

CHAPTER - III

PLAN AND PROCEDURE OF THE STUDY

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CHAPTER-IIIPLAN AND PROCEDURE OF THE STUDY

The present study intends to answer some questions which were raised and put in the form of objectives of the study in the first chapter. In the present chapter the details of plan and procedure that were followed in the study are explained.

3.1 Selection of MSU for the Study

The factors that were to be considered in selecting university for the study are discussed in Chapter-I. It is clear from the discussion that only one university should be selected for the study. The factors which were considered in selecting that university are:

- (i) Uniformity in the process of education that can be found only in a unitary university rather than in an affiliatory university where all the affiliated institutions may have dissimilar academic activities.
- (ii) Large number of students enrolment and
- (iii) Availability of large number of courses in the university.

To examine the characteristics of such a university is not only interesting but also essential to know whether the concept of university is justified. If we consider the above points it can be noted that MSU, a unitary university has twelve faculties where the students of a particular course study in the same classroom, with the same teacher and in the same environment. So the process of instruction

is same for all the students of a course. But in an affiliatory university the students of a course study in different affiliated institutions of the university i.e., in different classrooms, different teachers and in different academic environment. So the process of instruction varies from institution to institution in the same university. But the intricacy of the problems specifically about the academic performance of students and cosmopolitan character of the university are such that it is difficult to comprehend the problems in the perspective of more than one university. It is because all the universities possess unique academic environment and cosmopolitan character and also the employers prefer the products of certain universities taking into consideration the standard of that university. Besides these, the academic performance of students cannot be pooled together to arrive at valid answers with regard to the questions raised in the first chapter. So taking into consideration the above mentioned points, MSU has been selected for the present study.

3.2 Data Required for the Study

To achieve the formulated objectives of the study the following data about the students and the university were required. The data required from the students were about their nationality, domicile characteristics, socio-economic background, past academic performance, academic life, academic performance at the final year M.A., M.Sc., M.Com., M.Ed., M.B.B.S., B.E., L.L.B., M.Sc. (Home), M.Sw., M.Sc. (Applied) and M.A. (Fine) examinations, future plans and their job placement. The data required about the university were pertaining to the academic activities i.e., research work carried out by the university, availability of library facilities and its use, academic awards won by its teachers and students and extramural lectures organised by the university.

3.3 Sources of Data

The data required for the present study are mentioned in the preceding section and these required data available in various sources are identified here in this section.

Data regarding nationality, domicile characteristics, socio-economic background and past academic performance were available in the application forms of students for their admission to the courses. The application forms were preserved by all the Faculty Offices of MSU.

Some of the data regarding socio-economic background viz., education and occupation of parents, income of the family and family size (which were not available in the application forms) and data pertaining to academic life, future plans, and job-placement of the students, the students themselves were the sources of these data.

The data regarding students' academic performance in their respective final examinations of M.A., M.Sc., M.Com., M.Ed., L.L.B., M.A. (Fine), B.E., M.B.B.S., M.Sc. (Applied), M.Sw., and M.Sc.(Home) were available in the office of the Registrar, MSU. But for some other data namely the research work done by MSU, availability of library facilities and its use by students, academic awards won by teachers and students, and number of extra mural lectures organized by MSU, the Annual Reports of MSU were the sources.

3.4 Sample for the Study

It has been discussed in the preceding section of this chapter that MSU has been selected for the study and the data required for the study were to be collected from different sources. There were ten faculties in MSU, 1984.

