CHAPTER - III

PROCEDURE FOR INVESTIGATION

3.1.0 INTRODUCTION

The present study is a combination of content analysis and experimental research.

3.2.0 RESEARCH DESIGN

The research design as a whole involved the steps; (i) Collection of M. Ed. Curricula from Various Universities in India (ii) Identification of Criteria for Curriculum Analysis (iii) Validation of Criteria (iv) Analysing Curricula (v) Identification of Criteria for Critical Analysis. (vi) Validating Criteria for Critical Analysis. (vii) Analysing Curricula Critically (viii) Gathering Curricular Units for Updating Curriculum (ix) Validating the units identified (x) Enriching the Curriculum (xi) Validating the Enriched Curriculum (xii) Implementing the Curriculum and (xiii) Evaluating the Curriculum. Flow chart of the design of the study is given in the figure 3.1.
FLOW CHART SHOWING THE DESIGN OF INVESTIGATION

To Collect M. Ed. Curricula

To Identify criteria for Curriculum Analysis

To Analyse M.Ed. Curriculum

To Validate Criteria for Analysis

To Identify Criteria for Critical analysis

To Validate Criteria for Critical Analysis

To Gather Curricular Units for Updating

To Analyse Curricula Critically

To validate the units identified

To Enrich the Curriculum

To implement the Curriculum

To Validate the Enriched Curriculum

To evaluate the Curriculum
3.2.1 Content Analysis

Content analysis simply defines the process of summarizing and reporting written data; its main contents and their messages. More strictly speaking, it defines a strict and systematic set of procedures for rigorous analysis, examination and verification of the contents of written data (Flick 1998: 192; Mayring 2004: 266). Krippendorp (2004: 18) defines it as ‘a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use. ‘Texts are defined as any written communicative materials which are intended to read, interpreted and understood by people other than the analysts (Krippendorp 2004:30).

Content analysis has several attractions. It is an unobtrusive technique (Krippendorp 2004: 40) in that one can observe without being observed (Robson 1993: 280). It focuses on language and linguistic features, meaning in context, is systematic and verifiable, as the rules for analysis are explicit transparent and public (Mayring 2004: 267-9). As the data are in a permanent form (texts), verification through analysis and replication is possible.

Weber sees the purposes of content analysis as including the coding of open ended questions in surveys, the revealing of focus of individual, group,
institutional and social matters, and the description of patterns and trends in communicative content. It indicates the role of statistical techniques in content analysis: indeed Weber (1990: 10) suggests that the highest quality content analytic studies use both quantitative and qualitative analysis of texts (texts defined as any form of written communication).

Ezzy (2002: 83) suggests that content analysis starts with a sample of texts (the units), defines the units of analysis and the categories to be used for analysis, reviews the texts in order to code them and place them into categories, and then counts and logs the occurrences of words, codes and categories. From here statistical analysis and quantitative methods are applied, leading to an interpretation of the results. Simply content analysis involves coding, categorizing, comparing and concluding.

Anderson and Arsenault (1998: 102) indicate the quantitative nature of content analysis when they state that, ‘content analysis involves counting concepts, words or occurrences in documents and reporting them in tabular form’.

In the words of Cohen, Manion and Morrison (2007: 476-483) the whole process of content analysis can follow eleven steps. In the present study the investigator followed the eleven steps for content analysis.
Step 1: Define the Research Questions to be Addressed by the Content Analysis.

This means what one wants from the texts to be content-analysed.

Following were the research questions addressed by the content analysis:

- What are the different aspects of M.Ed. curriculum?
- What are the different dimensions of each of the aspects of M.Ed. curriculum?
- What are the most common aspects and dimensions found in M.Ed. curricula of different universities in the country?
- What new aspects and dimensions are to be added to prepare an enriched M.Ed. curriculum?

Step 2: Define the Population from which Units of Texts are to be Sampled.

The population here refers to text-the domain of the analysis. Population of the content analysis was the M.Ed. curricula offered in all the Indian universities where M.Ed. is offered.

Step 3: Define the Sample to be Selected.

Here the rules of sampling people can be applied equally well to documents. The key issue of sampling apply to the sampling of texts: representativeness, access, size of the sample and generalisability of the study. Question of
sampling arises directly out of the issue of defining the population on which the research will focus. M.Ed. Curricula offered in 37 universities were selected as the sample for content analysis of the study. Stratified sampling was followed by considering the curricula of universities from states of north, south, east and west in the country. The universities from where the curricula collected are situated in 15 states of the country. List of Universities and States where the universities belong to are given in the appendix.

**Step 4: Define the Context of the Generation of the Document.**

This will examine how the material was generated (Flick 1998); the authenticity and credibility of the documents.

The material of the content analysis was M. Ed. Curriculum collected from various universities in the country. Curriculum refers to all the activities and experiences that were planned and organized for students inside and outside educational institutions for realizing the goal of a particular programme or course. The M.Ed. curricula collected were the authentic documents developed by the curriculum committee, of the concerned university constituted by the university themselves for the purpose, including responsible persons of such as educationists, curriculum experts and other officials.
**Step 5: Define the Units of Analysis.**

This can be at very many levels, for example, a word, phrase, sentence, paragraph, whole text, people and themes.

The units of analysis are the components of curriculum. The three major components were;

1. Administrative components.
2. Educative components.
3. Evaluative components.

**Step 6: Decides the Codes to be Used in the Analysis.**

Codes can be at different levels of specificity and generality when defining content and concepts.

There are minor components under each of the major components. The major components are coded as ‘aspects’ and minor components are coded as ‘dimensions’.

**Step 7: Construct the Category for Analysis.**

Categories are main groupings of constructs or key features of the text, showing links between units of analysis. Categories formed for analysis are;
PROCEDURE

- Number of universities
- Percentage of number of universities
- Maximum number of universities
- Highest Percentage of number of universities

**Step 8: Conduct the Coding and Categorizing of the Data.**

Here the codes decided for analysis are categorized. The codes are categorised as,

- Aspects offered by maximum number of universities.
- Dimensions offered by maximum number of universities.
- Number of universities offering each of the aspects identified.
- Number of universities offering each of the dimensions identified.
- Percentage of universities offering each of the aspects identified.
- Percentage of universities offering each of the dimensions identified.

**Step 9: Conduct the Data Analysis.**

Once the codes and categories have been decided, the analysis can be undertaken. Miles and Huberman strongly advocate that the graphic display of data as an economical means of reducing qualitative data.
Analysis of the curricula was conducted in this step and results were presented in tables. Data was displayed by means of Column diagrams and Pie diagrams too.

**Step 10: Summarizing.**

The summary will identify key factors, key issues, key concepts and key areas for subsequent investigation.

The aspects and dimensions offered by highest percentage of number of universities could be identified.

**Step 11 : Making Speculative Inferences.**

This is an important stage, for it moves the research from description to inference. Inferences were made based on the result of the analysis.

Content analysis was done in the present study to identify the dimensions of various aspects of M. Ed curriculum. It was to get a clear picture of the importance given to different aspects and dimensions of the curriculum by the universities from where the curricula were collected.

**3.2.2 Experimental Research**

In the present study the investigator decided to adopt experimental research to test the effectiveness of the enriched curricular inputs on
prospective teacher educators. To carry out the present research work the investigator adopted the one-group pre-test post-test experimental design.

For this the investigator selected two minor dimensions of the enriched curriculum and provided treatment in those dimensions on prospective teacher educators after conducting pre-test. A post test was conducted after treatment and effectiveness was assessed using statistical technique.

The intervention was done by implementing two aspects of the enriched M.Ed. curriculum such as research guidance competency and training competency on the prospective teacher educators. The student trainers belong to a homogeneous group with respect to their age, course which they undergo, basic qualification and faculties who engage their classes. In the study the two competences were tested before and after the implementation of the enriched curricular input. For pre-test and post-test the same test was used.

3.3.0 POPULATION OF THE STUDY

A population refers to any collection of specified group of human beings or of non-human entities such as objects, educational institutions, time units or geographical areas (Lokesh Koul: 2008). The present study is a combination of content analysis and experimental research. The population of each of
these is different. Population of the content analysis includes the M.Ed. curricula offered in all the Indian universities where M.Ed. is offered. The population of the experimental research is the students studying for M.Ed. programme in various universities and affiliated colleges of education in the country.

3.4.0 SAMPLE FOR THE STUDY

Question of sampling arises directly out of the issue of defining the population which is the focus of the investigation. M.Ed. Curricula prescribed in 37 universities to offer the programme under the Departments of Education and affiliated colleges were selected as the sample for content analysis of the study. Universities from North, South, East and West parts of the country were considered for collection of curricula. The universities from where the curricula collected are situated in 15 states of the country. List of Universities and States where the universities belong to are given in the table 3.1.
### TABLE 3.1

**List of Universities from where Curricula were collected for the study**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of University</th>
<th>Name of State</th>
<th>Year in the Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Alagappa University</td>
<td>Tamil Nadu</td>
<td>2008</td>
</tr>
<tr>
<td>2</td>
<td>Annamalai University</td>
<td>Tamil Nadu</td>
<td>2003-2004</td>
</tr>
<tr>
<td>3</td>
<td>Banaras Hindu University</td>
<td>Uttar pradesh</td>
<td>2004</td>
</tr>
<tr>
<td>4</td>
<td>Bangalore University</td>
<td>Karnataka</td>
<td>2005</td>
</tr>
<tr>
<td>5</td>
<td>Barkathullah University</td>
<td>Madhya Pradesh</td>
<td>2006</td>
</tr>
<tr>
<td>6</td>
<td>Bharathideasan University</td>
<td>Madhya Pradesh</td>
<td>2006</td>
</tr>
<tr>
<td>7</td>
<td>Bharathiyar University</td>
<td>Tamil Nadu</td>
<td>2007-2008</td>
</tr>
<tr>
<td>8</td>
<td>Calcutta University</td>
<td>West Bengal</td>
<td>2004</td>
</tr>
<tr>
<td>9</td>
<td>Delhi University.</td>
<td>Delhi</td>
<td>2005-2006</td>
</tr>
<tr>
<td>10</td>
<td>Dilburgarh University</td>
<td>Madhya Pradesh</td>
<td>2006</td>
</tr>
<tr>
<td>11</td>
<td>Dr. Babasaheb Ambedkar Marathwada University</td>
<td>Maharashtra</td>
<td>2007</td>
</tr>
<tr>
<td>12</td>
<td>Gulbarga University.</td>
<td>Karnataka</td>
<td>2008</td>
</tr>
<tr>
<td>13</td>
<td>IASE Deemed University</td>
<td>Rajasthan</td>
<td>2005-2006</td>
</tr>
<tr>
<td>14</td>
<td>Indira Gandhi Open University</td>
<td>Delhi</td>
<td>2010</td>
</tr>
<tr>
<td>15</td>
<td>Jamia Millia Islamia</td>
<td>Delhi</td>
<td>2002-2003</td>
</tr>
<tr>
<td>16</td>
<td>Jivaji University.(NOPO)</td>
<td>Madhya Pradesh</td>
<td>2008</td>
</tr>
<tr>
<td>17</td>
<td>Kannur University.</td>
<td>Kerala</td>
<td>2006</td>
</tr>
</tbody>
</table>
### TABLE 3.1(a)

