CHAPTER 3

METHODS OF PROCEDURE

This chapter purports to describe the research procedures adopted to achieve the objectives of the present investigation, 'Role Analyses : role enactment, role contentment and role constraints of Home Science College Teachers, for which the descriptive survey method was employed.

The research procedures are described as follows :

3.1    Assumptions of the study
3.2    Hypotheses of the study
3.3    Limitations
3.4    Population and sample
3.5    Research tool - questionnaire
3.5.1  Construction of the structured questionnaire
3.5.2  Validity of the questionnaire
3.5.3  Pretesting of the questionnaire
3.5.4  Reliability of the questionnaire
3.6    Data Collection
3.7    Analyses of the data

3.1    Assumptions of the study

3.1.1  The Home Science College teachers play some teaching research and extension roles and face some constraints while performing the roles.

3.1.2  The administrators and post graduate students are familiar with the enactment of roles by Home Science College teachers in teaching, research and extension.

3.1.3 The administrators and post graduate students are familiar with some constraints faced by Home Science College Teachers.

3.2 Hypotheses of the Study

Null Hypotheses

3.2.1 There will be no significant consensus among the teachers, post graduate students and administrators regarding :

a) role enactment of Home Science College teachers in teaching, research and extension.

b) contentment with regards to roles enacted by Home Science College teachers in teaching, research and extension.

c) role constraints faced by Home Science College teachers in teaching, research and extension.

3.2.2 There will be no significant relationship between the selected variables of teachers and their response towards enactment and contentment in the three roles of teaching, research and extension as illustrated :

| Teachers' Variables | Role Dimensions | |
|---|---|---|
| | Role enactment | Role contentment |
| a. Professional Status | | |
| b. Area of Specialisation | | |
| c. Years of Experience in teaching profession | | |
| d. Occupation of spouse | | |
| e. Occupation of Father | | |

3.2.3  There will be no significant relationship between
the selected variables of students and their
response towards teachers' role enactment and
contentment in the roles of teaching, research
and extension as illustrated :

| Selected Variables | Role Dimensions | |
|---|---|---|
| | Role enactment | Role contentment |
| a. Medium of instruction in school | | |
| b. Occupation of father | | |
| c. Area of specialisation | | |

Other Hypotheses

3.2.4  The consensus regarding the role-dimensions among
administrators, teachers and students will differ
with respect to Home Science Colleges in agricultural
and non-agricultural Universities.

3.2.5  The consensus regarding role dimensions among
administrators, teachers and students will differ
with respect to the three roles - teaching,
research and extension.

3.2.6  There will be some inter-correlation between the
three role dimensions - role enactment, role
contentment and role constraints in teaching,
research and extension.

3.3  Limitations of the Study :

This study is limited to administrators, teachers and post-

graduate students of the colleges of Home Science having two, three or more specialisations in the year 1985-86.

3.4   Population and Sample of Study :

In the present investigation the population comprised of teachers, postgraduate (M.Sc.) students and administrators. The Home Science Colleges having at least two areas of specialisation at M.Sc. level were required.

As no updated published information was available regarding Home Science Colleges offering areas of specialisation, the investigator had to collect such information from scattered sources such as papers of Bienneal Conferences organised by Home Science Association of India, review of available Indian books on Home Science, Hand books and Journals. Discussion with senior colleagues and M.Sc. and Ph.D. students who did B.Sc (Home) from different universities also helped in the collection of information.

On the basis of the available information a list of 25 colleges likely to have M.Sc. specialisations was prepared. Thereafter, a proforma for obtaining preliminary information regarding areas of specialisation, number of teachers, M.Sc. students and administrators was sent to each college. The colleges were also requested to send the list of teachers, M.Sc. students and administrators.

After fifteen days each, two reminders were sent
requesting the colleges to send the required information.
The colleges which had sent the preliminary information were
only included in the study and the required permission to
collect data from the respective colleges was obtained. The
Home Science Colleges included in the study are indicated
in the table 1 , with their areas of specialisation.