In total, there were 25,000 students in these faculties. So the problem to consider here is whether to take all the students for the study or only to take a sample of them? If a sample is to be taken, whether it should be from all the levels of all the classes or from one level of various classes of all the faculties? To decide upon it, all the objectives of the study had to be considered. Taking into consideration the first objective of the study which is regarding the cosmopolitan character of the university, it was assumed that students admitted in various faculties in one year would represent all other students admitted in different years, thereby whole student population of the university. It was considered so because the structure of student population of different years may not vary much. Now the next problem was to decide students from which level should be taken for the study. If we consider the second objective i.e. academic performance or the output, it is only the final year students who should be taken for the study because they were completing their courses. Then to study the job-placement also, it is only the out-going students who serve the purpose, and these students were the final year students. So the students of equal level from all the faculties i.e., the out-going students were taken for the study. These students were the final year M.A., M.Sc., M.Com., M.Ed., L.L.B., B.E., M.B.B.S., M.Sw., M.Sc. (Home), M.Sc. (Applied) and M.A. (Fine) of 1983-84 session at MSU. Here it has to be noted that B.E. and M.Sc. (Applied) students were from one faculty i.e., Engineering but they were treated as different because they belong to different levels. Bachelor degree students from the faculties of Engineering, Medicine and Law, and Master degree students from all other faculties were taken because the Master degree students were admitted after three years in their graduate course but the B.E. and M.B.B.S. students although

were admitted after XII Std., these courses were of 4 to 5 years duration. The L.L.B. students were also admitted only after their graduation. So students reach these classes only after 4 to 5 years of formal higher education. Secondly, these courses are considered at par with one another by our society. Thirdly, these professional courses qualify, the students to enter into the respective professions. Fourthly, age-wise also students do not vary much.

Out of the total students of MSU, the students who were in final year M.A., M.Sc., M.Com., M.Ed., L.L.B., M.A.(Fine), B.E., M.B.B.S., M.Sc. (Applied), M.Sw., and M.Sc. (Home) were 2021 in total. This sample is of purposive type. The information about few variables viz., age, sex, caste, religion, rural-urban, domicility, nationality and previous academic record of students were available in the application forms for admission to the faculty. So all the application forms were taken.

Data regarding education and occupation of parents, annual income of the family, family size, stay at home or hostel during study, academic life, and future plans were not available in the application forms. For that an accidental sample of 837 students from different faculties were taken. So the sample was reduced to 837 from 2021 students. Then to study the job-placement, only the 837 students were followed-up because the other details of required data about them were collected earlier. The students taken for different objectives of the study from different faculties are shown in Table-2.

In addition to the above samples of students, the Annual Reports of MSU 1982-83, 1983-84 and 1984-85 were taken for the study. Reports of these academic sessions were taken because of their recency and the assumption that the academic activities of the university may not differ much from recent past.

Table-2

Facultywise Number of Students Taken for Different Objectives of the Study

Faculty	Objective 1.a and part of 1.b.	Objective 1.b partly and 2.a & b.	Objective 3
1. Arts	164	74	37
2. Science	254	121	64
3. Commerce	595	114	52
4. Education & Psychology	39	21	12
5. Law	104	27	9
6. Fine Arts	46	11	7
7. Engineering	558	332	166
8. Medicine	120	65	24
9. Applied Science	55	36	19
10. Social Work	30	13	8
11. Home Science	56	23	15
Total	2021	837	413

3.5 Construction of Tools

The tools which were prepared for carrying out the present study are (i) Information Schedule, (ii) Questionnaire on Academic Life and Future Plan, and (iii) Questionnaire to Follow-up university students. The details procedure of their preparation are given below.

(i) Information Schedule

The socio-economic background data which were not available in the application forms were about the education and occupation of parents, annual income of the family, and their residence. Of course some of the data which were

available in the application forms were also included in the Information Schedule for their recency and for the purpose of cross checking with application forms.

Keeping in view the data to be collected through the Information Schedule, items on socio-economic background were prepared by the investigator. To arrange the items in logical sequence, examine the coverage of items with respect to the required data and to avoid ambiguity in the constructed items, the prepared schedule was given to five experts (see Appendix-IV for experts' names and profession). The experts were requested to examine the items from three points of view i.e., logical sequence, coverage, and language of the items. On the basis of comments and suggestions given by the experts, the items were further improved in clarity of language, logical sequence and relevance to the content. The final draft of the schedule consists of 15 items. A copy of the finalised schedule has been given in Appendix-I.