**List of Universities from where Curricula were collected for the study**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of University</th>
<th>Name of State</th>
<th>Year in the Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Karnatak University</td>
<td>Karnataka</td>
<td>2005</td>
</tr>
<tr>
<td>19</td>
<td>Karnataka State Open University</td>
<td>Karnataka</td>
<td>2008</td>
</tr>
<tr>
<td>20</td>
<td>Kuvempu University</td>
<td>Karnataka</td>
<td>2004</td>
</tr>
<tr>
<td>21</td>
<td>Madurai Kamaraj University</td>
<td>Tamil Nadu</td>
<td>2006</td>
</tr>
<tr>
<td>22</td>
<td>Maharshi Dayanand Saraswathi University</td>
<td>Haryana</td>
<td>2010</td>
</tr>
<tr>
<td>23</td>
<td>Mahatma Gandhi University</td>
<td>Kerala</td>
<td>2003</td>
</tr>
<tr>
<td>24</td>
<td>Maulana Azad National Urdu University</td>
<td>Andhra Pradesh</td>
<td>2008</td>
</tr>
<tr>
<td>25</td>
<td>North Gujarat University</td>
<td>Gujarat</td>
<td>2008</td>
</tr>
<tr>
<td>26</td>
<td>North Eastern Hill University</td>
<td>Nagaland</td>
<td>2008</td>
</tr>
<tr>
<td>27</td>
<td>Osmania University</td>
<td>Andhra Pradesh</td>
<td>2003-2004</td>
</tr>
<tr>
<td>28</td>
<td>Pondicherry University</td>
<td>Pondicherry</td>
<td>2007</td>
</tr>
<tr>
<td>29</td>
<td>Sri Venkteswara University</td>
<td>Andhra Pradesh</td>
<td>2004</td>
</tr>
<tr>
<td>30</td>
<td>Tripura University</td>
<td>Tripura</td>
<td>2008</td>
</tr>
<tr>
<td>31</td>
<td>University of Calicut</td>
<td>Kerala</td>
<td>2004</td>
</tr>
<tr>
<td>32</td>
<td>University of Kashmir</td>
<td>Jammu-Kashmir</td>
<td>2004</td>
</tr>
</tbody>
</table>
TABLE 3.1(b)

List of Universities from where Curricula were collected for the study

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of University</th>
<th>Name of State</th>
<th>Year in the Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>University of Kerala</td>
<td>Kerala</td>
<td>2007</td>
</tr>
<tr>
<td>34</td>
<td>University of Madras</td>
<td>Tamil Nadu</td>
<td>2006</td>
</tr>
<tr>
<td>35</td>
<td>University of Mysore</td>
<td>Karnataka</td>
<td>2003-2004</td>
</tr>
<tr>
<td>36</td>
<td>University of Pune.</td>
<td>Maharashtra</td>
<td>2008</td>
</tr>
<tr>
<td>37</td>
<td>University of Rajasthan.</td>
<td>Rajasthan</td>
<td>2008</td>
</tr>
</tbody>
</table>

Apart from the curricula stated above the investigator referred the curricula of National Council for Teacher Education, Tamil Nadu University for Teacher Education and of the syllabus prescribed for UGC NET examination 2009.

The sample for the experimental study was drawn using purposive sampling technique. In purposive sampling researchers handpick the cases to be included in the sample on the basis of their judgement of their typicality or possession of the particular characteristics being sought. In this way they build up a sample that is satisfactory to their specific needs. As its name suggests, the sample has been chosen for a specific purpose.
As the investigator was working as teacher educator in Farook Training College, M. Ed. Students of the College was taken as the sample for experimental part of the study. The strength of the students was 19 at the time of the experimentation and so the size of the sample was 19.

3.5.0 TOOLS FOR THE STUDY

The investigator prepared the following tools with the help of his supervising teacher for the smooth conduct of the study.

1. Questionnaire for Validation of Criteria to be employed for Content Analysis.

2. Questionnaire for Validation of Criteria to be employed for Critical Analysis.

3. Questionnaire for Validation of Criteria to be employed for Gathering Curricular inputs for Updating Curriculum.

4. Research Guidance Competency Assessment Scale.

5. Micro Teaching Training Competency Observation Schedule.

7. Semi – structured Interview Schedule for Validating the Enriched Curricular Inputs.

3.5.1 QUESTIONNAIRE FOR VALIDATION OF CRITERIA TO BE EMPLOYED FOR CONTENT ANALYSIS

The tool was prepared in order to validate the criteria formulated by the investigator with the help of his supervisor teacher for analysing the collected curricula. A copy of the tool is given in Appendix ‘A’.

Construction of the tool

To analyse the collected curricula the investigator formulated certain criteria with the help of his supervisor by identifying the various aspects and dimensions of the curricula in general. The tool was constructed as a questionnaire to assess the adequacy, relevance and feasibility of each of the criteria formulated.

Description of the tool

The adequacy, relevance and feasibility of criteria to be employed to analyse the curricula can be assessed using the tool. There are 17 items in the tool related to the criteria for analysing the curricula. Validity of the criteria formulated can be found out with respect to adequacy, relevance and
feasibility by scoring the responses of the master trainers and curriculum experts in the field of education.

Administration of the tool

The investigator will administer the tool in person to master trainers and curriculum experts in the field of teacher educator preparation. The intention of the tool will be discussed before hand and the tool will be provided for recording their responses. Their valuable suggestions will be noted and response sheets will be collected.

Scoring

Each of the item in the tool has two alternative responses such as ‘yes’ and ‘no’ among which the subject has to select. A score of 1 and 0 are to be given to the responses ‘yes’ and ‘no’ respectively.

Validation of the tool

Validity

There were 17 items in the tool, based on the aspects and dimensions of the curricula, from which all the items were selected as valid by the experts in the Department of Education, Alagappa University. Validity of the tool was established and approved by experts and master trainers in Alagappa University and University of Calicut. The list of panel of experts
who were consulted for validity of the tool was given at the end of this section “Tools for the Study’

3.5.2 QUESTIONNAIRE FOR VALIDATION OF CRITERIA TO BE EMPLOYED FOR CRITICAL ANALYSIS

The tool was prepared in order to find out how far the criteria to be employed for critical analysis of the curricula would be adequate, relevant, and feasible. A copy of the tool is given in Appendix ‘B’.

Construction of the tool

The criteria to be observed for critically analysing the curricula were identified. The tool was a questionnaire to establish the validity of the criteria in each step of critical analysis. For this the adequacy, relevance, and feasibility of the steps were to be tested.

Description of the tool

The tool consists of 13 items indicating the criteria for critical analysis of the curricula. There are six columns against each item. Adequacy, Relevance and feasibility of the criteria used can be assessed by scoring the responses made by the experts in the respective columns.
Administration of the tool

The investigator will administer the tool in person to master trainers and curriculum experts in the field of teacher educator preparation. The intention of the tool is to test the validity of the criteria to be employed for critical analysis of the curriculum. Their valuable suggestions will be noted and response sheets will be collected.

Scoring

Each of the items in the tool has two alternative responses ‘yes’ and ‘no’ under each of the three sections – ‘adequacy’ ‘relevance’ and ‘feasibility’. A score of ‘1’ will be given for every ‘yes’ response and ‘0’ for every ‘no’ response.

Validation of the tool

Validity

The validity of the tool was established and approved by experts and master trainers in Alagappa university and university of Calicut. The list of panel of experts who were consulted for validity of the tool was given at the end of this section ‘Tools for the Study’
3.5.3 QUESTIONNAIRE FOR VALIDATION OF CRITERIA TO BE EMPLOYED FOR GATHERING CURRICULAR INPUTS FOR UPDATING CURRICULUM

The tool was prepared for validating the criteria to be employed for gathering curricular units for updating curriculum. A copy of the tool is given in Appendix ‘C’.

Construction of the tool

The tool was constructed by framing items to find out the adequacy, relevance, and feasibility of the criteria formulated to gather curricular units for updating curriculum. The intention of the tool is thus to establish the validity of the criteria to be observed in each step of updating curriculum.

Description of the tool

The tool consists of 15 items indicating the criteria for selecting various aspects and dimensions of the curricula to be incorporated in the updated curriculum. There are six columns against each item. Adequacy, Relevance and feasibility of the criteria to be used can be assessed by scoring the responses made by the experts in the respective columns.
**Administration of the tool**

The investigator will administer the tool in person to master trainers and curriculum experts in the field of teacher educator preparation. Validity of the criteria to be observed for gathering aspects and dimensions of the curricula for updating the curriculum will be found out. Their valuable suggestions will be noted and response sheets will be collected.

**Scoring**

Each of the items in the tool has two alternative responses ‘yes’ and ‘no’ under each of the three sections – ‘adequacy’ ‘relevance’ and ‘feasibility’. A score of ‘1’ will be given for every ‘yes’ response and ‘0’ for every ‘no’ response.

