Chapter 3

RESEARCH METHODOLOGY

The broad objectives of the present study have already been stated in the introductory chapter. This chapter gives specific objectives, a description of the problem area, the methodology adopted for the study, sample design, tools employed and the limitations of the study.

OBJECTIVES OF THE STUDY

The main objectives of the study are:

1. To make a thorough study of the powers, duties and functions of the academic bodies of the universities in Kerala, viz., the Academic Council, the Faculties and the Boards of Studies and to find out whether they function effectively within the legal frameworks of the universities in Kerala.

2. To find out the role of the academic bodies in designing and implementing academic programmes in the universities and also to understand how far these bodies are effective in this regard.
3. To explore the various aspects of the different academic programmes in the universities in Kerala in terms of their design and implementation.

4. To have a thorough knowledge of the various problems involved in the designing of the courses, their content and curricula.

5. To find out the genuine reasons for the failure as well as non-implementation of certain academic programmes in the universities in Kerala.

METHODOLOGY

The study is based on both primary and secondary data collected from four universities in Kerala, viz., the University of Kerala, University of Calicut, Mahatma Gandhi University and the Cochin University of Science and Technology.

Secondary Data

The Acts and Statutes of the four universities selected for the study, their annual reports, and calendars is the main source of the secondary data. In addition to these documents, the minutes of the meetings of the
Syndicate, the Academic Councils, Faculties and Boards of Studies have been made use of for the collection of secondary data. Another source of secondary data is the administrative reports and other publications of the State Directorate of Collegiate Education, State Planning Board and the Higher Education Department of the State government. The reports of the various education commissions appointed by the Central and State governments, U.G.C. and the universities also form a reliable source of secondary data.

Primary Data

The primary data comprise the opinions of two groups of respondents. They are the academicians and the academic administrators of the universities in Kerala. The group of academicians consists of the teachers of the university departments of study who are further classified into two sub-groups, viz., (1) teachers who have/had membership in one academic body or more, who are the academic decision-makers, and (2) teachers who are/were not such members who are mere academicians. The group of academic administrators includes persons like Vice-Chancellors, Pro-Vice-Chancellors, Registrars and Syndicate members who are not teachers by profession.
Groups I and II: Teachers of the Teaching Departments of the Universities

Table 3.1 shows University-wise distribution of teachers of the Teaching departments of the four universities under this study as on 1.1.1992.

Table 3.1
University-wise Distribution of Teachers as on 1-1-1992*

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the University</th>
<th>Members of academic bodies</th>
<th>Non-Members</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Group I</td>
<td>Group II</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>University of Kerala</td>
<td>122</td>
<td>98</td>
<td>220</td>
</tr>
<tr>
<td>2.</td>
<td>University of Calicut</td>
<td>97</td>
<td>81</td>
<td>178</td>
</tr>
<tr>
<td>3.</td>
<td>Mahatma Gandhi University</td>
<td>28</td>
<td>39</td>
<td>67</td>
</tr>
<tr>
<td>4.</td>
<td>Cochin University of Science and Technology</td>
<td>107</td>
<td>89</td>
<td>196</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>354</td>
<td>307</td>
<td>661</td>
</tr>
</tbody>
</table>

* Statistics taken by the researcher by visiting the University Departments.
The respondents were selected by the disproportionate stratified sampling method. This is a method of sampling in which equal numbers of cases are taken from each stratum without considering the size of the strata in proportion to the universe. It is also called controlled sampling. Equal samples (more than 20%) were selected from the two strata of the universe, viz., the academic decision-makers and the academicians.

Table 3.2 gives the number of respondents selected for the study from groups I and II.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the University</th>
<th>No. of respondents selected</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Members</td>
<td>Non-members</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Group I</td>
<td>Group II</td>
</tr>
<tr>
<td>1.</td>
<td>University of Kerala</td>
<td>27</td>
<td>26</td>
</tr>
<tr>
<td>2.</td>
<td>University of Calicut</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>3.</td>
<td>Mahatma Gandhi University</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>4.</td>
<td>Cochin University of Science and Technology</td>
<td>25</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>82</td>
<td>82</td>
</tr>
</tbody>
</table>
Group III: Academic Administrators

The group of academic administrators comprising Vice-Chancellors, Pro-Vice-Chancellors and Registrars of the four Universities also included those members of the Syndicates of these universities who are not teachers. The student members of all the Syndicates were excluded from the list. The total number of persons in this group was 34. As this group was small, it was decided to include all the members in the group for the study.