Since the colleges represented most of the areas of
specialisation, were amongst the established colleges of Home
Science and also exhibited geographical representation as shown
in the map (fig. 1 ), the selected colleges were found substan-
tially representing its population. Moreover they could be also
categorised under agriculture and non-agricultural universities
which formed a variable in one of the hypothesis.

With regards to the respondents, the sample of the study
was decided as follows :

Teachers :      Entire population of Professors, Readers
and Lecturers in the selected colleges of
Home Science.

Students :      Entire population of post graduate (M.Sc.)
students in each area of specialisation
of the selected colleges of Home Science.

Administrators: Entire population of Deans and Heads of
Departments in the selected colleges of
Home Science.

## Table 1.0

LIST OF HOME SCIENCE COLLEGES INCLUDED
IN THE PRESENT INVESTIGATION

| University/ Colleges of Home Science | No. | Areas of Specialisation* |
|---|---|---|
| **Agricultural Universities** | | |
| Ludhiana-Punjab Agricultural University | 5 | CD, EE, FN, CT, HM |
| Pant Nagar - G.B. Pant University (Uttar Pradesh) | 2 | CT, FN |
| Hissar - Haryana Agricultural University | 4 | CD, EE, FN, HM |
| Hyderabad - Andhra Pradesh Agricultural University | 5 | CD, EE, FN, CT, HM |
| **Non-Agricultural Universities** | | |
| Baroda - Maharaja Sayajirao University (Gujarat) | 5 | CD, EE, FN, CT, HM |
| Udaipur - Sukhadia University (Rajasthan) | 5 | CD, EE, FN, CT, HM |
| Tirupati - Srivenkadeshwara University (Andhra Pradesh) | 3 | CD, EE, FN |
| Chandigarh - Punjab University | 4 | FN, CT, CD, CD |
| Bombay - S N D T University for Women (Maharashtra) | 5 | CD, EE, FN, CT, HM |

\*
CD - Child Development        FN - Foods and Nutrition
EE - Education and Extension  CT - Clothing & Textiles
HM - Home Management/Family
       resource Management