**Validation of the tool**

**Validity**

The validity of the tool was established and approved by experts and master trainers in Alagappa university and university of Calicut. The list of panel of experts who were consulted for validity of the tool was given at the end of this section “Tools for the Study’
3.5.4 RESEARCH GUIDANCE COMPETENCY ASSESSMENT SCALE

A scale was prepared for assessing research guidance competency of student trainers with respect to ‘Problem Selection’ before and after the implementation of enriched curricular inputs. A copy of the tool is given in Appendix ‘D’

Construction of tests

The tool was constructed by framing items based on the components of ‘Problem Selection’.

Description of the tool

The test consists of 10 items prepared to assess the research guidance competency of student trainers in ‘Problem Selection’. It is a five point scale with levels of performance Very Good, Good, Average, Poor and Very Poor.

Administration of the test

The investigator will assess the Research Guidance Competency of student trainers with respect to Problem Selection’ before and after the intervention using the scale. The assessed sheets will be scored.
Scoring

A score of five, four, three, two and one will be given for levels of performance Very Good, Good, Average, Poor and Very Poor respectively.

Validation of the tool

Validity

The validity of the scale was approved by experts and master trainers in Alagappa university and university of Calicut. The list of panel of experts who were consulted for validity of the tool was given at the end of this section “Tools for the Study’

Reliability

Pilot Study

Test – retest method was employed to find out reliability of the tool. The tool was administered on ten M.Ed. students other than the experimental sample twice with a period of interval of three weeks. The reliability coefficient was found to be 0.7621 which is significant. This shows that the tool is reliable.
3.5.5 MICRO TEACHING TRAINING COMPETENCY OBSERVATION SCHEDULE

An observation schedule was prepared for assessing micro teaching training competency of student trainers before and after the implementation of enriched curriculum. A copy of the Schedule is given in appendix ‘E’.

Construction of the tool

The observation schedule was prepared by framing items based on the major steps to be followed for micro teaching training.

Description of the tool

The test consists of four dimensions of five stages prepared to assess the micro teaching training competency of student trainers in those sections. It can be assessed by observing the development of student trainers in all the stages and marking their performance in the schedule.

Administration of the tool

The investigator will observe and evaluate the performance of student trainers’ micro teaching training competency before and after the intervention based on the enriched curricular inputs. The evaluation sheets will be scored and their competency will be assessed.
**Scoring**

Each of the dimensions in the observation schedule will be observed and evaluated. A score of 5, 4, 3, 2 and 1 will be assigned to the levels of performances Very Good, Good, Average, Poor and Very Poor respectively.

**Validation of the tool**

**Validity**

The validity of the observation schedule was approved by experts and master trainers in Alagappa university and university of Calicut. The list of panel of experts who were consulted for validity of the tool was given at the end of this section “Tools for the Study’

**Reliability**

**Pilot Study**

Test – retest method was employed to find out reliability of the tool. The tool was administered on ten M.Ed. students other than the experimental sample twice with a period of interval of three weeks. The reliability coefficient was found to be 0.7215 which is significant. This shows that the tool is reliable.
3.5.6 SEMI STRUCTURED INTERVIEW SCHEDULE FOR VALIDATING THE CURRICULAR INPUTS GATHERED FOR UPDATED CURRICULUM

The tool was prepared for validating the curricular units gathered for updated curriculum. A copy of the tool is given in Appendix ‘F’.

Construction of the tool

The tool was constructed by framing items to find out the adequacy, relevance, and feasibility of the curricular units gathered for updated curriculum. The intention of the tool was thus to establish the validity of the units gathered for updated curriculum.

Description of the tool

The tool consists of 15 items indicating various aspects and dimensions of the curricula incorporated in the updated curriculum. The interview can be conducted based on these dimensions and adequacy, relevance and feasibility of the curricular units gathered for updated curriculum can be established by analysing the responses made by the experts.
Administration of the tool

The investigator will administer the tool in person to master trainers and curriculum experts in the field of teacher educator preparation. Validity of the curricular units gathered for updated curriculum will be established. Their valuable responses and suggestions will be recorded.

Validation of the tool

Validity

The validity of the tool was established and approved by experts and master trainers in Alagappa university and university of Calicut. The list of panel of experts who were consulted for validity of the tool was given at the end of this section “Tools for the Study”

3.5.7 SEMI STRUCTURED INTERVIEW SCHEDULE FOR VALIDATING THE ENRICHED CURRICULAR INPUTS

The tool was prepared for validating the Enriched Curricular Units. A copy of the tool is given in Appendix ‘G’.

Construction of the tool

The tool was constructed by framing items to find out the adequacy, relevance, and feasibility of the Enriched curricular units. The intention of the tool was thus to establish the validity of the Enriched Curricular Inputs.
Description of the tool

The tool consists of 14 items indicating various aspects and dimensions of the Enriched Curriculum. The interview can be conducted based on these dimensions and adequacy, relevance and feasibility of the Enriched curricular Inputs can be established by analysing the responses made by the experts.

Administration of the tool

The investigator will administer the tool in person to master trainers and curriculum experts in the field of teacher educator preparation. Validity of the Enriched curricular Inputs will be established. Their valuable responses and suggestions will be recorded.

Validation of the tool

Validity

The validity of the tool was established and approved by experts and master trainers in Alagappa university and university of Calicut. The list of panel of experts who were consulted for validity of the tool was given below.

The panel of Experts who were consulted for validating the Tools prepared for the study.
1. Dr. P. Prema, Research Supervisor, Chairperson, School of Education; Head, Department of Education, Alagappa University, Karaikudi, Tamilnadu.

2. Dr. C.R. Vasantha, Former Principal, Alagappa College of Education, Karaikudi, Tamilnadu.

3. Dr. Nirmala Devi, Former Principal, Farook Training College, Calicut, Kerala.

4. Prof. K.M Abdur Rasheed, Former Registrar, Kannur University, Kannur, Kerala.

5. Mr. P.P. Noushad, Assistant Professor, Farook Training College, Calicut, Kerala.

6. Dr. Mumthaz, Assistant Professor, Farook Training College, Calicut, Kerala.

7. Dr. Vijaya Kumari, Assistant Professor, Farook Training College, Calicut, Kerala.

8. Dr. A. Hameed, Department of Education, University of Calicut, Calicut, Kerala.

9. Dr. Manikandan, Associate Professor, Department of Psychology, University of Calicut, Calicut, Kerala.

3.6.0 METHODOLOGY

The study was conducted in two stages. The first stage of the study was content analysis. In the second stage experimental design was adopted. The two stages altogether included 13 phases as shown in the flow chart.
FLOW CHART SHOWING THE DESIGN OF INVESTIGATION

To collect M.Ed. Curricula of various Universities in India

To Identify Criteria for Curriculum Analysis

To Validate the Criteria for Curriculum Analysis

To Analyse Curriculum.

To Validate Criteria for Critical Analysis

To Identify Criteria for Critical Analysis

To Analyse Curricula Critically.
To Gather Curricular Units for Updating Curriculum

To Validate the units identified

To Enrich the Curriculum

To Validate the Enriched Curriculum

To Implement the Curriculum

To Evaluate the Curriculum

Each of these phases is discussed in detail in the following sections

3.6.1 COLLECTION OF M.ED CURRICULA FROM VARIOUS UNIVERSITIES IN INDIA

As the first phase of the study is collection of curricula the investigator collected M.Ed. curricula from various Universities in the country. For this
the investigator sought the help of his friends to contact their friends working as teacher educators in other states of the country. Thus he contacted them through phone, letter and e-mail and could collect curricula of thirty seven universities from thirteen states giving representation to the Northern, Southern, Eastern, Western and Middle part of the country. List of Universities from which curricula collected is given as appendix.

3.6.2 IDENTIFICATION OF CRITERIA FOR CURRICULUM ANALYSIS

Considering the steps from five to eight suggested for content analysis (Cohen, L. et al.) (2007) the investigator identified the following criteria for curriculum analysis.

1. Analysing Curricula as;
   Administrative Components
   Educative Components
   Evaluative Components

2. Analysing Components as;
   Aspects (Major Components)
   Dimensions (Minor Components)

3. Analysing Aspects of Administrative Components as;
   Mode of Offering the Programme
   Duration of the Programme
   Pattern of the Programme
4. Analysing Aspects of Educatve Components as;
   Syllabus
   Mode of transaction

5. Analysing Aspects of Evaluative Components as;
   Scheme of Examination

6. Analysing Dimensions of Mode of offering the Programme as;
   Regular
   Part-time
   Distance

7. Analysing Dimensions of Duration of the Programme as;
   One year
   Two years

8. Analysing Dimensions of Pattern of the Programme as;
   Semester Pattern
   Non-Semester Pattern

9. Analysing Dimensions of Syllabus of the Programme as;
   Categories of Subjects
   Objectives of Subjects
   Resource Materials of Subjects

10. Analysing Dimensions of Categories of Subjects as;
    Core Subjects
    Optional Subjects

11. Analysing the Dimensions of Objectives of Core subjects as;
    Objectives stated for all subjects
    Objectives not stated for any subjects

12. Analysing Dimensions of Core Subjects as;
    Core Subjects
    Number of Core Subjects
    Core subjects wise breakup of number of Universities
13. Analysing the Dimensions of Optional Subjects as;
   - Title used for Optional Subjects
   - Optional Subjects
   - Number of Groups of Optional Subjects
   - Number of Optional Subjects

14. Analysing the Units of Core Subjects

15. Analysing Dimensions of Resource Materials of Core Subjects as;
   - Resource Materials prescribed for all subjects
   - Resource Materials prescribed for some subjects
   - Resource Materials not prescribed for any subjects

16. Analysing Dimensions of Mode of Transaction of the Programme as;
   - Lecturing
   - Practicum
   - Practical Activities

17. Analysing Dimensions of Scheme of Examination of the Programme as;
   - Total marks
   - Total for Subjects
   - Total for Practical Activities

   Based on the given dimensions, criteria were developed to analyse the curricula.

3.6.3 VALIDATION OF CRITERIA FOR CURRICULUM ANALYSIS

The criteria formulated for analysing curricula were validated using the tool for validating the criteria prepared by the investigator with the help of the
supervisor. The ‘relevance’ ‘adequacy’ and ‘feasibility’ of the criteria were
assessed by administering the tool among the teacher educators, educationists and curriculum experts of the university of Calicut and Alagappa University and the validity of the criteria was established.