Table 3.3 shows the university-wise distribution of academic administrators.

Table 3.3

University-wise Distribution of Academic Administrators

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the University</th>
<th>No. of academic administrators</th>
<th>No. of common members in all the 4 universities</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>University of Kerala</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>University of Calicut</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Mahatma Gandhi University</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Cochin University of Science and Technology</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>31</td>
<td>3</td>
<td>34</td>
</tr>
</tbody>
</table>

Source: Calendars of the Universities.
Out of the 34 respondents in group III, only 21 persons who responded could be included in the study.

Tools for Collection of Data

The major tool employed for the collection of the primary data was the questionnaire circulated among the three groups of respondents selected for the study. In the questionnaire, the informants were required to furnish their bio-data and the details of their membership in the academic bodies. The questionnaire comprised questions eliciting responses on different aspects of design and implementation of academic programmes in the universities and the functioning of academic bodies of the universities. The questionnaire is given under Appendix I on page 281.

Administration and Collection of Data

The researcher visited the teaching departments of the universities and handed over copies of the questionnaire in person to the respondents selected from groups I and II. The questionnaire was distributed with a personal appeal to each of them (in addition to the written appeal attached to the questionnaire) to fill in the questionnaire to the best of their knowledge and thus co-operate in the study. The filled-in questionnaire copies
Copies of the questionnaire were mailed by the researcher to the respondents in group III with an appeal to send them back to the researcher's postal address. Out of the 34 respondents included in the study, only 21 persons responded.

Case Studies

In order to go into the circumstances under which some specialised courses conducted by the universities got discontinued some time after their implementation, case studies of such courses have been made in the thesis. Relevant data required in this subject had been collected from the records available in the university offices and the concerned departments of study. For making an in-depth study, interviews were conducted by the researcher. Two types of informants were selected for the interviews. They were the heads of the teaching departments where such cases occurred and a senior faculty member of the department concerned, selected at random. These functionaries were interviewed with the help of a schedule. Interview schedule is given under Appendix II on page 292. The opinions and the comments that emerged out of the interviews were used for the final analysis.
The secondary data collected from the minutes of the Academic Councils of the universities were interpreted and analysed by the method of content analysis.

Statistical Method

In order to find out whether there was a consensus of view or differences of opinion among the three groups of respondents in their average perception, the statistical method of Friedman's test was used in this study (Neave and Worthington, 1988).

In this test, the null hypothesis $H_0$ is that there is no difference in the average perception among the three groups. The alternative hypothesis $H_1$ is that the given sample provides evidence to suspect differences in the average perception of these groups. The observations within each row are ranked from 1 to $K$ (where $K = 3$ in the present case). If $H_0$ is true, we would expect the ranks 1, 2 and 3 to be fairly evenly distributed among the three groups. On the other hand if there are substantial differences, then we would expect to find at least one group getting consistently high or low ranks. The criterion for the similarity of views is thus judged by the ranks assigned to the three groups so that if $H_0$ ($H_1$) is
true, we would expect small (large) differences among these average ranks. The overall mean \( \bar{R} \) of the ranks is \( \frac{1}{2}(K+1) \), where \( K \) is the number of groups.

\[
S = \sum_{j=1}^{K} (\bar{R}_j - \bar{R})^2
\]

Friedman's statistic \( M \) is \( \frac{12n}{K(K+1)}S \), where \( K \) = number of groups and \( n \) = number of responses. \( H_0 \) will be rejected in favour of \( H_1 \) if \( M \geq \) critical value.

In the event of the evidence supporting the alternative hypothesis \( H_1 \), it becomes necessary to identify which of the groups exhibits such differences in perception. Towards this objective, further analysis can be carried out using multiple comparison test. The test is designed to evaluate the significance in the differences between the \( i^{th} \) and \( j^{th} \) groups. Thus the null hypothesis \( H_0 \) for the comparison test is that there is no difference in perception between the \( i^{th} \) and \( j^{th} \) groups. The multiple comparison test is based on the absolute differences \( |D_{ij}| = |R_i - R_j| \) where \( R_i \) and \( R_j \) are the rank sums of \( i^{th} \) and \( j^{th} \) columns, to examine a possible difference between the \( i^{th} \) and \( j^{th} \) populations. If there is no real difference between the two populations, \( |D_{ij}| \) is likely to
be small. A substantial difference between the $i^{th}$ and $j^{th}$ populations will tend to produce a large value of $|D_{ij}|$.

