CHAPTER - III
RESEARCH DESIGN AND METHOD OF STUDY

3.0.0 INTRODUCTION

In this chapter details of the design and the method underlying the present study entitled, “B. Ed. Curriculum of C.C.S. University : An Evaluation” are presented. It is mainly confined to the method, population, sampling, tools, data collection and statistical techniques for analysing the data. It consists of following major heads :

1. Research design
2. Method of the study
3. Population and sample of the study
4. Tools employed and Construction of the Tool
5. Data collection and organization
6. Statistical techniques used

3.1.0 RESEARCH DESIGN

Considering the nature and the objectives of the present study as well as the resources of the investigator, mixed methods research design that is quantitative as well as qualitative approach was used. (Johnson and Onwuegbuzies, 2004). It focused both on outcomes and meaning. In the present investigation, all the steps and characteristics have been followed which are essential in quantitative and qualitative approach. Researcher used descriptive (describing something new), holistic (looking at the bigger picture, interpretive (trying to understand meaning) and contextual (in the everyday setting) approach to evaluate B. Ed. Curriculum of C.C.S. University.

Quantitative research is the one in which facts can be quantified and expressed and analysed in terms of data and numerical values. Measurement and analysis of informations related to perception of teachers and teacher trainees regarding B. Ed. Curriculum was done following quantitative research approach.

Qualitative research is often called hermeneutical (Interpreting the experiences of the participants), naturalistic (giving a true reflection of the participant’s situation) and constructivist (with the emphasis on the participants constructing conceptualization). To study the curricular
requirements for B. Ed. Curriculum perceived by secondary school teachers and principals and evaluation of curriculum by teacher trainees and teacher educators, qualitative research approach was used.

3.2.0 RESEARCH METHOD
Under the quantitative approach, descriptive survey method was used as method of inquiry and perception of pupil teachers and teacher educators regarding B. Ed. Curriculum was studied. Phenomenological research method was followed under qualitative approach using semi-structured interview in the form of interview schedule.

3.3.0 POPULATION AND SAMPLE OF THE STUDY
Any group of people or observation which includes all possible members to that category, is called population. According to Best and Kahn (1993) “A population is any group of individual that have alone or more characteristic in common that are of interest to the researcher. The population may be all the individuals of a particular type or a more restricted part of that group.”

In present study population is constituted of all principals and teachers of secondary schools of U.P. Board and C.B.S.E. Board of Ghaziabad and B.Ed. Trainees and Teacher Educators of B.Ed. Colleges affiliated with C.C.S. University. The present study includes four types of respondents:
1. B. Ed. Trainees
2. Teacher Educators
3. Secondary Schools Principals
4. Secondary School Teachers

Sampling is the process of selecting the sample from population to obtain information regarding a phenomenon in a way that ensures that the population will be represented. The idea in the qualitative research is to select participants who are best able to give the researcher access to a special perspective, experience or condition, which the researcher wishes to understand. (Morse, 1994, Yegidis and Weinbach, 1996). The participants in this research were consciously and purposively selected by which the researcher could collect rich information on the topic of
investigation. (Patton, 1990). First of all a list of B. Ed. Colleges was prepared from website of C.C.S. University, Meerut. Three government aided and five self financed colleges were selected purposively from the viewpoint of quality. The criteria of quality was considered as accreditation by NAAC and only NAAC accredited colleges were taken in the sample. However, under self financed section, colleges were selected through random purposive sampling.

1. Sample selection of B.Ed. Trainees and Teacher Educators

All teacher educators of three government aided colleges and all teachers from five self financed colleges were taken in the sample to get relevant and enriched informations regarding B. Ed. Curriculum.

On part of the teacher trainees 50 students from government aided colleges and self financed colleges were selected based on the criteria of regular attendance (minimum 65% attendance). Total 150 teacher trainees from government aided and 150 from self financed colleges were included in the study. Hence 300 teacher trainees were selected to evaluate B.Ed. curriculum. Here, purposive cluster sampling technique was followed.