3.6.4 ANALYSING THE CURRICULA

The fourth phase of the present study is content analysis, i.e., analysis of M.Ed. curricula collected from various Universities following the criteria formulated. This is to get a clear picture of the different aspects and dimensions of MEd curriculum and the dimension which are given more representation with respect to the number of universities which offer that dimension. The important aspects and dimensions of M Ed curriculum considered for analysis are given in the table 3.30.
### TABLE 3.2

**Curricular Aspects and Dimensions to be analysed**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Aspects and Dimensions for Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mode of offering</td>
</tr>
<tr>
<td>2</td>
<td>Duration of course</td>
</tr>
<tr>
<td>3</td>
<td>Pattern of Course</td>
</tr>
<tr>
<td>4.</td>
<td>Syllabus</td>
</tr>
<tr>
<td>5</td>
<td>Categories of Subjects</td>
</tr>
<tr>
<td>6</td>
<td>Core Subjects</td>
</tr>
<tr>
<td>7</td>
<td>Number of Core Subjects</td>
</tr>
<tr>
<td>8</td>
<td>Core Subjects wise breakup of number of Universities</td>
</tr>
<tr>
<td>9</td>
<td>Units in Core Subjects</td>
</tr>
<tr>
<td>10</td>
<td>Optional Subjects</td>
</tr>
<tr>
<td>11</td>
<td>Title used for Optional Subjects</td>
</tr>
<tr>
<td>12</td>
<td>Number of groups Optional Subjects</td>
</tr>
<tr>
<td>13</td>
<td>Number of Optional Subjects</td>
</tr>
<tr>
<td>14</td>
<td>University wise break up of Optional Subjects offered</td>
</tr>
<tr>
<td>15</td>
<td>Objectives of Subjects</td>
</tr>
<tr>
<td>16</td>
<td>Objectives of Core Subjects</td>
</tr>
<tr>
<td>17</td>
<td>Resource Materials listed</td>
</tr>
</tbody>
</table>
### TABLE 3.3(a)

Curricular Aspects and Dimensions to be analysed

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Aspects and Dimensions for analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Resource Materials listed in Core Subjects</td>
</tr>
<tr>
<td>19</td>
<td>Mode of transaction of curriculum</td>
</tr>
<tr>
<td>20</td>
<td>Lecturing</td>
</tr>
<tr>
<td>21</td>
<td>Practicum</td>
</tr>
<tr>
<td>22</td>
<td>Preparing Assignments (Detailed Note)</td>
</tr>
<tr>
<td>23</td>
<td>Presentation of Seminar</td>
</tr>
<tr>
<td>24</td>
<td>Internal Tests</td>
</tr>
<tr>
<td>25</td>
<td>Practical Activities</td>
</tr>
<tr>
<td>26</td>
<td>Field Based Experience</td>
</tr>
<tr>
<td>27</td>
<td>Dissertation</td>
</tr>
<tr>
<td>28</td>
<td>Scheme of Examination</td>
</tr>
<tr>
<td>29</td>
<td>Total Marks</td>
</tr>
<tr>
<td>30</td>
<td>Total Marks per subject</td>
</tr>
<tr>
<td>31</td>
<td>Total Marks for Dissertation</td>
</tr>
</tbody>
</table>

Analyses were carried out for each of the given aspects and dimensions with respect to the number of universities offering the aspects and dimensions and discussed in detail in the following sections.
3.6.4.1 Mode of offering the course

Mode of offering the course refers to whether the course is offered as a regular course. It is an important aspect of the curriculum as it implies the freedom it can offer to the students who seek the course. Hence the investigator analyzed them and identified the modes of offering M.Ed. course offered in various universities. Following are identified as the different modes of offering the course in different universities.

- Regular
- Part time
- Distance

**Regular Mode** refers to one which stipulates compulsory regular attendance of students and there by regular discharge of academic activities.

**Part – time Mode** refers to one which does not stipulate attendance during day time. Generally it is offered during evenings after regular working hours and it is meant for the aspirers, of the course, who are otherwise employed. The mode is scheduled so flexibly that in service teachers can undergo the course. It is exclusively meant for in service teachers.
**Distance Mode** refers to one which does not insist regular attendance of students who seek the course. Generally a compulsory contact programme of fifteen days each should be attended by every candidate pursuing the course on distance mode.

### 3.6.4.2 Duration of offering the course

After analyzing the curricula to study the mode of offering the course the investigator analyzed the duration of the M.Ed. course existing in various universities. It is found that the duration of the M.Ed. course followed in the universities is as under.

- One year
- Two years

### 3.6.4.3 Pattern of offering the course

After analyzing the curricula for duration of course the investigator analyzed the curricula to identify the patterns followed for the M.Ed. course in various universities. The patterns are given below.

- Semester pattern
- Non Semester pattern

### 3.6.4.4 Syllabus

Syllabus refers to list of topics or books students should study in a
particular subject or subjects for a course or programme. Here this aspect was analysed as

- Categories of Subjects
- Objectives of Subjects
- Resource Materials of Subjects

3.6.4.5 Categories of Subjects

Every course aims at developing certain essential competencies in the students who pursue them. Teacher trainer preparation course aims at developing certain essential competencies required to train teachers and teacher trainers in the students who pursue the course. Apart from this certain other competencies according to the interests and aptitudes of the pursuers of the course are also aimed at.

‘Categories of subjects’ refers to the subjects categorized with respect to the importance attributed to each subject of study for the course. There are a number of subjects for the course to study. Some are essential for the course and some are beneficial for the students even though they are not essential for those who undergo the course.

3.6.4.6 Core Subjects:

‘Core subjects’ refers to the subjects to be studied compulsorily by every student trainer. Core subjects offered by all universities are not the
same. Some subjects are offered by most of the universities. In addition to the common subjects certain universities offer some other subjects too as core subjects.

### 3.6.4.7 Number of Core Subjects Offered

In this stage the investigator analysed the number of subjects offered by universities altogether under Core subjects. The number of core subjects offered by different universities is different. Universities under study offer three, four, five, six, seven or eight core subjects. In this section the investigator analysed the number of universities which offer each of the above number of core subject.

### 3.6.4.8 Units in Core Subjects

After identifying the core subjects to be included in the updated curriculum the investigator analysed the units of subjects wise break up of number of universities.

### 3.6.4.9 Optional Subjects

‘Optional subjects’ refers to the subjects, prescribed for the course, which every learner should study compulsorily selecting two, three or four subjects as the case may be prescribed by the University from the same or different groups of subjects categorized as optional subjects. It aims at developing
competency in any of the offered subjects other than core subjects, in which the student has comparatively more interest and aptitude. It is to make the student trainers specialize in any of the subjects to be mastered by them. The number and kind of Optional subjects offered by different universities differ.

3.6.4.10 Title used for Optional Subjects

Optional subjects are offered in the following titles.

- Optional Subjects
- Specialization Subjects
- Elective Subjects

3.6.4.11 Optional Subjects:

The subjects of study other than core subjects are offered as Optional subjects in most of the universities. Number of universities offering the subjects under this title is found out.

3.6.4.12 Specialization Subjects:

In some universities the subjects offered in addition to core subjects are considered as Specialization Subjects. Number of universities offering the subjects under this title is found out.
3.6.4.13 Elective Subjects:

Apart from core subjects the subjects offered in certain universities are considered as Elective Subjects. Number of universities offering the subjects under this title is found out.

3.6.4.14 Number of Optional Subjects Offered

In this stage the investigator found out the number of subjects offered by universities altogether under Optional Subjects. Ninety subjects are offered as Optional Subjects under the above heads by the universities under study altogether.

3.6.4.15 Number of Groups of Optional Subjects Offered

In the case of number of groups of specialization subjects and Elective subjects Universities offer one, two, three or eight groups. The number of Groups of Optional subjects wise breakup of number of Universities is done in this section.

3.6.4.16 Number Optional Subjects Offered wise breakup of Number of Universities

The subjects other than core are offered under the heads Optional, Specialization, or Elective subjects. In some universities these subjects are offered under two heads - Specialization and Elective subjects. The number
of Optional subjects offered by the universities ranges from one to four. Number of Universities offering different number of Optional subjects were analysed in this section.

3.6.4.17 Objectives of Subjects

As the number of optional subjects was too large to analyse the objectives of each of them offered in different universities the investigator delimited the task of analysing the objectives to that of core subjects.

3.6.4.18 Objectives of core subjects

The objectives of imparting Core subjects stated in the curricula under study were analysed and categorized them with respect to the number of universities as ‘Objectives stated for all subjects’ and ‘Objectives not stated for any subjects’.

3.6.4.19 Resource Materials listed

Considering the large number of optional subjects in the curricula and the effort of analysing the resource materials listed for each of the subjects in different universities, the investigator delimited the task of analysing the resource materials to that of core subjects.

3.6.4.20 Resource Materials listed in core subjects

In the curricula collected for the present study from various
universities resource materials were listed after the detailed description of units of subjects to be covered under core and optional subjects. The investigator analysed the resource materials stated for core subjects in the curricula with respect to the number of universities as: Resource Materials Prescribed for all subjects, Resource Materials prescribed for some subjects and Resource Materials not prescribed for any subjects.

3.6.4.21 Modes of Transaction of Curriculum

This refers to all the activities being carried out in and out of class rooms as part of M.Ed. course. Analysis of Mode of Transaction of Curriculum aims at the identification of all the activities followed for transacting curriculum as stated in the curricula collected from various Universities. For this the investigator went through all the collected curricula, identified the different activities offered by various universities and listed them. It was found that following are the important activities offered by different Universities for M Ed. course.

- Lecture Class
- Practicum or Sessional Work
- Practical Activities
3.6.4.22 Lecture Class

‘Lecture Class’ refers to oral presentation of content made by concerned lecturers in the class. The investigator analyzed the curricula to find out how far it is popular for transaction of M.Ed. curriculum in the universities.

