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RESEARCH PROCEDURE -  
TOOLS AND TECHNIQUE

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## CHAPTER IV

RESEARCH PROCEDURE -  
TOOLS AND TECHNIQUES

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## 4.1. Introduction

When a researcher poses a problem the method to carry out the problem arises. There is no natural system for the classification of educational research into a particular method still the researches do fall basically into one category or the other. Barr (1960) said that, "the educational research methods can be categorised on the basis of end results, data gathering technique, method of data processing, degree of control of exercised approach, source of data and number of other considerations. Educational research can also be classified as a laboratory or field research, and, of course, according to such other dimensions as curriculum research, psychometric research or sociometric research."

Basically they can be categorised into three; historical, survey and experimental research method. This classification is based on time sequence but they are also related to the type of the problem and procedure employed.

The study was undertaken with the following major purposes :

- to secure evidence concerning the existing situation of Home Science education at the higher level of education;
- to identify standards to compare condition and to determine how to take next step;
- it also aimed to review the present existing status, practices that prevailed, point of view that were held, processes that were going on, effects that were being felt and trends that were developing.

#### 4.2. Selection of the Sample

At the time of data collection there were twenty two states in India. Home Science degree programmes were spread all over the country and different types of institutions had started the programmes but a complete list of the universities with Home Science degree programmes and the institutions recognized by them were not available. The available lists included the institutions with different types of programmes e.g. Home Science as a subject for B.A. and/or B.Sc., diploma programmes, training courses etc. Therefore to

prepare a complete list of the colleges offering Home Science degree programmes, Universities' Hand Book, Association of Indian Universities 1975, was referred. Also reply paid letters (Appendix 2) were sent to the Registrars of all the universities with the request to send the list of the affiliated colleges offering Home Science degree programmes.

There was a return of 80 per cent but with the requests and reminders (Appendix 3) there was a complete return. The responses were verified during the visits of the selected universities and institutions. Thus, the final list was prepared of the institutions of universities in India offering Home Science degree programmes or Home Science as a major which was 73 (Appendix 4). As there were only 73 institutions it was decided to include all of them in the study and request the Heads of the institution in case of an institution, and Heads of the department in case of a department to be the respondent.

After deciding the institutions for data collection it was felt that the study would be incomplete if the pioneers and the leaders of the discipline whose multidimensional efforts to bring the discipline to this day and to this level were not included. It was therefore, decided to include these pioneers and leaders of Home Science into the study for an understanding of bringing the discipline to this status of

higher level of education and their vision of higher level of education and their vision for its further development. A list was therefore, prepared of these pioneers and leaders of Home Science into the study for an understanding of bringing the discipline to this status of higher level of education and their vision for its further development. A list was therefore, prepared of these pioneers and leaders to be interviewed (Appendix 5)

#### 4.3. Tools of Investigation - Questionnaire and Interview Method

Since the data were to be collected from (1) all the institutions of the universities offering degree programmes in India; (2) over a period of time and (3) from old records and registers questionnaire method was employed.

To supplement the information obtained by questionnaire method pioneers and leaders of the discipline were interviewed to get the required information of the past and the opinion for future development of the programme.

##### 4.3.1. Developing the Questionnaire

This being the first study of its kind in Home Science in India reference material related to the study was not available. The frame work of the study was decided with the help of history of education. An outline depending on the

points collected was prepared. This was discussed with the Home Scientists of different category i.e. pioneers, principals, deans, heads of the departments and lecturers. This information was not much different from one another. All the information collected was organised as to frame the questionnaire.

As the purpose of the study was to trace the development; see the present status and get a view of the projected plane it was decided to expose the selected dimensions in relation with either all the three, or in any of its combinations according to the suitability of the dimension and response of the respondent.

Before discussing the dimensions and its study it would be better to explain the link established between the philosophy of the discipline and its outcome. The institutions are the link between the philosophy of the discipline and its outcome - the students. The philosophy of the discipline which underlies the programme is routed through the institutions by establishing the programmes for the educands. It is therefore understood that the programmes would have a relationship with the objective of the institution and its resources human and material, and would be executed through the educand - the students. The dimension selected for the study were: the institutions,

objectives, programmes, the enrolment and the degrees granted to the students and their preparation for its utilisation; the human and material resources of the institutions.