The test statistic $T_{ij} = \frac{D_{ij}}{\sqrt{\frac{nK(K+1)}{6}}}$ is distributed normally with 0 mean and unit standard deviation.

The $i^{th}$ and $j^{th}$ populations differ if $|D_{ij}| = |R_i - R_j|$ is large and consequently if $|T_{ij}|$ is large, the critical regions will take the form $|T_{ij}| \geq Z$, where $Z$ is the standard normal value corresponding to a single-tail probability of $\frac{\alpha}{K(K+1)}$.

In the present study, the Friedman's test alone was employed. As there was no great difference in the average perception of all the three groups of respondents, the need for making use of the multiple comparison test did not arise.

LIMITATIONS OF THE STUDY

The study has been restricted to the conditions obtaining in the four universities in Kerala, in respect of the functioning of their academic bodies with special
reference to the design and implementation of academic programmes. These four universities are (1) the University of Kerala, (2) the University of Calicut, (3) the Mahatma Gandhi University and (4) the Cochin University of Science and Technology. The first three universities are of the teaching-affiliating type having colleges affiliated to them, and having several departments of study attached to them. The fourth University, the Cochin University of Science and Technology has no affiliated colleges, but has many teaching departments. The laws of these universities are patterned in a similar model, which provide for almost the same authorities in the universities. The fifth university in the State, the Kerala Agricultural University, is of the federal type and is a purely professional university. The laws of this university as well as its authorities are different from those obtaining in the other four universities. In the Agricultural University, only specialised courses in a particular field of specialisation are run, whereas in the other four universities, specialised as well as general courses are conducted. For these reasons, the Kerala Agricultural University has been excluded from the scope of the present study.
In selecting the respondents for the study, samples were taken only from the university teaching departments. Teachers working in affiliated colleges were not considered. This was because by and large the affiliated colleges generally run only traditional courses without the uniqueness obtaining in the university departments. Also because the selection procedures and the qualifications prescribed for recruitment of staff are rigorous in universities as compared to those for selection of staff in affiliated colleges, the teaching staff in the universities will be better-qualified than their counterparts in colleges. Again, while many colleges do not have good facilities for research work, all university departments invariably have handsome facilities for pure and applied research, especially in the matter of equipment in the laboratories and reference books and journals in the libraries. The obvious result is that teachers in the university departments will be fully conversant with the advanced developments in the subjects of their study and will be automatic choices for nomination as chairmen of boards of studies and as deans of faculties, with the responsibility to design courses, draft syllabi and update them when required. Also the courses with the same
subjects of study in colleges and university departments have different syllabi with the latter being more rigorous and up-to-date. It was therefore considered desirable to depend on the responses of such staff to the questionnaire eliciting information on the different aspects of the present study.

In making an in-depth study of the functioning of the academic bodies of the universities, content analysis of the minutes of the Academic Councils of the three universities, viz., the University of Kerala, the University of Calicut and the Cochin University of Science and Technology was carried out. In the Mahatma Gandhi University, the Academic Council has not been constituted to date, though the laws of the university provide for such a body. Therefore this study could not include the content analysis of the minutes of the Academic Council of the Mahatma Gandhi University.

As the present study is concerned with the role of academic bodies of the universities, the role of the governing bodies such as the Senate and the Syndicate has not been studied in detail, though a review of their duties, responsibilities and functions has been made in general.
CHAPTERISATION: PRESENTATION OF THE STUDY

The present study is arranged in six chapters. The first chapter gives a general introduction to the study. The second chapter gives a detailed review of literature related to the study. The third chapter deals with the objectives of the study, the methodology adopted and the limitations of the study. The fourth chapter surveys the powers, duties and functions of the academic bodies in the universities in Kerala and their effectiveness in terms of carrying out their functions. The fifth chapter presents a detailed analysis of the various facets of academic programmes in universities. The last chapter provides a summary of the study, its conclusions and recommendations.