3.6.4.23 Practicum or Sessional work

‘Practicum’ or ‘Sessional work’ refers to the activities assigned to the students to develop in them subject matter mastery, skill in preparing assignments and skill in presenting seminar in all the subjects to be covered as per syllabus. Practicum is offered to assess their performance in the subjects concerned and award internal or sessional marks to the student trainers. Practicum involves the following.

- Seminar Presentation
- Assignment Preparation
- Attending Internal Tests

3.6.4.24 Practical Activities

‘Practical Activities’ refers to the activities intended to provide first-hand experience to student trainers by engaging themselves in it. Following are practical activities offered in the universities under study.
• Field based Experience
• Dissertation

3.6.4.25 Field based Experience

‘Field based Experience’ refers to visiting and observing the practice teaching classes of student teachers. This includes the experience the student trainer gains while interacting with, the principals or heads of institutions where the student teachers undergo their practice teaching programme, the concerned teachers of student teachers in the school, the student teachers whose practice teaching session he or she observes and, the students in the school where the practice teaching session is undergone.

3.6.4.26 Dissertation

‘Dissertation’ refers to research or thesis work on any topic of educational importance to be carried out by students under the guidance of a supervising teacher. It is to develop a positive attitude towards educational research and competence in doing research.

3.6.4.27 Scheme of Examination

The schemes of examination followed in the curricula under study were analysed with respect to the number of universities as;

Total Marks
Total for Subjects
Total for Practicals.
3.6.4.28 Total Marks

Total marks offered for theory, practicum and practical activities were analysed in this section.

3.6.4.29 Total Marks per Subject

Total marks offered for each subject including internal and external were analysed.

3.6.4.30 Total Marks for Practicals

Total marks offered including both for internal and external for Dissertation is analysed.

3.6.5 IDENTIFICARION OF CRITERIA FOR CRITICAL ANALYSIS

Based on the results of the analysis the criteria was formulated for critical analysis of curricula.

- To decide among Regular, Part-time or Distance modes for offering the M.Ed. programme based on the percentage of number of universities offering them and to identify the gap.
- To decide between one year or two years for duration of M.Ed. programme based on the percentage of number of universities offering them and to identify the gap.
• To decide between Semester Pattern or Non-Semester Pattern for offering the M.Ed. programme based on the percentage of number of universities offering them and to identify the gap.

• To decide the number of core subjects to be offered for the M.Ed. Programme based on the percentage of number of universities offering them and to identify the gap.

• To decide which of the core subjects identified are to be selected for the M.Ed. Programme based on the percentage of number of universities offering them and to identify the gap.

• To decide the number of groups of optional subjects to be offered for the M.Ed. Programme based on the percentage of number of universities offering them and to identify the gap.

• To decide the number of optional subjects to be offered for the M.Ed. Programme based on the percentage of number of universities offering them and to identify the gap.

• To decide units of core subjects to be offered for the M.Ed. Programme based on the percentage of number of universities offering them and to identify the gap.

• To decide whether the following dimensions of the aspect, mode of transaction of curriculum, are to be offered based on the percentage of number of universities offering them and to identify the gap.
- Lecturing
- Practicum
- Practical Activities

- To decide whether the following dimensions of the aspect practical activities are to be offered based on the percentage of number of universities offering them and to identify the gap.
  - Field Based Experience
  - Dissertation

- To decide among the minor dimensions of the dimension ‘total marks’ of the aspect ‘scheme of examination’, which of them is to be offered based on the percentage of number of universities offering them and to identify the gap.

- To decide among the minor dimensions of the dimension ‘total marks for subjects’ of the aspect ‘scheme of examination’, which of them is to be offered based on the percentage of number of universities offering them and to identify the gap.

- To decide among the minor dimensions of the dimension ‘total marks for practical activities’ of the aspect ‘scheme of examination’, which of them is to be offered based on the percentage of number of universities offering them and to identify the gap.
3.6.6 VALIDATION OF CRITERIA FOR CRITICAL ANALYSIS

The criteria formulated for critical analysis were validated using the tool for validating the criteria prepared by the investigator with the help of the supervisor. The ‘relevance’ ‘adequacy’ and ‘feasibility’ of the criteria were assessed by administering the tool among the teacher educators, educationists and curriculum experts of the university of Calicut and Alagappa University and the validity of the criteria was established.

3.6.7 CRITICAL ANALYSIS OF CURRICULA

Critical analysis of a material refers to the detailed study of what the material consists of for making careful judgements about the good and bad qualities of the contents of the material. In this section the results of the analysis were studied in detail to decide between the dimensions of various aspects and to gather curricular units for updating curriculum and to identify the gaps to be filled in the event of enriching the curriculum as a whole.

3.6.8 GATHERING CURRICULAR UNITS FOR UPDATING CURRICULUM

‘Updating Curriculum’ refers to framing of a curriculum incorporating the most common curricular aspects and dimensions identified in the M. Ed. curricula collected for investigation and adding the recently incorporated dimensions, found in one or two curricula, even if it is found in
ver few curricula and not in other, which may enhance the effectiveness of the curriculum. For this the investigator identified a criteria with the help of his supervisor.

In the phase ‘critical analysis’ the percentage of number of universities offering every dimension of each curricular aspect was calculated. This percentage of number of universities offering the various dimensions of every aspect was considered to select them for the updating curriculum. The aspects and dimensions offered by more than fifty percentage of the total number of universities under study were selected for the purpose. In some cases where the highest percentage was below 50 percent the investigator gathered the curricular units offered by the highest percentage of number of universities from where the curricula were collected. The recently added dimensions were incorporated irrespective of the percentage of universities offering that dimension.

**Rationale for the Criterion to Select Core Subjects for the Updated Curriculum**

After analysing the curricula critically the investigator formulated a criterion to select a dimension of the various aspects to prepare an Updated Curriculum. In scientific research when data are to be categorized and results are to be interpreted a criteria should be formulated for the purpose and it should be based some rationale.
The rationale for the present criterion is that it is with utmost sincerity, interest, devotion and care the educationists and educational experts of a University take efforts to structure or re-structure a curriculum. The outcome of their efforts after such a devoted attempts will, of course, be of great importance especially when a work of that kind is undertaken incorporating that work itself.

Further the decision of the expert committee for curriculum development to include certain dimensions in the curriculum should be treated as of valuable documents supporting the curriculum. Hence the decision of curriculum development committees of more number of universities to include certain aspects and follow certain dimension of same aspects in their curriculum indicates the significance and relevance of that aspect and dimension to be included in the curriculum. The approval of more number of universities to include those aspects and dimensions in the curriculum shows the acceptance of them by wide range of educational experts and educationists to be included in the curriculum of M.Ed. Programme.

It is hence the investigator formulated the present criteria to include the aspects and dimensions for updating the curriculum. Aspects of curricular units gathered for updating the curriculum are given in the table 3.4.
### TABLE 3.3

**Aspects of Curricular Units taken up for Updating Curriculum**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Curricular Units Identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mode of offering</td>
</tr>
<tr>
<td>2</td>
<td>Duration of course</td>
</tr>
<tr>
<td>3</td>
<td>Pattern of the course</td>
</tr>
<tr>
<td>4</td>
<td>Identification of Categories of subjects</td>
</tr>
<tr>
<td>5</td>
<td>Identification of Number of Core Subjects</td>
</tr>
<tr>
<td>6</td>
<td>Number of groups of Optional subjects</td>
</tr>
<tr>
<td>7</td>
<td>Number of Optional Subjects offered</td>
</tr>
<tr>
<td>8</td>
<td>Number of groups of Optional subjects and number of Optional subjects offered</td>
</tr>
<tr>
<td>9</td>
<td>Core Subjects</td>
</tr>
<tr>
<td>10</td>
<td>Objectives of Core subjects</td>
</tr>
<tr>
<td>11</td>
<td>Units in Core Subjects.</td>
</tr>
<tr>
<td>12</td>
<td>Resource materials for Core Subjects</td>
</tr>
<tr>
<td>13</td>
<td>Mode of transaction of Curriculum</td>
</tr>
<tr>
<td>14</td>
<td>Scheme of Examination</td>
</tr>
</tbody>
</table>
### 3.6.8.1 Mode of offering

Critical analysis of mode of offering reveals that regular mode is considered more appropriate for the course than distance mode and part-time mode. The high percentage in the number of universities which offer the course in regular mode shows that regular mode is more popular among the Indian universities in conducting M. Ed course. It shows its capacity for smooth and effective transaction of the curriculum and for completing the curriculum programme in scheduled time. Hence the regular mode is identified for the updated curriculum.

<table>
<thead>
<tr>
<th>Mode of offering the course</th>
<th>Regular</th>
</tr>
</thead>
</table>

### 3.6.8.2 Duration of course

From the critical analysis of duration of course it is seen that in 86.48% of the number of universities under study the duration of course is one year and it is for regular mode. It shows that the most popular duration of M.Ed. course among the Indian Universities is one year. It further indicates that transaction of M. Ed curriculum in one year duration can be made practicable if it is offered through regular mode. One year duration is enough for imparting M.Ed. curriculum following regular mode.
effectively. Hence one year duration is identified for the updated curriculum.

<table>
<thead>
<tr>
<th>Duration of the course</th>
<th>One Year</th>
</tr>
</thead>
</table>

3.6.8.3 Pattern of Course

Critical Analysis of pattern of course shows that 54% of universities follow semester pattern and 46% follow non-semester pattern. It implies that semester pattern is comparatively more popular for offering M.Ed. course in the universities under study. Another fact noticed is that semester pattern gets more popularity in offering courses. It shows its advantages over non-semester pattern. In semester pattern students are exposed to immediate goals and their involvement in academic activities can be ensured. Further lagging the assessment of competences developed for the whole year is not scientific. Immediate feedback will enhance the active involvement in the forthcoming learning situations. Hence semester pattern is identified for the updated curriculum.

<table>
<thead>
<tr>
<th>Pattern of the course</th>
<th>Semester Pattern</th>
</tr>
</thead>
</table>

3.6.8.4 Categories of subjects

Following are the categories of subjects offered in all the universities under study.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Categories of subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Core Subjects</td>
</tr>
<tr>
<td>2</td>
<td>Optional or Elective Subjects</td>
</tr>
</tbody>
</table>

3.6.8.5 Number of Core Subjects

Critical Analysis shows that the number of core subjects offered by 57% of number of universities is three. This made the investigator infer that in the opinion of wide range of educational experts and curriculum reformers the number of core subjects to be studied essentially by every student trainer to equip themselves with required competencies is three. Hence the number of core subjects identified for the updated curriculum is three.