As the Information Schedule was finalised with the help of experts' comments and observations regarding the clarity of language, the data it was to reveal, and its sequence, it can be said that the Information Schedule was valid.

(ii) Questionnaire on Academic Life and Future Plan

This questionnaire contains two parts. The Part-I is on academic life and Part-II is on future plan of university students. The construction procedure is as below.

Part-I. Academic Life

Academic Life as has been operationalized in Chapter-I, is the sum total of the mental and physical experiences of the student in various academic activities of the university and his own. Before thinking about the

construction procedure, it was necessary to identify the academic activities of the university and of the student himself, which form the student's academic life. To identify the various academic activities, the investigator had informal discussions with students and teachers of some of the departments and some experts i.e., teachers at the Centre of Advanced Study in Education, MSU. Following eleven components (these are the academic activities where the student involves himself and gather physical and mental experiences) were identified as academic life of students on the basis of discussion.

1. Activities inside the classroom
2. Assignment work
3. Participation in Seminar
4. Participation in extra-mural lecture
5. Participation in debate
6. Tackling of academic problems
7. Research work
8. Utilization of leisure
9. Relation with teachers and classmates
10. Reading of magazines and
11. Reading of newspaper

Items with regard to all the above components were constructed. Since the purpose was to see the effect of academic life on the academic performance of students, it was essential to obtain data about academic life in quantitative form. So all the responses to items on academic life had to be obtained in a scale. The scale ranges from more-academic and less-academic to non-academic with respective scale values of "2, 1 and 0" was used.

Taking into consideration all the eleven components of academic life and quantification of responses, items were constructed on each component. All the items were constructed in similar fashion i.e., a stem, followed by some probable responses below them.

After the items were drafted with the direction to respond to them, it was given to five experts (see Appendix-IV for the list of experts) at CASE for its further improvement. The experts were asked to scrutinize all the items with regard to the items' relevance to the component for which it has been prepared, language and logical sequence of the items. They were also asked to suggest if any other item they feel should be included in the questionnaire.

On the basis of comments, suggestions and observations of the experts about all the items' relevance to the components, logical sequence and language, the investigator modified some of the items and retained some other as they were. The final draft of the academic life questionnaire consists of 32 items. The serial number of items pertaining to each components of Academic Life questionnaire are given below in Table-3.

Table-3

Serial number of Items Pertaining to the Different Components of Academic Life Questionnaire

Aspects of Academic Life	Sr.No. of Items
1.Activities inside the class-room	1, 2 & 3
2.Assignment work	4 & 5
3.Participation in seminar	6,7,8,9 & 10
4.Participation in extramural lectures	11,12,13,14 & 15
5.Participation in debate	16, 17 & 18
6.Tackling academic problems	19 & 20
7.Research work	21, 22 & 23
8.Utilization of leisure	24 & 25
9.Relation with teachers and classmates	26, 27 & 28
10.Reading of magazines	29 & 30
11.Reading of news paper	31 & 32

To estimate the reliability of the academic life questionnaire it was administered to 25 students i.e., 10 students of M.Sw. and 15 students of M.A. in informal situations and after a gap of one month it was again administered to them. The correlation of both the sets of scores was calculated (the calculation of 'r' given in Appendix-IX) and the test-retest reliability of 0.87 was estimated.

About the validity of the questionnaire it was assumed that as the items were scrutinised by the five experts at CASE, MSU about the relevance of the items to the components of academic life, and language of the items, the questionnaire is supposed to yield valid data. The other approach followed to establish its validity is the criterion validity. For this purpose, the academic performance of students were taken as the criterion because it is true that students' academic life and academic performance are positively related. So, the investigator while collecting the data regarding academic life of students in the Arts faculty, collected the academic performance i.e., percentage of marks secured by 30 students in Master of Arts (M.A.) Part-I examination. The product moment 'r' was then calculated between academic life and academic performance of those students (the calculation of 'r' given in Appendix-IX). It was found that the questionnaire had high criterion validity as the calculated 'r' of 0.88 was significant at .01 level. A copy of the questionnaire has been given in Part-I of Appendix-II.