College wise details of sample are given in table 3.1

Table 3.1 : Number of Teacher Educators and Teacher Trainees (from Government Aided and Self Financed Colleges)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of Colleges</th>
<th>No. of Teacher Educators</th>
<th>No. of Teacher Trainees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I. Govt. Aided Colleges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>NAS College, Meerut</td>
<td>08</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>Meerut College, Meerut</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>VMLG College, Ghaziabad</td>
<td>07</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>25</td>
<td>150</td>
</tr>
<tr>
<td>1</td>
<td>II. Self Financed Colleges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>HLM College, Muradnagar</td>
<td>05</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>Inmentec College, Dasna</td>
<td>06</td>
<td>35</td>
</tr>
<tr>
<td>3</td>
<td>Saraswati College, NH-24</td>
<td>04</td>
<td>26</td>
</tr>
<tr>
<td>4</td>
<td>Madhav College, Hapur</td>
<td>06</td>
<td>32</td>
</tr>
<tr>
<td>5</td>
<td>Advance College, Mahrauli</td>
<td>04</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>25</td>
<td>150</td>
</tr>
</tbody>
</table>
A schematic representation for sample selection is given as below:

1. List of B. Ed. colleges affiliated with C.C.S. University, Meerut
   - List of Self financed colleges
     - Random purposive sampling
       (selection from NAAC Acc.)
       - Selection of 5 colleges
         - Cluster sampling
           - All Teacher Educators N=25
         - Purposive Sampling
           - students from each colleges on the basis of regular Attendance N=150
   - List of Govt. aided colleges
     - Purposive sampling
       (selection from NAAC Acc.)
       - Selection of 3 colleges
         - Cluster Sampling
           - All Teacher Educators N=25
         - Purposive sampling
           - students from each colleges on the basis of regular attendance N=150

Fig. 3.1.0 : Schematic Representation of Sample Selection
2. **Sample selection of Principals and Teachers from Schools**

First list of all secondary schools was made with the help of internet and on the basis of informations received by DIOS, Ghaziabad. Ranking of both types of schools was confirmed and best five schools from C.B.S.E. and U.P. Board were selected. Principal and 10 teachers from each school were taken in the sample. Only those teachers were selected in the sample who were reported sincere and best by the principal. Total 10 principals and 100 school teachers were interviewed to explore the B.Ed. curriculum requirements. Detailed layout is presented in Fig. 3.2.0

![Diagram](image-url)

**Fig. 3.2.0 : Layout of Sample Selection from Secondary Schools**
School wise details of Sample are given in table 3.2

Table 3.2 : Number of Principals and School Teachers from C.B.S.E. and U.P. Board.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>C.B.S.E. Board</th>
<th>U.P. Board</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Name of School</td>
<td>Principal</td>
</tr>
<tr>
<td>1.</td>
<td>Ryan International School, Dasna</td>
<td>1</td>
</tr>
<tr>
<td>2.</td>
<td>Bright Land School, Govindpuram</td>
<td>1</td>
</tr>
<tr>
<td>3.</td>
<td>NWS, Shastri Nagar</td>
<td>1</td>
</tr>
<tr>
<td>4.</td>
<td>GPS, Ghaziabad</td>
<td>1</td>
</tr>
<tr>
<td>5.</td>
<td>SSD Jain Public School, Kavi Nagar</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

Therefore, finally sample for the present research included 10 principals (5 from C.B.S.E. Board and 5 from U.P. Board), 100 teachers (50 from C.B.S.E. Board and 50 from U.P. Board), 50 teacher educators (25 from self financed and 25 from government aided colleges) and 300 B. Ed. students (150 from self financed and 150 from government aided colleges).

3.4.0 TOOLS EMPLOYED

The selection of tools for a particular study depends upon various considerations such as the objective of the study, the amount of time for disposal, availability of suitable test, personal competence of the researcher to administer, score and interpret the test results and like. Selection
of the tool is very important and careful work for researcher because skills in choice and use of research instrument is crucial to the sources of the study and validity of its results. Therefore, researcher used self constructed tools for the study. Following tools were employed:

2. B. Ed. Trainees and Teacher Educators’ Interview schedule for curriculum evaluation of C.C.S. University, Meerut.
3. Interview schedule regarding curricular requirements for secondary school teachers.
4. Interview schedule regarding curricular requirements for principals.

3.4.1 PERCEPTION SCALE FOR B.ED. CURRICULUM EVALUATION

Likert type method of summated rating scale was used to measure perception of B. Ed. students and teacher educators regarding general characteristics of B. Ed. curriculum. The researcher used following steps in preparing the perception scale:

1. Planning
   First discussion was made with the different researchers and research experts regarding B. Ed. Curriculum and consulted available literature on National Curriculum Framework, latest journals and curricular improvements related books. Through this exercise, sub areas were found out for perception scale. Subareas decided for perception scale as B. Ed. programme efficiency, Micro teaching, Teaching practice session, Present needs in education and Changes in B. Ed. Programme.