<table>
<thead>
<tr>
<th>Number of Core Subjects</th>
<th>Three</th>
</tr>
</thead>
</table>

3.6.8.6 Number of Groups of Optional Subjects

Analysis of the curricula critically for the number of groups of optional subjects shows that 52% of the number of universities offer two
groups of optional subjects from which the students have to select optional subjects allowed by the respective university. As majority of universities under study offer two groups of optional subjects from which the students have to select it can be considered optimum number of groups of optional subjects for student trainers. Hence the number of groups of optional subjects identified for the updated curriculum is two.

<table>
<thead>
<tr>
<th>Number of groups of Optional subjects</th>
<th>Two</th>
</tr>
</thead>
</table>

3.6.8.7 Number of Optional Subjects

Critical analysis of university wise break up of number of optional subjects show that 86% of the universities under study offer two optional papers. This shows that the most popular number, accepted by and agreeable to curriculum experts and educationists of most of the universities, of optional papers of core length which can be offered during the limited period of one year, is two. Hence the number of optional subjects identified for the updated curriculum is two.

<table>
<thead>
<tr>
<th>Number of Optional Subjects</th>
<th>Two</th>
</tr>
</thead>
</table>
3.6.8.8 Number of Groups of Optional Subjects and Number of Optional Subjects

The critical analysis of the number and percentage of universities offering different number of optional subjects and number of groups separately shows that the highest percentage of the universities offering two groups of optional subjects and two optional subjects is 49%. The percentage of number of universities offering two groups of optional subjects is 51%. The percentage of number of universities offering two optional subjects is 86%. Considering these three factors it can be inferred that the optimum number of groups of optional subjects and number of optional subjects is two. Hence the number of groups of optional subjects identified for the updated curriculum is two; and the number of optional subjects identified also is two.

<table>
<thead>
<tr>
<th>Number of groups of optional subjects</th>
<th>Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Optional subject</td>
<td>Two</td>
</tr>
</tbody>
</table>

3.6.8.9 Core Subjects Offered

Critical analysis of core subjects offered shows that three core subjects are offered in more than 89% of the curricula collected for the study.
remaining subjects are offered in less than 9% of the curricula. The Core subjects offered in more than 89% of the curricula are (i) Philosophy and Sociology of Education, (ii) Advanced Educational Psychology and (iii) Research Methodology and Educational Statistics. Hence these subjects are identified as core subjects for the updated curriculum.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Core Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Philosophy and Sociology of Education.</td>
</tr>
<tr>
<td>2</td>
<td>Advanced Educational Psychology.</td>
</tr>
<tr>
<td>3</td>
<td>Research Methodology and Educational Statistics.</td>
</tr>
</tbody>
</table>

3.6.8.10 Objectives for Core subjects.

The most common objectives stated in the collected curricula for core subjects were identified for the updated curriculum. They include only direct objectives focussing mastery of content in the subject.

3.6.8.11 Objectives for the Core Subject ‘Philosophy and Sociology of Education’.

Objectives for the sections Philosophy of education and Sociology of education were identified separately.
3.6.8.12 Objectives for ‘Philosophy of Education’

Following are identified as the objectives for the section ‘Philosophy of education’ of core subject ‘Philosophy and Sociology of Education’.

1. To enable the student trainers to enrich their knowledge in the area of Philosophy.
2. To enable the student trainers to enrich their knowledge of contributions of different scholars of Philosophy with their educational implications.
3. To apply the knowledge of philosophy in the analysis of present day educational system.
4. To develop in the student trainers interest in reading philosophical papers.
5. To enable the student trainers to understand and use philosophical methods in studying educational data.
6. To enable the student trainers to understand the relation between philosophy and education.
7. To enable the student trainers to understand the nature and functions of philosophy of education.

3.6.8.13 Objectives for ‘Sociology of Education’

Following are identified as the objectives for the section ‘Sociology of education’ of core subject ‘Philosophy and Sociology of Education’.
1. To enable the student trainers to enrich their knowledge in the area of Sociology.

1. To develop an understanding about the role of education in bringing about desirable social changes in a pluralistic nation like India.

2. To apply the knowledge of Sociology in the analysis of present day educational system.

3. To develop in the student trainers interest in reading sociological papers.

4. To enable the student trainers to understand the social structure and social stratification in Indian context.

5. To enable the student trainers to understand modern education in emerging Indian society.

3.6.8.14 Objectives for ‘Advanced Educational Psychology’

Following are identified as the objectives for the core subject ‘Advanced Educational Psychology’.

1. To enable the student trainers to enrich their knowledge in the area of Psychology.

2. To develop in the student trainers interest in Psychology.

3. To develop in the student trainers favourable attitude to the various findings in the field of educational psychology.

4. To enable the student trainers apply their knowledge of Psychology to the problems of education.
5. To develop in the student trainers the skill to measure different personality traits.

3.6.8.15 Objectives for ‘Research Methodology and Educational Statistics’

Objectives for the sections ‘Research Methodology’ and ‘Educational Statistics’ were identified separately.

3.6.8.16 Objectives for ‘Research Methodology’

Following are identified as the objectives for the section ‘Research Methodology’ of the core subject ‘Research Methodology and Educational Statistics.’

1. To enable the student trainers to acquire the knowledge of the different aspects of educational research.

2. To enable the student trainers to undertake a project in educational research.

3. To enable the student trainers to understand the need, nature, scope and various methods and techniques of educational research.

4. To enable the student trainers to understand various types of tools of data collection.

5. To make the student trainers understand and appreciate the role of research in theory and practice of education.
6. To enable the student trainers to develop a favourable attitude towards the study of Educational research.

3.6.8.17 Objectives for ‘Educational Statistics’

Following are identified as the objectives for the section ‘Educational Statistics’ of the core subject ‘Research Methodology and Educational Statistics’

1. To enable the student trainers to acquire the knowledge of various statistical terms, concepts, principles and processes.

2. To enable the student trainers to apply relevant statistics in the analysis of data.

3. To enable the student trainers to develop a favourable attitude towards the study of Educational statistics.

4. To enable the student trainers to understand different statistical techniques of data analysis in educational research.

5. To enable student trainers solve problems in educational research using appropriate statistics.

3.6.8.18 Units in Core Subjects

In this stage the investigator identified the units in the core subjects offered by more than 89% of the universities.
3.6.8.19 Units in ‘Philosophy and Sociology of Education’.

The units of the sections ‘Philosophy of education’ and Sociology of Education’ of the core subject ‘Philosophy and Sociology of Education’ are identified separately.

3.6.8.20 Units in ‘Philosophy of Education’

Critical analysis of the units in the section ‘Philosophy of education’ show that out of 9 units 5 units are offered by more than 50% of the universities under study. They are (i) The Concept Philosophy of Education (ii) Western Schools of Philosophy (iii) Indian Schools of Philosophy (iv) Branches of Philosophy and (v) Thinkers and Philosophers. Hence these units are identified for the updated curriculum.

**Units of ‘Philosophy of Education’**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Units in the section ‘Philosophy of education’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The Concept Philosophy of Education</td>
</tr>
<tr>
<td>2</td>
<td>Western Schools of Philosophy</td>
</tr>
<tr>
<td>3</td>
<td>Indian Schools of Philosophy</td>
</tr>
<tr>
<td>4</td>
<td>Branches of Philosophy</td>
</tr>
<tr>
<td>5</td>
<td>Thinkers and Philosophers</td>
</tr>
</tbody>
</table>
3.6.8.21 Units in ‘Sociology of Education’

Critical analysis of the units in the section ‘Sociology of education’ show that out of 16 units 3 units are offered by more than 50% of the universities under study. They are (i) The Concept Educational Sociology (ii) Social Change and (iii) Culture.

Hence these units are identified in the section ‘Sociology of education’ of the core subject ‘Philosophy and Sociology of Education’ for the updated curriculum.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Units in the section ‘Sociology of education’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The Concept Educational Sociology</td>
</tr>
<tr>
<td>2</td>
<td>Social Change</td>
</tr>
<tr>
<td>3</td>
<td>Culture</td>
</tr>
</tbody>
</table>

3.6.8.22 Units in ‘Advanced Educational Psychology’.

From the critical analysis it is seen that there are eighteen units offered altogether by the universities in the core subject ‘Advanced Educational Psychology’. Among them 5 units are offered by more than 60% of the universities under study. They are (i) Learning and Instruction (ii) Intelligence (iii) Personality (iv) Introduction to Psychology and (v) Child
Development. Hence these units are identified in the core subject ‘Advanced Educational Psychology’ for the updated curriculum.

### Units of ‘Advanced Educational Psychology’

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Units of ‘Advanced Educational Psychology’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Learning and Instruction,</td>
</tr>
<tr>
<td>2</td>
<td>Intelligence,</td>
</tr>
<tr>
<td>3</td>
<td>Personality,</td>
</tr>
<tr>
<td>4</td>
<td>Introduction to Psychology,</td>
</tr>
<tr>
<td>5</td>
<td>Child Development.</td>
</tr>
</tbody>
</table>

3.6.8.23 ‘Research Methodology and Educational Statistics’

The units of the sections ‘Research Methodology’ and ‘Educational Statistics’ of the core subject ‘Research Methodology and Educational Statistics’ are identified separately.

3.6.8.24 Units in ‘Research Methodology’

Critical analysis of the section ‘Research Methodology’ of the core subject ‘Research Methodology and Educational Statistics’ show that out of 8 units three units are offered by more than 50% of the universities under study. They are (i) Designing a Research Plan (ii) Introduction to Research and (iii) Methods of Research. Hence these units are identified in the
section ‘Research Methodology’ of the core subject ‘Research Methodology and Educational Statistics’.