Part-II. Future Plan

Future Plan as has been taken in this study is the programme of action that will be undertaken by the students immediately after the completion of study. The various possibilities that a student may plan for are to go for job, study further, or may do some other work besides these two.

There is also a possibility that some of the students might not have planned their future. So, while constructing the questionnaire on future plan, it was essential to take into account all these possibilities. The main two possibilities are students who have planned and students who have not planned their future. Then about the students who have planned, as mentioned above have three possibilities i.e., plan for job, study, and for some other work which means other than taking up a job and study further. So it was decided to construct a questionnaire on future plan having two sections. The first section is for those who have planned their future and second section is for those who have not planned their future. The first section is having three corresponding sub-sections of plan for job, study, and some other work than job and study.

The first sub-section of the first section i.e., about the plan for job, includes items regarding the following. Firstly the specific job/s that the student has planned to go for. Secondly, whether the student has planned it by himself or with other's help. Thirdly, the educational qualification required for the planned job and the sources of information about the job. And fourthly, the reasons to go for the job/s. So, with regard to the plan for job, items were prepared by the investigator.

The second sub-section which is about the plan for study includes items on the following. (i) The specific study which the student has planned, (ii) whether he has planned it by himself or with other's help, (iii) minimum educational and other requirements for admission to the course, (iv) sources of information to know about the details of planned further study, and (v) the reasons to pursue further study. So, items regarding the plan for further study were prepared by the investigator and processed for further modification.

The third sub-section of the first section of the future plan questionnaire is about the plan of students for doing some other work than job and study. In this sub-section, items regarding the specific plan of students, the reasons to have that plan, and the sources of information about the specific plan that the students have besides job and study were prepared.

The second section is for the students who have not planned their future. It includes items regarding the following. Firstly, about the reasons of not having any plan. Secondly, whether the student has any access to guidance bureau or not? Thirdly, whether he/she looks for advertisement of jobs or not? And if he/she looks for any advertisement of job, what is the specific type of job he/she looks for? So items about these were prepared.

After the preparation of the first draft of the questionnaire including the direction to the respondents, it was given to five experts (see appendix-IV for list of experts) at CASE, MSU, for their comments, observations and suggestions about the relevance of the items to the data it has to gather, logical sequence, and language of the items. On the basis of experts comments, observations, and suggestions, the items of all the sections were modified.

About the validity of the questionnaire it can be said that as the tool was developed on the basis of experts' comments and as the items were developed sub-sectionwise and sectionwise, and relevance of items were examined with its purpose, it can be said that the questionnaire yields valid data. A copy of the questionnaire having 19 items has been given in Part-II of Appendix-II.