No. - Number of specialisation

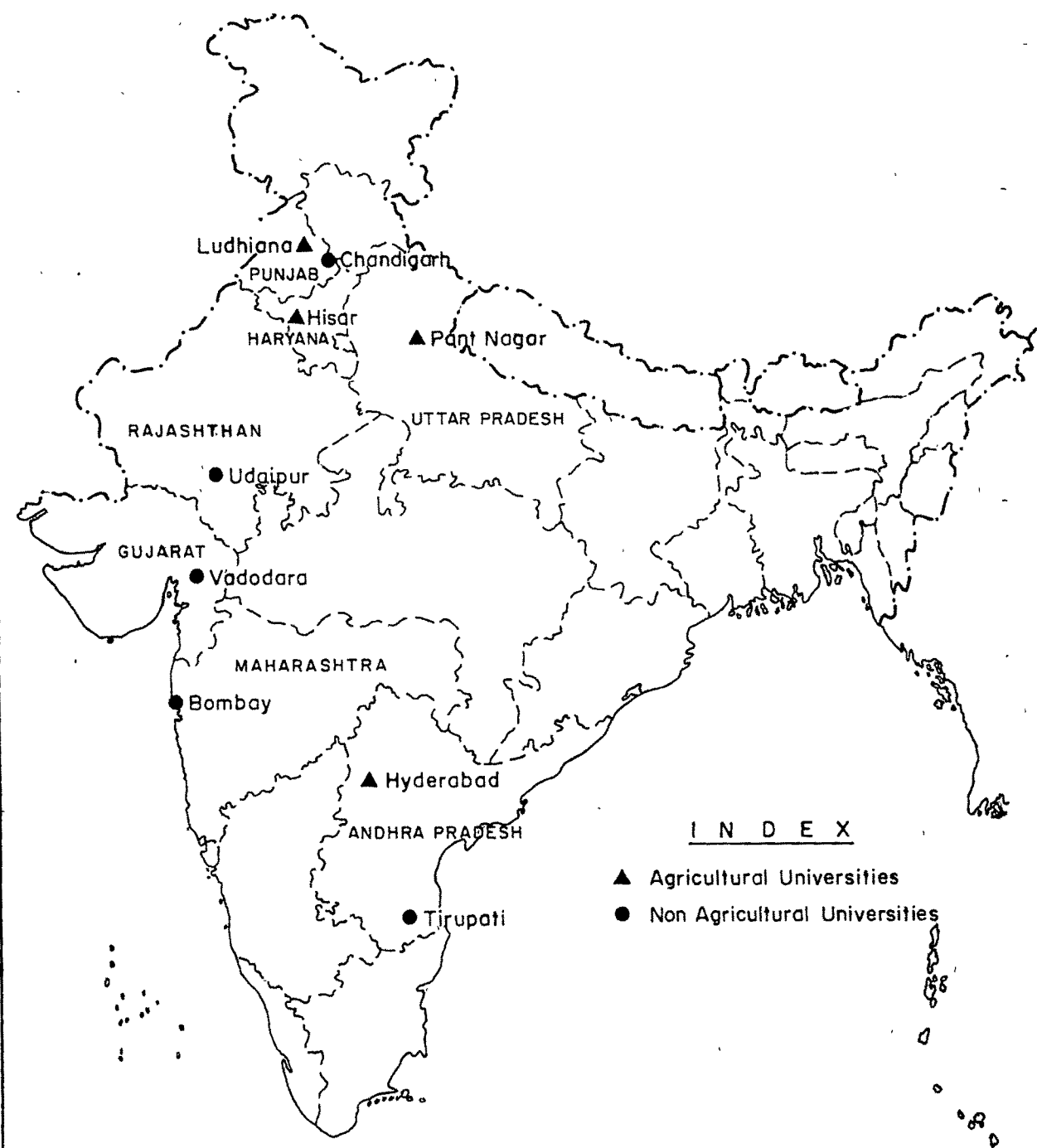LOCATION OF AVAILABLE HOME SCIENCE COLLEGES INCLUDED IN THE STUDY

Fig. I

Due to the number of Teachers, M.Sc. students and administrators in Home Science Colleges not being very large, and the anticipated problems of non-respondents, it was decided to include the entire population for each category of respondents. Thus, a purposive and selective sample evolved for the study.

3.5 Research tool

The research tool for the present investigation comprised of a structured questionnaire.

3.5.1 Construction of the questionnaire

Prior to starting the construction of the research tool an extensive review was done on the role of teachers in teaching, research and extension and on the related aspects of the role of teachers. The related research studies were reviewed and books, journals, magazines were studied. For the purpose of review the following libraries were referred :

- ICSSR, NIEPA, NCERT and American Library in Delhi
- TISS Library in Bombay
- Smt. Hansa Mehta Library, M.S. University of Baroda
- Centre of Advance Study in Education (CASE) Library, M.S.University of Baroda.

The reviews strengthened the theoretical and conceptual framework of the investigator with respect to the role of College/University teacher in teaching, research and extension.

Theoretical frame work alone does not suffice. Emperical evidence gives added meaning and practical value to the prospective research. Therefore, a pilot study was conducted to get further insight into the roles teachers actually play or the roles teachers expect the College/University teachers to play in teaching, research and extension.

The pilot study was done on fifty teachers of M.S.University, Baroda,which comprised of an open-end questionnaire, asking the teachers to enlist the roles they expect a college/university teacher to perform under the following major and sub-roles :

| | | |
|---|---|---|
| Teaching | : | Instructor |
| | | Communicator |
| | | Evaluator |
| Research | : | Researcher |
| | | Research Guide |
| Extension | : | Extension Worker |
| | | Extension Work Guide |

Each of the roles was defined and Instructions were given to enlist the perceived roles keeping in mind the defined role. The open-end questionnaire was given to teachers of Arts, Science and Home Science Faculties.

The response of the pilot study was very satisfactory. Out of 50 open end questionnaires, the investigator received 45 duly completed,with the various role activities of teachers

in teaching, research and extension enlisted . This provided
a definite frame work to the investigator for preparing the
list of role-activities in the various sub-heads of teaching,
research and extension.