2. Pooling of The Items
   On the basis of decided subareas, a number of questions were pooled for perception scale. About 57 questions were constructed at first time. This preliminary draft of the scale was given to research experts, for their expert opinion.

3. Judge Direction
   For this step, the researcher recruited ten judges. Judges were asked them to rate the direction of the statement whether the items reflect a positive or negative attitude/perception towards B.Ed.
Curriculum. Judges were requested to rate items with regard to its favourability towards B.Ed. Curriculum.

4. Discarding Neutral Statements

Only those items were included where at least 8 or 9 judges agree as to direction (favourability rating). The statements were eliminated which were rated as neutral/unable to judge or those for which judges differ in their opinions (less than 8). After discarding the neutral statements, only 30 items were kept in the scale.

5. Pretesting

Before printing the final draft for pre-testing, the items were balanced by alternating positive and negative statements. All items were mixed up in scale. Directions, ambiguity, typing and numbering were checked and the scale was finalized having 30 items. The pretesting was done on a sample of 100 students selected randomly from self-financed and government aided B. Ed. colleges. Each item in the scale is followed by four responses i.e., four points scale was used. For each item, respondents have to indicate the degree to which they agree or disagree with its content. According to Welman and Kruger (1999), the error of central tendency can be eliminated by avoiding response category ‘Neutral’ or ‘Neither agree nor disagree’. One of which is to be chosen by the subject. The responses are:

- Strongly Agree (SA)
- Agree (A)
- Strongly Disagree (SD)
- Disagree (D)

Arbitrary scoring weights of 4, 3, 2, 1 are used for Strongly Agree, Agree, Strongly Disagree and Disagree for the statement favouring responses and scoring weights of 1, 2, 3, 4 respectively for the negative statements. An individual’s scores on the scale would be the sum of his ratings on all the items. Following instruction is given to all respondents, “If you strongly agree, put a tick (✓) mark in the space under strongly agree. If you agree, put a tick (✓) mark under agree, if you disagree put a tick (✓) mark under disagree. If you strongly disagree, put a
tick (\(\checkmark\)) mark under strongly disagree.” Individual ratings were sum and a total score was got to characterize the individual’s perception.

6. Selection of the items and preparation of the final draft
B.Ed. trainees’ scores based upon the responses to all questions were classified in highest scorers and lowest scorers. 25% of the subjects with highest total scores and 25% of the subjects with lowest scores were selected. In both cases, these two groups provide the criterion group to evaluate the individual statements, a ratio of ‘t’ was calculated. The value of ‘t’ measured the extent to which a given statement differentiate between high and low groups. The ‘t’ equal to or greater than 1.75 indicated that the average response of high or low groups of a statement differ significantly. Finally ‘20’ statements with largest ‘t’ value were selected for the final draft as shown in following table:

<table>
<thead>
<tr>
<th>No. of items in preliminary draft</th>
<th>No. of items in first draft</th>
<th>No. of items in final draft</th>
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</thead>
<tbody>
<tr>
<td>57</td>
<td>30</td>
<td>20</td>
</tr>
</tbody>
</table>

7. Reliability
Reliability refers to the accuracy or precision of a measurement procedure. Researcher used single administration method to estimate reliability. The procedure for estimating the reliability of a from a single administration of a single form depends on the consistency of each individual's performance from item to item and is based on the variance of the test scores and the variances of the separate items. This process is called coefficient alpha. Researcher calculated alpha on sample of teacher educators and the value was found out as 0.666 and alpha on sample of teacher trainees was found out as 0.631. Therefore, test is reliable for both teacher educators as well as teacher trainees.

8. Validity
Validity of a test provides a direct indication of the degree to which a test scores actually measures what they intend to measure. Anastasi (1968) said, “The name of a test cannot be taken as a satisfactory index of validity because the names are usually vague and general.”
To ensure the content validity, the researcher tried to make the test items and scoring procedures on the basis of up-to-date theory procedures and researches available on the topic. The items were selected after in-depth study of the expert’s view, their preferences, expectations, and deeply examining the relevance of particular items in different subareas of B. Ed. programme. Validity of the test was determined on the basis of following points:

(i) The items were pooled from preferences enunciated by the B. Ed. trainees and Teacher Educators.

(ii) Before the actual use of the test, it was subjected to a systematic and critical inspection by experts.

(iii) B.Ed. trainees, Teacher Educators were asked to give free and candid comments regarding the usefulness of the items.

The researcher used ‘face validity’ which may when a test appears to measure what the test user wishes or intends to measure, it is said to possess face validity. Face validity refers not to what the test measures but what the test appears to measure. To ensure the face validity the researcher tried to make the test items based on B.Ed. curriculum.