(iii) Questionnaire to Follow-up University Students

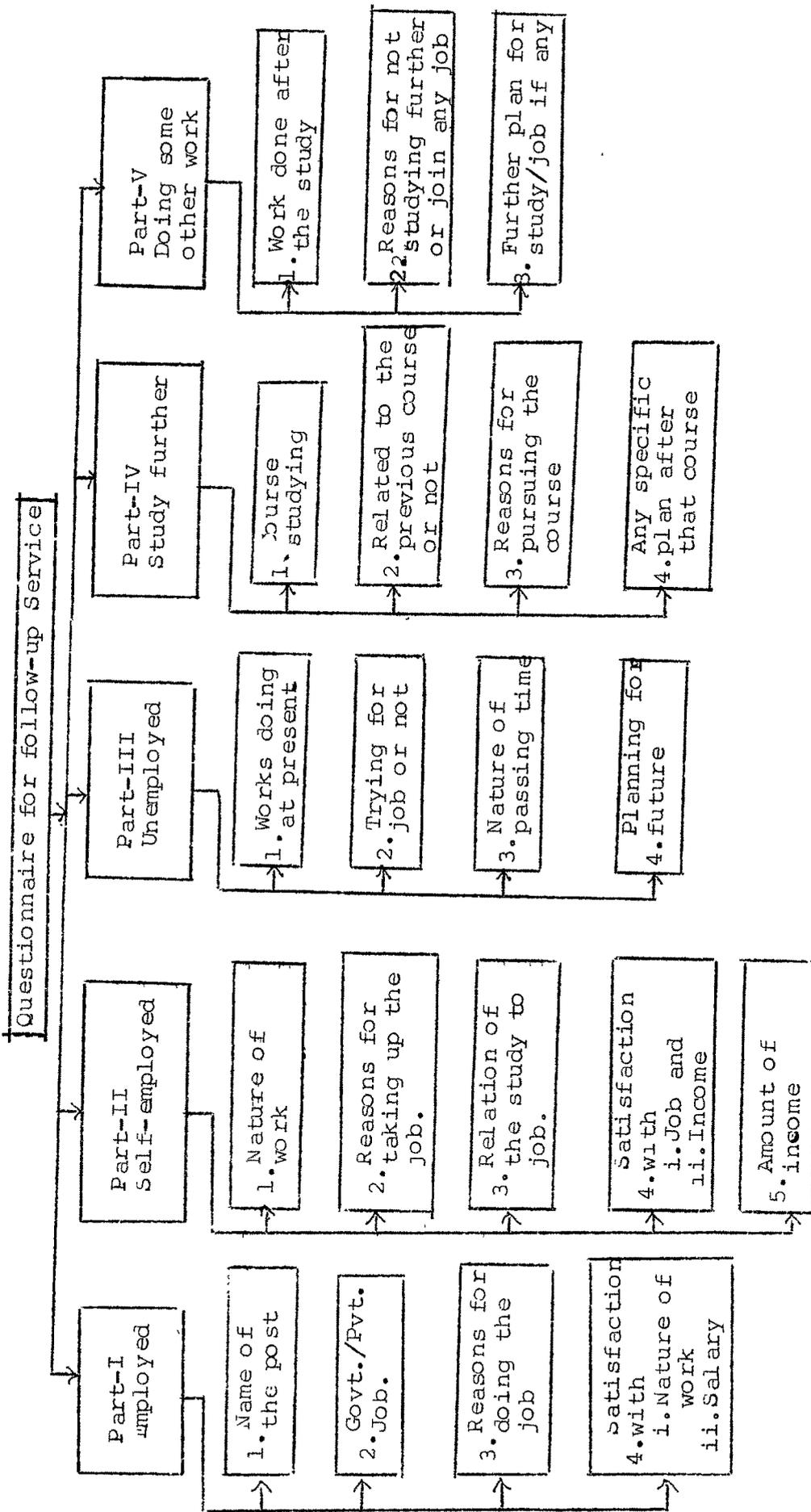
To gather data regarding the job-placement of university students a follow-up questionnaire was required. The job-placement as has been operationalized in the first chapter is the piece of work undertaken by students after the completion of their study. The various possibilities that a student might be doing after completion of study are (i) employed some where, (ii) self-employed, (iii) unemployed (iv) studying further or (v) may be engaged in some miscellaneous work than the preceding four possibilities. So there were in maximum five categories of respondents for whom questionnaire was to be prepared. There is also a possibility that a student who is employed or self-employed may be studying further or doing some other work also. A student who considers himself as unemployed, may also be studying further. So it is possible that a respondent may fall in more than one category and therefore provision was made in the questionnaire to include items about these. The required data for each category of respondents were listed down in a schematic form as shown in Figure-1, which helps to prepare the items in a logical fashion.

