSSIP-1975-76

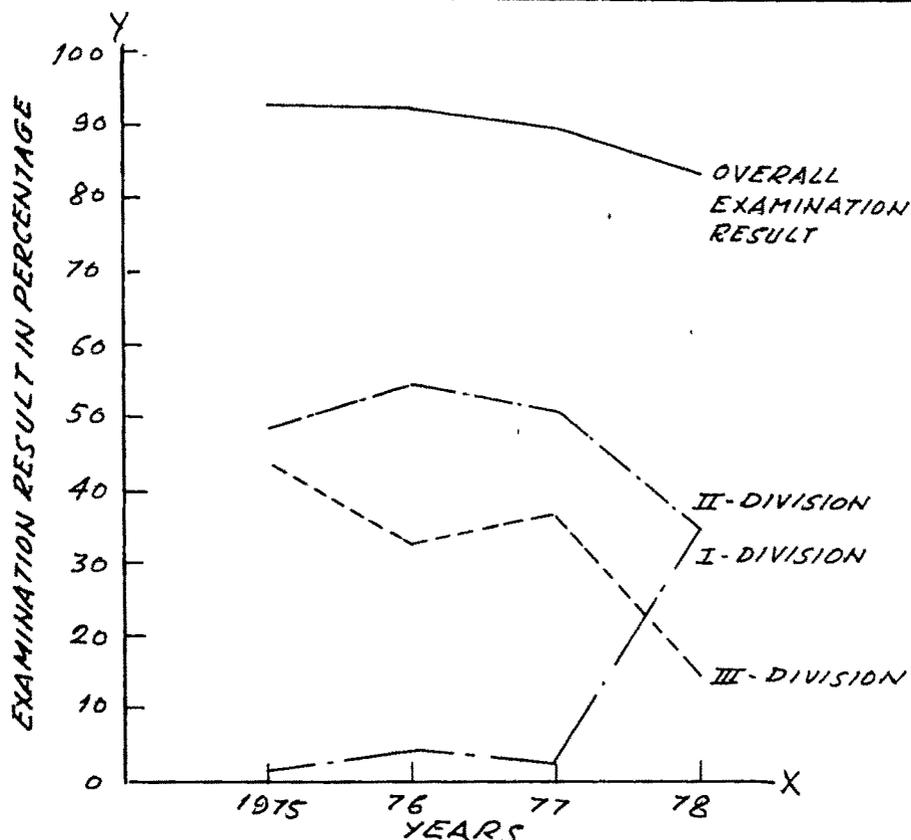


FIG. 4.6B.7 STUDENTS' ACHIEVEMENT IN HUMANITIES AND SOCIAL SCIENCES AFTER THE INTRODUCTION OF COHSSIP
RAMNARAIN RUIA COLLEGE, BOMBAY
YEAR OF INTRODUCTION OF COHSSIP-1975-76

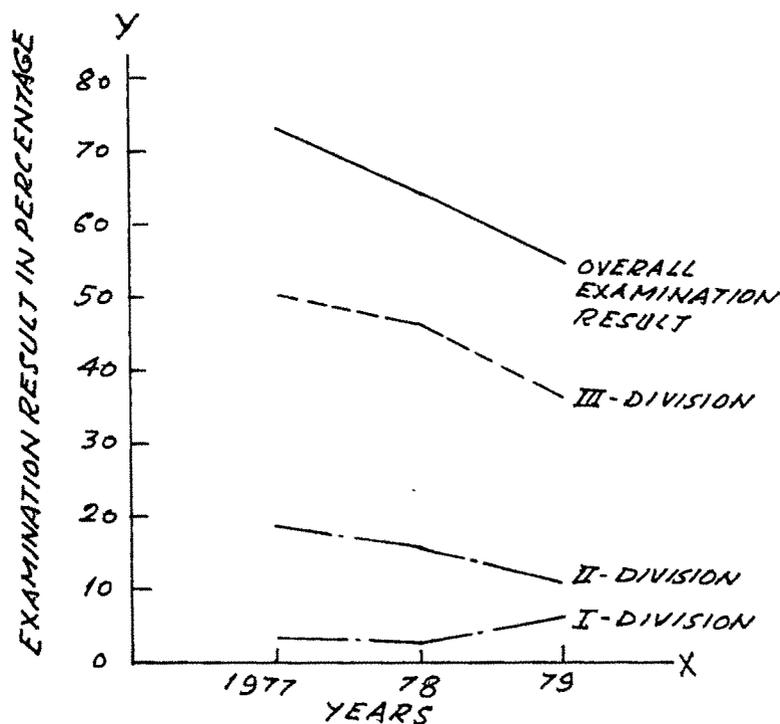


FIG. 4.6B.8 STUDENTS' ACHIEVEMENT IN HUMANITIES AND SOCIAL SCIENCES AFTER THE INTRODUCTION OF COHSSIP
S.D. COLLEGE, AMBALA CANTT.
YEAR OF INTRODUCTION OF COHSSIP-1977-78