### Units of ‘Research Methodology’

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Units in the section ‘Research Methodology’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Designing a Research Plan,</td>
</tr>
<tr>
<td>2</td>
<td>Introduction to Research,</td>
</tr>
<tr>
<td>3</td>
<td>Methods of Research.</td>
</tr>
</tbody>
</table>

### 3.6.8.25 Units in ‘Educational Statistics’

Critical analysis of the section ‘Educational Statistics’ of the core subject ‘Research Methodology and Educational Statistics’ show that out of 5 units two units are offered by more than 50% of the universities under study. They are (i) Basic Inferential Statistics and (ii) Basic Descriptive Statistics. Hence these units are identified in the section ‘Educational Statistics’ of the core subject ‘Research Methodology and Educational Statistics’.

### Units of ‘Educational Statistics’

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Units in the section ‘Educational Statistics’.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Basic Inferential Statistics,</td>
</tr>
<tr>
<td>2</td>
<td>Basic Descriptive Statistics.</td>
</tr>
</tbody>
</table>
3.6.8.26 Resource Materials for Core Subjects

The resource materials for the core subjects were identified with the help of supervisor and teacher educators of Farook Training College, Departments of Education in the University of Calicut and Alagappa University.

3.6.8.27 Modes of Transaction of Curriculum

Modes of transaction of the M. Ed. Curriculum by different Universities are (i) Lecture Class (ii) Practicum and (iii) Practical Activities.

3.6.8.28 Lecture class

It was found that Lecture Class is the most common and important of curriculum practiced by all the faculties in all the universities under study. It shows its efficiency in transacting curriculum content in terms of economy, time and energy. Hence Lecture Class is identified as one of the mode of transaction for the updated curriculum.

3.6.8.29 Practicum

The practicum offered for M.Ed. course in the universities under study are (i) Seminar Presentation (ii) Assignment Preparation and (iii) Attending Internal Tests.

Critical analysis shows that 73 % of universities offer practicum as a mode of transaction of Curriculum. Further it is one of the widely accepted
mode of transaction which can be applied to enhance the knowledge competency and manipulating skills of student trainers in various content areas for the benefit of themselves and their future students. Hence Practicum is identified as one of the mode of transaction for the updated curriculum.

3.6.8.30 Practical Activities

Analysis shows that the practical activities offered in the universities under study are (i) Field based Experience and (ii) Dissertation.

3.6.8.31 Field based Experience

The Practical activity ‘Field based Experience’ is offered by 22% of the universities under study. This shows that it is not recognized as an important practical activity in most of the universities. Any how it is a dynamic strategy to enhance the competency of student trainers in supervising student teachers’ practice teaching session for the benefit of themselves, their students and thereby the education system itself. Considering its less popularity among the universities compared to other mode of transaction ‘Field based Experience’ is not identified as a practical activity in the updated curriculum.

3.6.8.32 Dissertation

Critical analysis shows that ‘Dissertation’, is offered in 78% of the
universities under study. It, being an important practical activity to develop competency in doing research in education and education related subjects and preparing research papers, is given due weightage in the curriculum of most of the universities under study. This shows that it is a widely accepted technique to enhance the competency of student trainers in doing research for the benefit of themselves, their students and the education system itself. Hence ‘Dissertation’ is identified as one of the practical activity for the updated curriculum.

**Modes of Transaction identified for the M.Ed. Curriculum**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Modes of transaction of Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lecture Class</td>
</tr>
<tr>
<td>2</td>
<td>Practicum</td>
</tr>
<tr>
<td>3</td>
<td>Practical Activities</td>
</tr>
</tbody>
</table>

**Practicum identified for transaction of M.Ed. Curriculum**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Practicum identified for transaction of M.Ed. Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Seminar Presentation</td>
</tr>
<tr>
<td>2</td>
<td>Assignment Preparation</td>
</tr>
<tr>
<td>3</td>
<td>Attending Internal Tests</td>
</tr>
</tbody>
</table>
Practical Activity identified for transaction of M.Ed. Curriculum

<table>
<thead>
<tr>
<th>Practical Activity</th>
<th>Dissertation</th>
</tr>
</thead>
</table>

3.6.8.33 Scheme of Examination

The critical analysis of scheme of examination with respect to total marks, total for subjects and total for practical activities show that in 41% of the universities which provided scheme of evaluation in their curriculum the total marks was 800. The marks for each subject offered by 69 percent of universities was 100. The total marks for practical activities offered by 30 percent of universities was 100. Hence only marks for each subject was identified for updating curriculum that is 100.

| Marks for each subject | 100 |

3.6.9 VALIDATING THE UNITS IDENTIFIED

After updating the curriculum the next phase was validation of the curricular units identified. For this a semi structured interview schedule prepared for the purpose was used. After consultation with the supervisor the investigator personally met experts in the field of education such as Heads of departments of education, Administrators of colleges of teacher education,
experienced and expert professors, Readers and Lectures in various universities and colleges of teacher education in Kerala and Tamil Nadu and conducted interview. Data of the interview showed that the gathered units for updating the curriculum were valid in terms of feasibility and relevance.

3.6.10 ENRICHING THE UPDATED CURRICULUM

After validating the units gathered for updating the curriculum the investigator entered into the venture of enriching the curriculum for teacher educator preparation with the help of his supervisor. For this he followed the instructions of the supervisor and considered the opinions of educational experts whom he interviewed. Preserving the prevailing structure of teacher educator preparation curriculum the investigator enriched the curriculum making some fundamental changes in some aspects and adding some other aspects which already have roots in the existing curricula but not being acknowledged their potential. Enriched Curricular Inputs are given in the tables.
3.6.10.1 ENRICHED CURRICULAR INPUTS

Enrichment carried out in the Regulations of the Course

Enrichment carried out in Curricular Inputs

Enriched Practical Activities for Theory Subjects

Enrichment carried out in terms of Course Competencies

Enrichment carried out in Evaluative components

Master Trainer Competency Practising Strategy

These Enriched Curricular Inputs are described in the following Tables and Flowchart.

**TABLE 3.4**

**Enrichment carried out in the Regulations of the Course**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Aspects of Curriculum</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mode of offering the Course</td>
<td>Regular, Distance and Part-time</td>
</tr>
<tr>
<td>2</td>
<td>Duration of Course</td>
<td>Two years (one year)</td>
</tr>
<tr>
<td>3</td>
<td>Pattern of Course</td>
<td>Trimester</td>
</tr>
</tbody>
</table>

Regular, Distance and Part-time modes can be utilised for effective transaction of the curriculum especially in the present age of technological revolution.
For the optimum benefit of Enriched Curriculum duration of the course may be made two years.

Trimester pattern refers to division of the course duration into periods of three months.

**TABLE 3.5**

*Enrichment carried out in Curricular Inputs*

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Aspects of Curriculum</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No. Of Core subjects</td>
<td>Four</td>
</tr>
<tr>
<td>2</td>
<td>Suggested Subject</td>
<td>Educational Technology</td>
</tr>
<tr>
<td>3</td>
<td>Title for Optional Subjects</td>
<td>Specialization Subjects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Elective Subjects</td>
</tr>
<tr>
<td>4</td>
<td>No. of Groups of Optional subjects</td>
<td>Two</td>
</tr>
<tr>
<td>5</td>
<td>No. of Optional subjects</td>
<td>Two from each group</td>
</tr>
<tr>
<td>5</td>
<td>Major Mode of Transaction</td>
<td>Training</td>
</tr>
<tr>
<td>6</td>
<td>Practicum</td>
<td>For all subjects</td>
</tr>
<tr>
<td>7</td>
<td>Practical Activities</td>
<td>For Theory, For Course</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Competencies</td>
</tr>
</tbody>
</table>
TABLE 3.6

Enriched Practical Activities for Theory Subjects

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Activities</th>
<th>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Detailed Note making</td>
<td>For</td>
</tr>
<tr>
<td>2</td>
<td>Review of Detailed note prepared</td>
<td>All</td>
</tr>
<tr>
<td>3</td>
<td>Peer Teaching (Lecturing)</td>
<td>Core</td>
</tr>
<tr>
<td>4</td>
<td>Report on peer teaching</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Seminar</td>
<td>Specialization and</td>
</tr>
<tr>
<td>6</td>
<td>Report on student seminar</td>
<td>Elective Subjects</td>
</tr>
<tr>
<td>7</td>
<td>Group discussion</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Report on Group Discussion</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Lecturing</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Lecture Note preparation</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 3.7

**Enrichment carried out in terms of Course Competencies**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Course Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Research</td>
</tr>
<tr>
<td>2</td>
<td>Organization</td>
</tr>
<tr>
<td>3</td>
<td>Library utilization including Inflibnet</td>
</tr>
<tr>
<td>4</td>
<td>Leadership</td>
</tr>
<tr>
<td>5</td>
<td>Computer Application</td>
</tr>
<tr>
<td>6</td>
<td>Perseverance</td>
</tr>
<tr>
<td>7</td>
<td>Resource Lecturing</td>
</tr>
<tr>
<td>8</td>
<td>Communication skill</td>
</tr>
<tr>
<td>9</td>
<td>Reporting</td>
</tr>
<tr>
<td>10</td>
<td>Record Maintenance</td>
</tr>
<tr>
<td>11</td>
<td>Article Preparation</td>
</tr>
<tr>
<td>12</td>
<td>Seminar College level, university Level, State level and National Level</td>
</tr>
<tr>
<td>13</td>
<td>Finishing Competence</td>
</tr>
</tbody>
</table>

College level and University level journals may be published for prospective teacher trainers to publish their research findings. College level, University
level, State level and National level Platform may be formed for student trainers to meet, interact and conduct seminar of current interest.

**TABLE 3.8**

**Enrichment carried out in Evaluative components**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Aspects of Curriculum</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Explicit Performance</td>
<td>Competencies</td>
</tr>
<tr>
<td>2</td>
<td>Ranking Criteria</td>
<td>Credit</td>
</tr>
</tbody>
</table>

The major mode of transaction is training. The strategies for training are given in the flowchart.
STRATEGY FOR PRACTISING MASTER TRAINER

COMPETENCY

Theoretical Orientation (What, Why and How)

Demonstration by the Master Trainer

Training in Coding and Feedback

Assigning the Task related to the Competency to Students

Planning by Students

Practice by Students

Peer Feedback and Master trainer Feedback

If not Successful Repeat

If Successful Assigning Next Task

When Complete all Tasks, Students Take Test
The Enriched Curriculum upheld the popular sayings:

I Hear - I Forget

I See - I Remember

I Do - I Understand

Further the following were added in the Enriched Curriculum.