The questions for employed students are; the specification of their job, date of joining the job, nature of work, and whether the last educational qualification acquired was essential and related for the job or not. Whether the student looks for other job or not? and if he looks for, why so? Satisfaction with the job and properly employed or underemployed. In total eight items were prepared in this sub-section.

For the self-employed students the questionnaire seeks the information regarding the work they do, approximate earning per month, their satisfaction with the work they do, the relation of the work with their last educational degree which they obtained from MSU, reasons for doing the work, and their satisfaction with the earning. To gather these information six items were prepared.

Figure 1

Dimensions of Follow-up Questionnaire



From the unemployed students, it was necessary to know about the utilization of time by them, the jobs they were trying for, interviews attended, competitive examination they are planning to appear for and their plans to do any thing further without a job, and if any plan to continue further study. And if they have plan for further study the details about the plan. To gather these data from the unemployed students, five items were prepared.

Another category of respondents were the students who were pursuing further studies. The following data were required from them. ^{They are} the course which the students were studying, requirement of the last degree for their admission to the course, specialization and relation of the course to the last degree of the students, utility of the course which was being studied, and the jobs and competitive examinations that the students were trying for. Six items were prepared to gather these information from the students.

There was another category of students who were engaged in some miscellaneous work rather than employed, self-employed, unemployed or studying further. The data required from those students were about the specification of work he/she has been doing after the completion of study in the previous year, reasons for not pursuing any further study, and the further plan if the students had any for the future. To gather these specified information, three items were prepared.

The number of items in various parts of the follow-up questionnaire as mentioned above were prepared. To modify the questionnaire further i.e., to remove ambiguity and to prepare any new item (if necessary), it was given to five experts (see Appendix -IV for list of experts) at CASE, MSU. They were requested to examine each item with reference to

the required information from students, logical sequence of all the items and suggest if any new item they feel which should be added. So it was further developed on the basis of the experts' comments and suggestions but no new item was added.

The questionnaire can be said to be valid because it was improved and finalised with the help of experts who examined the relevance of each item with the purpose i.e., the data to be gathered with it. It was also scrutinised from language point of view and hence is free of ambiguity. Another approach to say about its validity is that the items in the questionnaire were logically sequenced and if a student has responded to an item he has to give certain other information related to that in the items followed by that item. For example, if a student has responded that he is employed, he has to specify the name of the post, date of joining, salary, qualification required for the job, and the nature of the job. So when the respondent will answer to so many items with regard to particular response in chain, it can be said that the validity is logically inbuilt. A final form of the questionnaire has been given in Appendix-III.

3.6 Collection of Data

The details of the procedure of collecting the data has been explained in this section.

The data pertaining to nationality, domicility and socio-economic background i.e., information about students' sex, age, caste, religion, rural-urban, Gujarati-non-Gujarati, foreign-Indian, were collected from the application forms of 2021 students for their admission to the courses. These forms were obtained from the faculty office of MSU.

Except the data available in the application form, some other data collected from the students were regarding the socio-economic background (which were not available in the application forms), academic life, and future plan. It was decided to contact the students generally in the classrooms to maximise the number of respondents. To administer the prepared Information Schedule, and questionnaire on Academic Life and Future Plan of the students, the investigator met the Dean of each faculty and Head of each department personally (with an introduction letter from Head, CASE, MSU given in Appendix-XI) and explained the purpose of the study. He fixed the convenient time for the administration of the tools on the students.

Before giving the questionnaire to the students, the investigator introduced himself to the class, explained the purpose of the study and gave the direction to the students to respond to the Information Schedule and Questionnaires. Though there was no time limit for responding to the Information Schedule or to the Questionnaire on Academic Life and Future Plan, generally the students took 45 minutes to complete them. The investigator visited all the classes i.e., final year M.A., M.Sc., M.Com., M.Ed., L.L.B., M.A. (Fine), B.E., M.B.B.S., M.Sc. (Applied), M.Sw., and M.Sc. (Home) of MSU in similar fashion and contacted 837 students, the detail of which can be seen from Table-2.