3.4.2 B.ED. TRAINEES AND TEACHER EDUCATORS INTERVIEW SCHEDULE FOR CURRICULUM EVALUATION OF C.C.S. UNIVERSITY, MEERUT

Teacher Educators and B. Ed. trainees are the key users of the B.Ed. curriculum. So their views are very important for gathering data regarding curriculum evaluation. So that researcher constructed an interview schedule for Teacher educators and for B.Ed. trainees. Interview schedule is the tool which makes individuals responses more valid. It is a scientific tool to tap person thoughts and feelings. The present interview schedule was constructed to evaluate specific characteristics of B.Ed. Curriculum of C.C.S. University, Meerut. The interview schedule has both type of responses open as well as close. The open form or unrestricted questionnaire calls for a free response in the respondent’s own words. The open form probably provides for greater depth of response. The respondents reveal their frame of reference and possibly the reasons for their responses. Whereas close form questionnaire is easy to fill out, takes little time, keeps the respondent on the subject, is relatively objective, and is fairly easy to
tabulate and analyse, therefore interview schedule used for research has both types of qualities. So researchers followed steps in preparing the schedule:

1. **Planning**
   Researcher made extensive discussions with other researchers and research experts regarding the evaluation of B. Ed. Curriculum of C.C.S. University, Meerut. Researcher consulted the valuable suggestions of experts, National Curriculum Framework, Journals and various current books related to B.Ed. curriculum. After that researcher constructed an open interview schedule which is based on B.Ed. theory papers, teaching practice and sessional work. Questions are based on those theory papers, which respondent taught in their B. Ed. classes. So, they can evaluate B.Ed. curriculum practically in meaningful sense. Their suggestions and evaluation make this research fruitful. The questions are in the form of addition, deletion and corrections in the content of theory papers of present B. Ed. curriculum. Researcher framed some questions on preference order of co-curricular activities in B.Ed. syllabus and some questions are also regarding teaching practice in present B.Ed. curriculum.

2. **Pooling of the Items**
   On the basis of view and suggestions of experts, a number of questions were pooled for interview schedule. About fourteen questions were constructed. After serialization and proper organization of the items, the preliminary draft of the schedule was given to research experts for their expert opinion. Experts were requested to categorize the items in three categories i.e. good, to be modified, to be rejected.

3. **Making correction after expert opinion**
   After collecting the test drafts filled by experts, researcher analysed all views and all those items. Seven were rejected which were kept in the category of rejection by any expert. Modifiable items were two and five items were categorized as good. They also suggested for the format of interview schedule that additions and deletions options should be kept in different paper items.
4. Final Draft

Following the suggestions and advise of the experts the number of questions were rejected and a final semi-structured interview schedule was prepared. This revised draft was given to the hundred B.Ed. trainees and fifteen Teacher Educators. The purpose of pre-test was to examine schedule from the research point of view and also to examine whether schedule promotes congenial relationship with sample and respondents understand the question without having to be explained or reworded. Only Seven items related to theory papers, suggestions, sessional work were retained in the final draft. All items were open type and only one item i.e. related to sessional work was preference type, stepwise selection of items are given in following table:

<table>
<thead>
<tr>
<th>No. of items in preliminary draft</th>
<th>No. of items rejected by experts</th>
<th>No. of items modified after expert’s opinion</th>
<th>No. of items in final draft</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>07</td>
<td>02</td>
<td>07</td>
</tr>
</tbody>
</table>

3.4.3 INTERVIEW SCHEDULE REGARDING CURRICULAR REQUIREMENTS FOR SECONDARY SCHOOL TEACHERS

Schools today have a clearly defined vision for the improvement of learning for each and every student. Emphasis is on the achievement of a broadly defined set of standards including academic knowledge, skills development etc. Schools now are related and geared to the needs of society. So schools are changing focus to meet the demands of society. Such teachers are required who can fulfill the requirements of the schools. Being an important part of the society, secondary school teachers’ view is very important for gathering data regarding curricular requirements. On the basis of nature of the research, researcher constructed an interview schedule for secondary school teachers. The qualities of schedule can only be maintained when it is constructed according to methodology of tool construction. The researcher followed steps in preparing the schedule:

1. Planning

A large number of statements which were expressing the perception of secondary school teachers on B. Ed. curriculum were collected. For the collection of statements, the researcher consulted
the research experts, different Journals, internet etc. After the statements had been collected, they were edited by keeping in view the different subareas such as present needs in education, teaching skills, B.Ed. programme efficiency training areas and changes in B.Ed. programme. After that the researcher constructed and open interview schedule which is based on B.Ed. curriculum.