The institutions were studied for their characteristics, objectives, number of students enrolled and degrees granted and its human and material resources. The characteristics studied were : the source of maintenance, types of evaluation system, and the levels of programmes. The types of evaluation system were studied over a period of time i.e. whether it changed from the time the programmes began until the present day and whether any change was envisaged.

The objectives were studied for over a period of time as they were expected to be the goal directing the growth i.e. objectives when the programmes were started, when the data were collected and those which were envisaged. The development of the programme was studied from the establishment of the first programme to the last and the types general, specialisation and the masters programme in different specialisation along with the programmes dropped or restarted, and the problems of starting higher programmes. It was felt that after these programmes were developed not on the basis of need but

according to many other factors such as pattern of existing education, resources, preferences of planners and administrators. The B.Sc. Home Science programmes being the basis for all higher education in Home Science and the varied programmes being available an enquiry into its planning, evaluation, and analysis for the weightage given to different Humanities and Sciences on which Home Science is based, was studied. Earlier in 1958 Devdas had stated "Home Science is an application of many sciences and arts towards achieving better, healthier, and happier homes. It includes knowledge of basic sciences and arts as well as applied sciences such as nutrition, food, clothing child care, home nursing, home management and human relationship."

With the social, cultural and other technical and technological changes the needs of the disciplines from which it draws its principles are also expected to be changing. Preferences for the existing programmes of B.Sc. general and specialisation was also taken to find out the causal effect, that existed. The future plan for the development of teaching programmes researches and extension education was also enquired.

Enrolment for the degrees granted for the different B.Sc. and M.Sc. programmes were seen for the output and the growth, the changing trends and for a future look into

the planning according to the manpower need. The education of Home Science at higher level could not be only for the purpose of educating housewives it was understood that the education would prepare the students for gainful employment. Therefore, an attempt was made to investigate the profession for which they were expected to be prepared. It was also tried to find out the percentage which wanted to go in for the profession and the factors which hindered. Since these dimensions were dependent on the human and material resources of the institution, staff, laboratories and funds were selected to be studied for their present status. Amongst the three the staff was a problematic issue in the educational plans of Home Science. A feeling existed amongst the Home Scientists that there was scarcity of Home Science staff in number, qualification and experience. If it was so it definitely would effect the programmes and its development. Therefore, the staff as a dimension was selected for its present status, change in the staff position from past to present. The Home Science was being developed at the Agricultural universities and there was a continuous cry for suitably qualified, experienced and required number of teachers, respondents views were invited on how they viewed the situation as that would effect the planning and solving the issue. How

they looked at the staff position of their institutions in comparison to past and hope for future, and whether they were satisfied at present was also requested for. Their suggestion was also invited on the solution of this issue.

Information regarding laboratories were collected to find out the status of the physical facilities that existed. Because these meet educational standards an attempt was made to know the exact situation so as to provide ways and means to cope up with it.

Thus, in the development of the questionnaire all the dimension selected were included to get a realistic picture of the development of the discipline to its present status. As stated earlier, the pioneers and the leaders were interviewed as they had a meaningful hand into the adoption and diffusion of the philosophy of this education but who were also responsible and participated for its development to the present position.

#### 4.3.2. Arrangement of the Questionnaire

The questionnaire was arranged into 3 sections. The dimensions, the institutions and its characteristics, objectives, programmes, enrolment and degrees granted, staff

and laboratories were placed in section one; to be filled up by the Heads of the institution in case of an institution and department in case of a department, satisfaction for funds, preparation for profession, and laboratory arrangement were arranged in section two and three to be filled up by Heads of the undergraduate and post-graduate department respectively.

#### 4.3.3. Developing the Interview Schedule

The interview schedule was planned to extract the views of the dignitaries regarding the social, economic, political, cultural and such other factors which influenced the growth of the discipline. As education changes with the changes in time it was thought that Home Science education would have also changed from what it was and what it would be. Therefore, the leaders and pioneers had an important role in throwing light on the factors which helped the institutions to grow. It was, therefore, decided to interview them to know the factors which helped in the initiation and establishment of the degree programmes, the factors which accelerated and hindered the growth; their views on sex role vs person role; problems involved in making the discipline for the person role; and the suggestions for the strengthening of the programmes and its qualitative and quantitative growth.

An open end interview schedule to have the free response of the interviewee on the basis of the points mentioned above according to the objectives of the study was outlined. It was also felt that it would help in getting adequate information required.