At the end of the session of 1983-84, the details of examination result of the 837 students of all the faculties were collected from the Office of the Registrar, M.S. University of Baroda.

After six months of the examination of final year M.A., M.Sc., M.Com., M.Ed., L.L.B., M.A. (Fine) B.E., M.B.B.S. (Internship), M.Sc. (Applied), M.Sw., and M.Sc. (Home), the prepared questionnaire for follow-up study

i.e., to study the job-placement of students were mailed to the 837 students about whom all other details required information for objectives 1 & 2 of the study were obtained. Only a total of 315 students of various faculties returned the questionnaire. Then after a reminder letter (given in Appendix-XII) another 98 students responded. So, totally 413 questionnaires were collected. The facultywise number of students responded to the questionnaire has been given in Table-2.

3.7 Scoring and Recording of the Data

In this section an attempt has been made to explain the scoring and recording procedures of the data collected through different tools, and from various sources. For the sake of convenience analysis, numerical values were given to some of the data. But some of the data were recorded as they were in raw form and analysed qualitatively. The detailed procedure of scoring and recording has been given below.

The socio-economic background data which were collected from the application forms and with the help of information Schedule were scored and recorded in the following ways. Most of the socio-economic background data were on nominal scale. Such data were regarding sex, caste, religion, residence (hostel or outside), rural-urban, domicility and nationality. The other data regarding family size, expenditure of the student per month and annual income of the family were on ratio scale. To ease the task of data analysis i.e., counting frequency and computing the percentages of male and female, high caste and low caste, Hindu, Muslim, Christian, Sikh and other religion, stay at hostel and outside, rural and urban, Gujarati and non-Gujarati, and Indian and foreign students all the nominal data were coded as 1, 2 and 3 etc. The

code or symbol given to these data are presented in Appendix-X. The data which were in ratio scale viz., family size, and annual income of the family were recorded as they were. To see the difference in the academic performance of students with different educational and occupational level of parents in a particular faculty, it was essential to grade the independent variables. Hence the quantification of these data were required. The order of parents' education i.e., illiterate to highest level of education and parental occupations i.e., unskilled occupations to high professional were divided into 8 and 9 points scales respectively. The details of this can be seen from Appendix-VI.

One of the objectives of the study was to study the effect of socio-economic background and academic life on the academic performance of students. So it was necessary to evolve an index of socio-economic background which is one of the independent variables. The various components viz., per capita income of the family, and education and occupation of parents were taken to evolve the index. All these components as explained and operationalized in Chapter-I are additive in nature. It is also expected that the educational level and occupational level are positively related. It is because if the parents are highly educated, they might also be in high level of occupations. If they are in high level of occupations, their income level may also be high. So all these components were taken together to arrive at an index of socio-economic background. To arrive at a meaningful index, the per capita annual income of the family was also put into an order of 1 to 8 i.e., ranging from Rs.0/- to 1,000/- as 1, to Rs.7,000 and above as 8 with Rs.1000/- interval each. The details can be seen from Appendix-VI. The education of father,

education of mother, occupation of father and occupation of mother as they are in ordinal scale were also taken together. So the total score of a student in socio-economic background shows the relative background position in the group.

To quantify the data pertaining to academic life, the responses to items were categorised into three categories as explained earlier in this chapter where the preparation of tools have been discussed. The categories are more academic, less academic, and non-academic. To decide the scores for responses of different categories, ten judges (names and professions are given in Appendix-V) were asked to categorize the responses. The decided scores for all these responses are given in Appendix-VII. The written responses (the responses which do not conform to the answers of students) and more than one responses to items (where the response is more than one of the listed responses) were also given to the judges for their judgement. The written responses with their scores are given in Appendix-VIII. The judgement of all the judges were pooled by taking the Mean Scores for various responses. The scores on all the 32 items of academic life of students were added together because the involvement of the students in the academic activities are taken as their academic life. So the total score of the student on the academic life questionnaire is the index of academic life of a student.