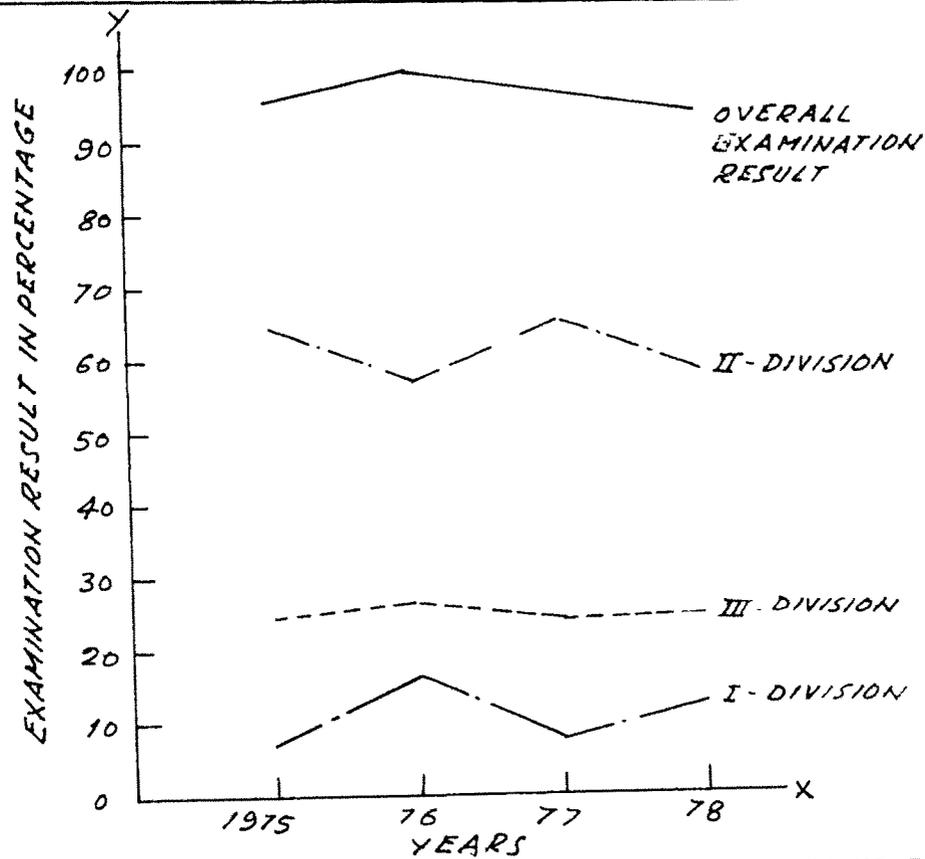


FIG. 4-6 B-9 STUDENTS' ACHIEVEMENT IN HUMANITIES AND SOCIAL SCIENCES AFTER THE INTRODUCTION OF COHSSIP SOPHIA COLLEGE FOR WOMEN, BOMBAY YEAR OF INTRODUCTION OF COHSSIP-1975-76