Thus, on the basis of the (a) perceived roles enlisted
by the teachers of the different departments of different
faculties, (b) the review done on roles of teachers and
(c) the personal discussion of investigator with people of
different professions and students on the roles they expect
the teachers to play, a <u>structured questionnaire</u> was prepared.

The structured questionnaire comprised of three parts
as follows :

-- First part attempted to find the background
information of the respondents.

-- Second part comprised of the checklist of perceived
roles in teaching, research and extension. The
respondents were required to respond to the extent
to which teachers enact the role and the extent to
which they were contented by the enactment of the
teachers' role on five point scale. The sub roles
under teaching, research and extension were retained
as included in pilot study open-end questionnaire.

-- The third part of the questionnaire comprised of a
checklist of constraints where the respondents
were asked to check by tick marking. The checklist

included physical constraints as well as constraints
in teaching, research and extension.

It is to be noted that in the students' questionnaire two
sub roles as of researcher and extension worker in the role
of research and extension respectively were deleted. In
research and extension roles, students were supposed to
respond to teachers role as research guide and extension work
guide, as they would have direct contact with teacher when the
respective roles were performed. On the other side when the
teachers are engaged solely in their individual research or
extension work there is not much scope for students to judge
the respective roles played by the teachers. Therefore, the
two roles were excluded from the questionnaire given to post-
graduate students.

### 3.5.2 Validity of the Questionnaire

To find out the validity of the research tool,
the methods of Juri opinion (Good and Hatt 1952, p.237)
and logical validation were employed. The Juri consisted
of ten experts who comprised of professors, Heads of
Education departments in and outside Baroda. The
experts were asked to check the questionnaire with
regards to the following :

- Adequacy of role items : whether the items were
  adequate to test the objectives of the study,
- Content of questionnaire : whether the content measured
  what the study proposed to find out.
- Consistency of ideas and language of role items.

- clarity of the items and ease with which they could
  be comprehended by the respondents.
- Appropriateness of the response system and
  measuring technique.

Eight experts' response were received. The suggestions
asked for few minor changes in the questionnaire, which were
incorporated.

### 3.5.3 Pretesting of the Questionnaire

Pretesting was done on fifteen teachers and
twenty students to check whether the role items and
response system were easily comprehended and answered.
The teachers and students were also requested to give
their suggestions or comments where ever required. It
was found that teachers and students on an average took
25 to 30 minutes to answer the questionnaire. They could
comprehend the role items and the response system. Very
few minor suggestions were given which were considered
and the required changes were made in the questionnaire.

### 3.5.4 Reliability of the questionnaire

The pretested data of teachers and students
respectively were used to test the reliability of the
questionnaire. The split-half method was used for
establishing the reliability.

First the  r was calculated by using Pearson's product
moment correlation coefficient (Garett 1979) as follows:

$$r = \frac{\xi X \, Y - NM \, X \quad MY}{\sqrt{[\xi \, X^2 - NM^2 X] \, [\xi \, Y^2 - NM^2 \, Y]}}$$

Thereafter the Spearman Brown prophecy formula (Garett 1969) was used for calculating reliability scores :

$$\gamma_{II} = \frac{2 \, r \, \frac{1}{2} \, \frac{1}{11}}{1 + r \, \frac{1}{2} \, \frac{1}{11}}$$

The reliability was calculated seperately for each sub role which were found to be very high ranging from .70 to .93.

After the reliability was established the final draft of the questionnaire was given for printing. For ease in distribution while data collection, the students' questionnaire was printed in pink color where as teachers' and administrators' was in yellow color.

## 3.6    Data Collection

Data were collected in most colleges by mailed technique and in only two colleges the investigator personally collected the data. The data collection took place between February to July, 1986.