The data regarding future plan were recorded qualitatively under four main headings. The various future plans were job, study, and any other besides job and study. And the other possibility was unplanned.

The data of follow-up study were also recorded in raw and qualitative form as they were for all the respondents in five main headings. The five main headings

were: (i) employed, (ii) unemployed, (iii) self-employed, (iv) studying further, and (v) engaged in some miscellaneous work than the above. Some of the respondents were also both employed/self-employed and simultaneously studying further. So, the data regarding these were recorded in the respective columns of data sheet.

3.8 Data Analysis and Interpretation

The analysis and interpretation of data has been presented in three chapters as below :

- (i) Cosmopolitan Character of the University
- (ii) Academic Performance, and
- (iii) Job-Placement.

3.8.1 Cosmopolitan Character of the University

In this section i.e., for the first objective of the study, descriptive statistical technique namely, percentage analysis, has been used. In brief, facultywise percentage analysis was done for the number of students from India and foreign countries, and further from various states of India and districts of Gujarat. Facultywise percentage analysis was also done for the following variables of socio-economic background of students. Those variables are: (i) sex, (ii) caste, (iii) religion, (iv) students stay at hostel and outside, (v) rural-urban background (vi) education of parents, (vii) occupation of parents, and (viii) per capita income of the family. About the substantive cosmopolitan character of MSU, the data which were in percentages and frequency forms in Annual Reports of MSU were interpreted qualitatively.

3.8.2 Academic Performance

To analyse the data related to the academic performance of students, statistical techniques namely, 't' tests and Analysis of Variance (ANOVA) were used. The details about these are mentioned below.

For objective 2a i.e., study of the difference in the academic performance of students with different backgrounds, 't' tests were carried out to test the significance of difference in the academic performance of students residing at hostel and elsewhere, between male and female, high caste and low caste, Hindu and non-Hindu, rural and urban background, and between Gujarati and non-Gujarati students. The differences were tested by 't' tests of uncorrelated sample techniques.

For objective 2b, ANOVA was applied to find out the effect of socio-economic background (SEB) and academic life (AL) on the academic performance of students. The ANOVA applied for all the faculties was by Mean method of 2 x 2 factorial design. The ANOVA by Mean method is specially applicable when the number of observations in some cells even become less than five and unequal (Edwards, 1971).

To carry out the ANOVA, it was essential to divide the two independent variables (SEB and AL) into artificial dichotomies. The procedure adopted to divide each of them into two dichotomies was on the basis of Mean Scores of students in these variables. In these two variables, if a student's score lies below the Mean, it was counted as low and if above the Mean, then it was counted as high in respect of these variables. Mean scores were taken as the bases of dichotomization because of the following reasons:

- (i) These variables are assumed to be normally distributed, and

- (ii) To have sizable number of observations both in low and high categories.

3.8.3 Job-Placement of Students

To study the job-placement of alumni students i.e., objective-3, percentage analysis and other descriptive statistics like Means and SDs were used. The placement of students has been analysed facultywise by taking into consideration the future plans, socio-economic background and academic performance of students. To see the placement of students with respect to their future plans, percentage analysis has been done. The socio-economic background of students, past examination records, and last examination results of the employed, unemployed, self-employed, and students studying further or engage in some miscellaneous work have been analyzed and interpreted by taking the Means and SDs. However, the details about the plan and procedure of the study can be seen from the flow chart given in Figure-2.

The foregoing presentation in this Chapter gives details about the procedure followed in the study to construct the tools, drawing the samples, and collection of the required data from various sources. The procedure of the analysis of data collected from different sources for various objectives of the study are also presented. In the forthcoming Chapters-IV, V and VI, the analysis of data along with their interpretation are presented.

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Figure-2
Design of the Study