#### 4.4. Pretesting

Pretesting was done in the five colleges of the three states of India - Punjab, Maharashtra and Gujarat for both the questionnaire and the interview schedule. It was decided to drop out 'finance' as a dimension from the questionnaire for the detailed study because the questionnaire was lengthy and required the use of old records etc. In the case of finance the study of the present status alone would not be meaningful, therefore the growth will have to be studied. For the older institutions it would increase too much of work to provide data for the development of the finance. Therefore for the convenience of the respondents, the length of the questionnaire and to limit the study the dimension of fund was deleted.

It was also felt that the questionnaire was lengthy therefore the researcher had a personal discussion with the respondents on the possibility of dropping out the items or its other details. After discussion it was decided to continue

with the questionnaire as it was because of the questionnaire included two types of questions the facts and figures and reasons/opinions for the purpose of giving the data a meaningful direction. It was also felt that the questionnaire on facts and figures could be filled up by the office or any one could provide help. Moreover if the data are not completely received many items would automatically be deleted.

#### 4.5. Collection of Data

Seventy three reply paid questionnaires (Appendix 6) were mailed in March/April 1974. A letter (Appendix 7) was attached to the questionnaire explaining the importance of the study, non-availability of the literature in Home Science and value of their co-operation and my own problem of going back to job. Before mailing the questionnaire to the respective institution a letter (Appendix 8) was mailed for two purposes; (1) to establish rapport with the respondents of the institutions and (2) to get preliminary information of their institution. There was a return of about 50 per cent. The leaders and pioneers were interviewed (appendix IX).

As there was a plan to visit the leading institutions of India for discussion a plan was made to cover as many colleges as possible if they were either on the route or could be approached through a little diversion so that as

many institutions as possible could be covered for the collection of the questionnaire observation and discussion. Thus there was a return of about 85 per cent i.e. 62 institutions (Appendix 910).

#### 4.6. Analysis of Data

The development of Home Science degree programmes ranged over a period of about 34 years. These were therefore seen chronologically. All the institutions were arranged according to the date of the first programme. They were then grouped on certain characteristics so as to bring out meaningful understanding of the growth. Since the sample consisted of independent colleges of Home Science Faculty/Department/College as an integral part of the university, to a college department; they were therefore grouped on the basis of 'teaching arrangement made for the sciences and humanities which was as below :

1. Institutions exclusively for Home Science with the arrangement of teaching other science and Humanities within the institution.
2. Institutions in a macro-organisation getting help for the teaching of subjects of other disciplines from other faculties/departments/ and colleges.
3. Establishment of the programme in a micro-organisation where the teaching was done for other subjects and a department was established for the teaching of Home Science.

As the 'Yes' answers to each question were added and analysed according to the objectives and the type of institutions in percentages for comparison.

All the programmes enrolment of the students and degrees granted were arranged chronologically and were evaluated for their growth.

The curriculum was analysed on the weightage given to different disciplines. When there were marks, they were calculated from total marks and where there were credits, they were calculated from credits and converted into weightage in percentages. The subjects of the same area were grouped together and their marks or credits were totalled. All the subjects were grouped with one of the four groups: Science, Humanities, Agriculture and Home Science. Home Science was thus subgrouped according to the area of specialisation and totalled as core and specialisation.

The data collected through the interview schedule was pooled on the basis of the questions and the responses. They were then calculated in percentages.

The growth rate of the higher programmes developed, students enrolled and degrees granted was calculated as below.

The graph was plotted and the curve was fit by using the equation  $Y = AB^X$ . The growth rate was then calculated by

$(B-1) \times 100$  (Freund and William, 1958).

#### 4.7. Conclusion

In the end it could be concluded that the study due to its purposes of finding out the growth and the present status of the Home Science in the degree programmes of India so as to provide base line data and the relationship of the different factors of growth to each other and its impact on the development of the programme for planning the future of Home Science and ways and means for its meaningful development towards the individual, family, community and nation at large. The study was therefore placed under normative survey and the data was collected through questionnaire and interview schedule. The study included the population who were the Heads of the institution in case of a College of Home Science and Head of the department in case of the Head of the College. The interview schedule was administered on the Home Science pioneers and leaders of India to find out the factors of acceleration and institution of the development of the discipline. They were also requested to opine on the Home Science education for sex role vs person role and their suggestions for its meaningful development in future.

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