2. Pooling of the Items
On the basis of decided subareas, a number of questions were pooled for interview schedule, about 17 questions were constructed. The manuscript of the preliminary draft was submitted to experts for their opinions and criticism. After necessary modifications in the light of experts suggestions the preliminary draft was printed. Experts were requested to categorize the items in three categories i.e. good, to be modified, to be rejected.

3. Making correction after expert opinion
After collecting the test drafts filled by experts, researcher analysed all views and all those items nine were rejected which were kept in the category of rejection by any expert. Modifiable items were two and six items were categorized as good. They also suggested for the format of interview schedule that demands of the schools and society from the B.Ed. trainees should be kept in different items.

4. Final Draft
Following the suggestion and advise of the experts the number of questions were rejected, some were ignored and some new one’s got included then a final semi structured interview like schedule was prepared, only eight main items related to different subareas were retained in the final draft. Mostly questions are open type and only two close type questions are included in final draft.

<table>
<thead>
<tr>
<th>No. of items in preliminary draft</th>
<th>No. of items rejected by experts</th>
<th>No. of items modified after expert’s opinion</th>
<th>No. of items in final draft</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>09</td>
<td>02</td>
<td>08</td>
</tr>
</tbody>
</table>
3.4.4 INTERVIEW SCHEDULE REGARDING CURRICULAR REQUIREMENTS FOR PRINCIPALS

A school principal is the primary leader in a school building. An effective leader is available to teachers, staff members, parents, students and community members. Good leader stays calm in difficult situations, thinks before their act, and puts the needs of the school before themselves. Because the principal knows about the demands of society that is which types of teachers are needed in their school. So principal’s view is very important for gathering data regarding curricular requirements. For this purpose researcher constructed an interview schedule for Principals. Interview schedule is the tool which makes individuals responses more valid. Young (1966) enumerated the qualities of schedule as accurate communication and accurate response. These qualities of schedule can only be maintained when it is constructed according to methodology of tool construction. All items were open type in this schedule. An open form question in which the subject is encouraged to answer in his or her own words at some length is likely to provide greater depth of response. The researcher followed steps in preparing the schedule:

1. Planning
Discussions were made with the teachers, principals and research experts regarding requirements in B.Ed. curriculum in present time. Researcher consulted available literature on National Curriculum Framework and latest curricular improvements related books and internet. Then researcher decided areas for questioning as school demands, area for specific skills, effectiveness of teachers, suggestions about B.Ed. curriculum.

2. Pooling of the Items
On the basis of decided subareas a number of questions were pooled for interview schedule. About 12 questions were constructed and after serialization and proper organizations of the items, the preliminary draft of the schedule was given to research experts for their expert opinion.

3. Try Out
Following the suggestions and advise of experts, seven questions were rejected due to double interpretation and other reasons. This draft was given for preliminary try out. Try out wad done
on three principals and confirmed about the items whether these are communicating proper message and respondents are feeling convenience in giving response.

4. Final Draft
After try out, six questions were deleted and only six questions related to different subareas were retained in the final draft. The details of the items after modified are as follows:

<table>
<thead>
<tr>
<th>No. of items in preliminary draft</th>
<th>No. of items in first draft</th>
<th>No. of items in final draft</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>06</td>
<td>06</td>
</tr>
</tbody>
</table>

3.5.0 DATA COLLECTION AND ORGANIZATION
First of all the researcher visited all B.Ed. colleges selected in the sample for taking permission for data collection from principals of the colleges. After fixing the schedule, the researcher established the rapports with B.Ed. trainees and discuss the purpose of the research, then she administered perception scale on B.Ed. trainees. Researcher visited each of selected B.Ed. college and institute personally for establishing rapport. After that researcher took permission of date and time from Head of Institutes or principals for administrating the questionnaire. The researcher administered the questionnaire with fully framed instructions personally and she got face to face information from the respondents.

Thus obtained data have been scored and organized in a systematic way to achieve the purpose of the study. This data have also been checked to see the accuracy, utility and completeness and then tabulation has been performed.

3.6.0 STATISTICAL TECHNIQUES
1. Content analysis was done to arrive the curricular requirements of B. Ed. training programme on the basis of responses of Principals and teachers of secondary school on Interview Schedule.
2. Frequency, percentage and chi-square were used to analyse in data obtained on perception scale.
REFERENCES


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