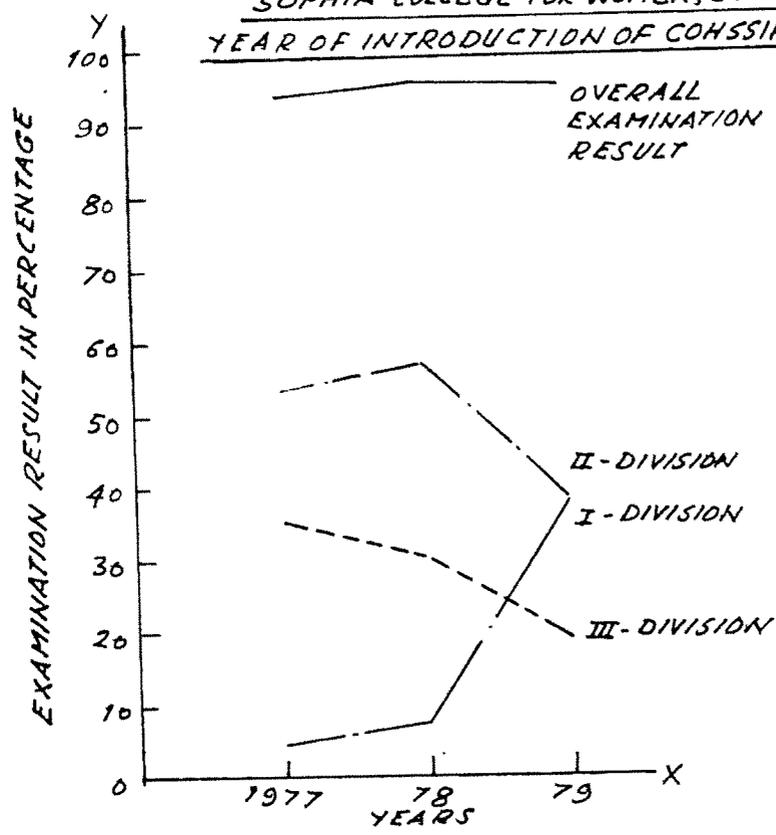


FIG. 4-6 B-10 STUDENTS' ACHIEVEMENT IN HUMANITIES AND SOCIAL SCIENCES AFTER THE INTRODUCTION OF COHSSIP STELLA MARIS COLLEGE, MADRAS, YEAR OF INTRODUCTION OF COHSSIP-1977-78

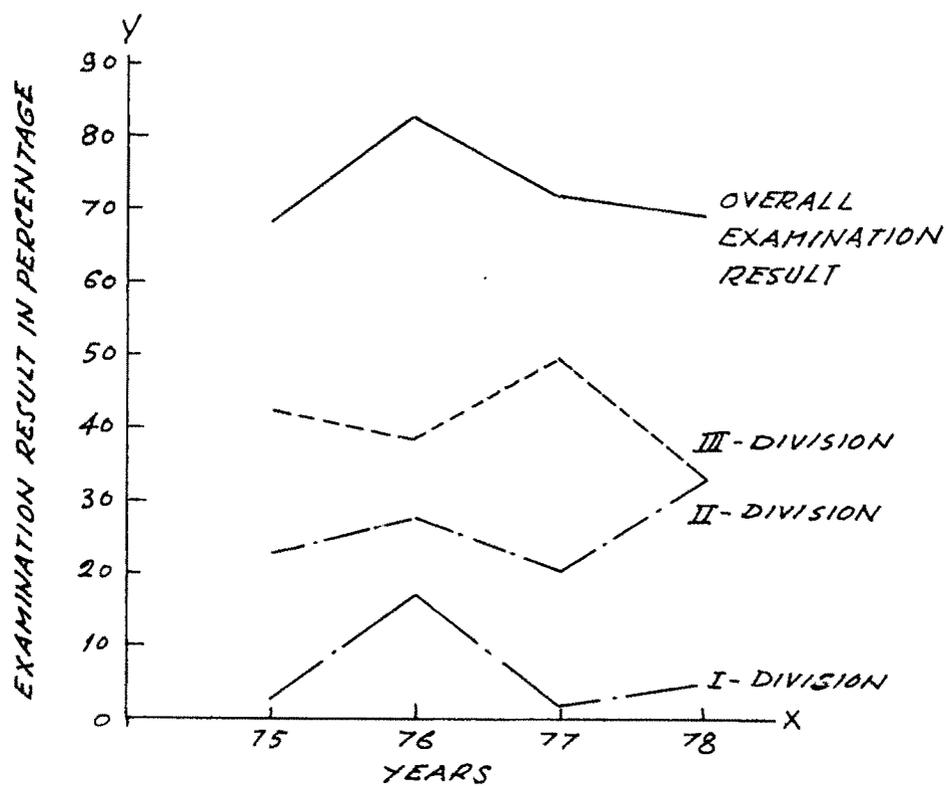


FIG. 4.6 B.11 STUDENTS' ACHIEVEMENT IN SCIENCE AFTER THE
INTRODUCTION OF COHSSIP
VIVEKANANDA COLLEGE, MADRAS
YEAR OF INTRODUCTION OF COHSSIP-1975-76

4.6A.1 Trend of Students' Achievement in Science : For the sake of simplicity, the graphic representations indicating the trends of students' achievement in Science after the introduction of COSIP are represented in the table 4.6A.1.

According to the table 4.6A.1 on the next page, the emerging trend of students' achievement in Science at the undergraduate level after the introduction of COSIP is discussed below.

(a) First Division : Ten colleges out of thirteen show a rising trend in the percentage of students getting first division. It indicates that the quality of students' achievement in terms of first division has increased after the introduction of the programme.

(b) Second Division : Five colleges show a rising trend in second division; six colleges show a declining trend ; and two colleges show a fluctuating trend. It means that in majority of colleges the percentage of students has gone down after the introduction of the programme.