The parcel of questionnaires was sent to the Heads of department or Deans of colleges with the letter earnestly requesting the prompt response of teachers, post-graduate students and administrators of the respective colleges. In three colleges the parcel of questionnaire was sent to the

## Table 2

PATTERN OF RESPONSE OF TEACHERS, STUDENTS AND
ADMINISTRATORS IN HOME SCIENCE COLLEGE OF
AGRICULTURAL AND NON-AGRICULTURAL UNIVERSITIES

| University/Colleges of Home Science | Teachers | Students | Administrators |
|---|---|---|---|
| **Agricultural University** | | | |
| Ludhiana | 27 | 28 | 3 |
| Pant Nager | 11 | 12 | 1 |
| Hissar | 20 | 7 | 2 |
| Hyderabad | 10 | 10 | 1 |
| Total response | 68 | 47 | 7 |
| Total questionnaire sent | 140 | 165 | 18 |
| Percentage of response | 49% | 27% | 38% |
| **Non-agricultural University** | | | |
| Baroda | 24 | 33 | 4 |
| Udaipur | 12 | 32 | 2 |
| Tirupati | 9 | 28 | 1 |
| Chandigarh | 6 | 8 | 1 |
| Bombay | 20 | 17 | 5 |
| Total response | 71 | 118 | 13 |
| Total questionnaire sent | 156 | 270 | 20 |
| Percentage of response | 46% | 43% | 65% |
| Grand Total Response | 139 | 164 | 20 |
| Percentage of response | 47% | 38% | 53% |

investigator's friend who collected the data. With the parcel a self addressed stamped weighed parcel envelope was enclosed for ease in return of the duly filled questionnaire.

According to Oppenhim (1970) "the greatest disadvantage of mailed questionnaire is the fact that they usually produce very poor response rate. For respondents who have no special interest in the subject matter, the figure of 40% to 60% are typical. Even in studies of interested groups 80% is seldom achieved. The response rate could be enhanced by sending several suitably worded reminders."

Therefore, after 25 days the investigator sent one reminder. The second reminder was sent after two weeks.

The personal acquaintants of the investigator in the respective colleges were also requested to pursue the early return of the data.

The pattern of response from students, teachers and administrators from various colleges is indicated in the Table 2.

Considering the limitations of the mailed questionnaire technique, the response rate of data were found acceptable.

### 3.7   Analyses of the Data

Different statistical measures were employed to study the objectives and to test different hypotheses.

Analyses started with coding the entire data after which the statistical measures were used as described :

a) For studying the background information of the respondents the percentages were calculated which were used for intrpretations.

b) For describing the identification of teachers' role the means and percentages were calculated.

c) For testing the consensus among respondents the scores were translated into ranks and the Kendall coefficient of concordance (W) (Siegel 1956 pg.229, 230) was calculated by the following formula .

$$W = \frac{S}{\frac{1}{12} K^2 (N^3 - N)}$$

where S = Sum of square of observed deviation $= \sum \left( R_j - \frac{\sum R_j}{N} \right)^2$

K = Number of set of rankings

N = Number of entries ranked

$\frac{1}{12}K^2 (N^3 N)$ = Maximum possible sum of squared deviations.

d) To measure the inter-correlation between the three dimensions - role enactment, contentment and constraints, first the simple correlation were calculated using formula (Garett 1979 Pg. 192)

$$r = \frac{\sum XY - NM_x \, M_Y}{\sqrt{[\sum X^2 - NM^2{}_x][Y^2 - NM^2{}_y]}}$$

Thereafter, the partial correlation were calculated
(Garett 1979 pg. 407).

$$r_{12\cdot3} = \frac{r_{12} - r_{13}r_{23}}{\sqrt{1-r^2_{13}}\sqrt{1-r^2_{23}}}$$

e) For testing relationship between the selected
variables of students and teachers and their perception
of role enactment and contentment Chi-square tests
were used (Garett pg. 263)

$$x^2 = \xi\left[\frac{(fo - fe)^2}{fe}\right]$$

For calculating 2 x 2 fold contengency table, the
formula used was (Garett p. 265).

$$x^2 = \frac{N (AD - BC)^2}{(A + B)(C + D)(B + D)(A+C)}$$

The analysed data were then interpreted and discussed
as presented in the findings chapter.

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