I Teach - I Learn

I Train - I Master

Every student trainer should train others to become masters in the respective fields.

Detailed Enriched Curriculum is given in Appendix – G.

3.6.11 VALIDATING THE ENRICHED CURRICULUM

After enrichment the investigator established the validity of the enriched curriculum. He approached the experts in the field of curriculum development, experienced teacher educators, educational experts and educationists and gave each of them a copy of the enriched curriculum requiring to examine the adequacy, relevance and feasibility of the same. He administered a scale of validating the enriched curriculum on them to collect their responses regarding the validity of the same and collected it.
The response collected from them showed that the enriched curriculum is valid. The panel of Experts who were consulted for validating the Enriched Curriculum include;

1. Dr. P. Prema, Research Supervisor, Chairperson, School of Education; Head, Department of Education, Alagappa University, Karaikudi, Tamilnadu.

2. Dr. C.R. Vasantha, Former Principal, Alagappa University College of Education, Karaikudi, Tamilnadu.

3. Prof. C. Abdussalam, Former Principal, Farook Training College, Calicut, Kerala.

4. Prof. K.M. Abdur Rasheed, Former Registrar, Kannur University, Kannur, Kerala.

5. Prof. A Faziluddin, Principal, Farook Training College, Calicut, Kerala.

6. Dr. C.M. Bindu, Associate Professor, Farook Training College, Calicut, Kerala.

7. Dr. Manikandan, Associate Professor, Department of Psychology, University of Calicut, Calicut, Kerala.

8. Dr. Abdul Gafoor, Associate Professor, Department of Education, University of Calicut, Calicut, Kerala.
3.6.11.1 DESIGN OF THE EXPERIMENT

It is the experimental part of the study. Design of the Experiment explains the nature of experiment, variables of the study, tools used, sample selected, duration of experiment and statistical techniques used if any. Schematic Presentation of the design of the experiment is given in the table 3.13.

TABLE 3.9
Schematic Presentation of the design of the Experiment

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Aspects of Experiment</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Design of Experiment</td>
<td>Pre-test-Treatment-Post-test Design</td>
</tr>
<tr>
<td>2</td>
<td>Independent Variables</td>
<td>Enriched Curricular Units (Training Strategy)</td>
</tr>
<tr>
<td>3</td>
<td>Dependent Variables</td>
<td>Research Guidance Competency Micro Teaching Training Competency</td>
</tr>
<tr>
<td>4</td>
<td>Tools Used</td>
<td>a)Research Guidance Competency Assessment Scale</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b)Micro Teaching Training Competency Observation Schedule</td>
</tr>
<tr>
<td>5</td>
<td>Sample Selected for the Experiment</td>
<td>Nineteen M.Ed. Students</td>
</tr>
<tr>
<td>6</td>
<td>Duration of the Experiment</td>
<td>Forty eight hours(Twenty four Hours each)</td>
</tr>
<tr>
<td>7</td>
<td>Statistical Techniques Used</td>
<td>T-test</td>
</tr>
</tbody>
</table>
3.6.11.2 ADMINISTRATION OF PRE-TEST

Before the implementation of the enriched curricular inputs to develop Research Guidance Competency with respect to identification of problem and Micro Teaching Training Competency a pre test was conducted. Using Research Guidance Competency Assessment Scale (Problem Identification) the competency of student trainers to guide problem identification was assessed. Using an Micro Teaching Training Competency Observation schedule the competency for training Micro Teaching was assessed.

3.6.12 IMPLEMENTING THE CURRICULUM

As the implementation of curriculum as such is an administrative task, the face validity of the curriculum was established with the help of experts in the field. Two minor aspects – Research Guidance Competency with respect to Problem Identification and Micro Teaching Training competency - of the curriculum was implemented on student trainers of the college where the investigator has been working as a teacher educator.

This phase constitute the experimental part of the study which mainly involves treatment of the group with the strategy for developing competencies.

A detailed account of the experimental part of the study is given in the flow chart.
Flow Chart showing the steps of experimentation and Evaluation of Effectiveness

- Identification of the main task
- Division into sub-tasks
- Determination of activities of the Strategy
- Assignment of Activities to Student Trainers
- Discussing the progress with the student Trainer
- Encouraging Interaction among Student Trainers
- Encouraging Peer evaluation and Feedback
- Assessing the Performance of Student Trainers
- Analysis of the Effectiveness of the Strategy
The steps are discussed in detail below.

Step – 1

The main tasks put to experimentation was identified as Research Guidance Competency and Micro Teaching Training Competency. The strategy for Research Guidance Competency was experimented on student trainers for the first semester and the strategy to develop Micro Teaching Training Competency was experimented in the second semester.

Step – 2

The sub tasks involved in the strategies for developing Research Guidance Competency and Micro Teaching Training Competency were analysed and described to student trainers. How to perform these tasks were also explained in detail to them. Any doubt when occurred were clarified. As it was a training strategy they worked themselves and discussed with the investigator personally when they needed any clarification.

Step – 3

The activities involved in the subtasks were discussed and the sub task considered for experimentation was declared as Research Guidance Competency with respect to problem Identification and Training Competency with respect to Micro Teaching Training competency. The
activities involved in the experimental strategy were discussed with the help of the flow chart showing the various steps of Training model developed as a part of Enriched Curriculum.

The sub tasks of Research Guidance Competency with respect to Problem Identification are given in the table.

**TABLE 3.10**

**Sub tasks involved in Problem Identification**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Sub tasks involved in Problem Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sensing Problem for Identification</td>
</tr>
<tr>
<td>2</td>
<td>Knowledge of Researchable Problems</td>
</tr>
<tr>
<td>3</td>
<td>Key Variables of the problem</td>
</tr>
<tr>
<td>4</td>
<td>Identification of Independent and dependent variables for Experimental and Quasi Experimental Studies</td>
</tr>
<tr>
<td>5</td>
<td>Knowledge of Preparation of Research Design</td>
</tr>
<tr>
<td>6</td>
<td>Knowledge of Research Methods such as Survey, Experimental Study etc.</td>
</tr>
<tr>
<td>7</td>
<td>Knowledge of use of appropriate Statistical Techniques</td>
</tr>
</tbody>
</table>
TABLE 3.11

Sub Tasks involved in Micro Teaching Training

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Sub Tasks involved in Micro Teaching Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lesson Planning</td>
</tr>
<tr>
<td>2</td>
<td>Discussion</td>
</tr>
<tr>
<td>3</td>
<td>Demonstration of practicing a skill</td>
</tr>
<tr>
<td>4</td>
<td>Conducting Practice</td>
</tr>
<tr>
<td>5</td>
<td>Evaluation and Feedback</td>
</tr>
</tbody>
</table>

Step – 4

The activities required to master the sub tasks were assigned to them and their progress was monitored by the investigator. They were encouraged to clarify doubts occurred during the course of activities.

Step – 5

The strategy even at the beginning is the interaction between the student trainers with a clearly stated objective. The next step in the process was to evaluate others’ performance and offering valuable feedback to them. These are to be observed by every student trainers.
Step – 6

When all the activities involved in the strategy for development of competencies were performed the student trainers were tested to find out whether their performance was improved in comparison with their performance in the Pre – test.

3.6.13 EVALUATING THE ENRICHED CURRICULUM

Evaluation of the curriculum presupposes implementation of the curriculum. As implementation of the curriculum is a task to be performed at administrative level the investigator treated the group with two dimensions of the curriculum and found out the effectiveness of implementing those aspects. Their performance in that dimensions before and after the treatment was assessed and the difference in their performance was calculated using statistical technique. This stage is characterised by post – test, scoring and analysis.

Administration of Post - Test

After implementation of the enriched curricular inputs to develop Research Guidance Competency with respect to identification of problem and Micro Teaching Training Competency a post - test was conducted. Using Research Guidance Competency Assessment Scale (Problem Identification) the competency of student trainers to guide problem identification was assessed.
Using Micro Teaching Training Competency Observation schedule the competency for training Micro Teaching was assessed.

The difference in the performance between the pre–test and post test was found out by analysing the two scores using statistical technique. Interpretation was made based on the findings.

3.6.13.1 CONTROLLING THREATS TO VALIDITY OF THE EXPERIMENT

There are several threats to any experimental research which are likely to affect the results of the study. Therefore these threats were carefully controlled in the present study.

Maturation

The subjects’ biological and psychological changes may be confused with the effect of the independent variable under consideration. This is known as maturation. The activities given were same to all members in the group and were given at the same time.

History

During experimentation, specific external events occurring between the first and second measurements may go beyond the control of the investigator and may have a stimulating or disturbing effect on the
performance of subjects. These events are called History Threat. In this study no specific instance happened during the experiment to affect the performance of the group.

**Placebo-Hawthorn Effect**

The activities were given to all the student trainers in the class. Knowledge of this may introduce the extraneous variable of bias in favour of experimental group. As the experiment is a single group study this threat was eliminated.

**Interaction effect of Testing**

The use of a pre – test at the beginning of a study sensitise individuals by making them more aware of concealed purposes of the investigator and may serve as a stimulus to change. Pre – testing interacts with the experimental treatment and causes some effect such that the results will not be generalised to the population. All the students were subjected to this programme. In this study the purpose of the experiment was not revealed while giving pre – test.

**The extent of treatment verification**

Because of the potential threat of experimenter bias those who do not directly involve in the formulation of hypotheses deliver the treatment. This
leads to a potential threat to external validity. The investigator himself conducted the experiment. Knowing the limitation the investigator did his best to conduct the experiment, reach valid conclusions, provide answers to important questions and solve significant problems.

3.7.0 STATISTICAL TECHNIQUES EMPLOYED

a) **Percentage Analysis**

To find out the Percentage of number of universities offering different dimensions of the various aspects of the curriculum.

b) **Test of Significance**

*t-test* to find the significance of difference between the mean scores of research guidance competency and micro teaching training competency of the group before and after the treatment.