(c) Third Division : Eleven colleges show a declining trend in third division and two colleges show a fluctuating trend again pointing towards decline. It means that in all the colleges the percentage of students obtaining third division has gone down after the introduction of the programme.

(d) Overall Examination Result : Six colleges show a rising trend in the overall examination; the same number of colleges show a declining trend and one college shows a fluctuating trend. It means that in majority of colleges, the programme has not had a

Table :4.6A.1: Trend of Students' Achievement in Science After the Introduction of COSIP

Name of the Colleges	Trend of Students' Achievement			
	First Division	Second Division	Third Division to Zero	Overall Examination Result
1. Ahmednagar College, Ahmednagar	Rising	Declining	Declining to Zero	Declining
2. D.A.V. College, Jullunder	Declining	Rising	Declining	Declining
3. D.N. College, Meerut	Declining	Rising	Declining	Rising
4. Fergusson College, Poona	Rising	Declining	Declining	Rising
5. Loyola College, Madras	Rising	Declining	Fluctuating	Rising
6. Madras Christian College, Tambaram	Rising	Declining	Declining	Declining
7. Maharaj Singh College, Saharanpur	Rising	Rising	Declining	Rising
8. Maharaaja College, Jaipur	Rising	Fluctuating	Declining	Declining
9. New Science College, Hyderabad	Rising	Rising	Declining	Rising
10. Ramnarian Ruia College, Bombay	Rising	Declining	Declining	Declining
11. Sophia College for Women, Bombay	Rising	Fluctuating	Declining	Rising
12. Vivekananda College, Madras	Declining	Rising	Declining	Declining
13. Women Christian College, Madras	Rising	Declining	Fluctuating	Fluctuating

positive impact on the overall examination of the colleges.

The significant impact of the programme can be seen in the increase of the number of first divisioners and the fall in the number of third divisions. However, in majority of colleges, the overall students' pass percentage has gone down.

4.6.B.1 Trend of Students' Achievement in Humanities and Social Sciences : For the sake of simplicity, the graphic representations indicating the trends of students' achievement in Humanities and Social Sciences after the introduction of COHSSIP are presented in the table 4.6.B.1 on the next page.

According to the table 4.6.B.1, the emerging trend of students achievement in Humanities and Social Sciences at the undergraduate level after the introduction of COHSSIP is discussed below :

(i) First Division : Ten colleges show a rising trend in first division and one college shows a declining trend. It means that in majority of colleges the percentage of students obtaining first division has increased after the introduction of the programme.

(ii) Second Division : Four colleges show a rising trend in second division; six colleges exhibit a declining trend and one college show a fluctuating trend. It means that in majority of colleges the percentage of students getting second division has gone down after the introduction of the programme.

(iii) Third Division : Ten colleges show a declining trend in third division and one college shows a rising trend. It indicates

Table :4.6B.1: Trend of Students' Achievement in Humanities and Social Sciences after the Introduction of COHSSIP.

Name of the Colleges	Trend of Students' Achievement				Overall Examination Result
	First Division	Second Division	Third Division		
1. Kanodia Mahila Mahavidyalaya, Jaipur	Rising	Rising	Declining	Rising	Rising
2. L.D. Arts College, Ahmedabad	Rising	Fluctuating	Declining	Declining	Fluctuating
3. Loyola College, Madras	Rising	Rising	Declining	Declining	Declining
4. M.T.B. College, Surat	Rising	Declining	Declining	Declining	Declining
5. N.A. and T.V. Patel Arts College, Vallabh Vidyanagar	Declining	Declining	Rising	Declining	Declining
6. R.G. College, Meerut	Rising	Rising	Declining	Rising	Rising
7. Ramnarayan Ruia College, Bombay	Rising	Declining	Declining	Declining	Declining
8. S.D. College, Ambala Cantt.	Rising	Declining	Declining	Declining	Declining
9. Sophia College for Women, Bombay	Rising	Declining	Declining	Declining	Declining
10. Stella Maris College, Madras	Rising	Declining	Declining	Declining	Rising
11. Vivekananda College, Madras	Rising	Rising	Declining	Declining	Rising

The examination result of Khalsa College, Amritsar was not available

that in majority of colleges the percentage of students obtaining third division has gone down after the introduction of the programme.

(iv) Overall Examination Results : Four colleges show a rising trend in the overall examination result ; Six colleges show a declining trend ; and one college exhibits a fluctuating trend. It means that in majority of colleges the programme has not had positive impact on the overall students' pass percentage of the colleges.

The appreciable impact of the programme can be seen in the increase of percentage of first divisioners and fall in the percentage of third divisioners. However, in majority of colleges the overall students' pass percentage has gone down.
