CHAPTER – I

Introduction and Conceptual Framework
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1.01. INTRODUCTION

Teaching is the noblest of all professions. Teachers play a very significant role in any programme of education. "The status of the teachers reflects the socio-cultural ethics of the society. Traditionally, teachers have enjoyed a very high position in India. Teachers, in ancient India, were considered to be the spiritual fathers of their disciples. But, this position of great respect has been diminished in recent years because of various reasons. Both the teachers and the society must strive to improve the conditions of the teachers because without improving the quality of teachers. Education cannot make progress. Educational qualifications are the most important quality of teacher". Teacher education is a continuous process, and its pre-service and in-service components are inseparable. The new programme of teacher education will emphasize continuing education. Seminars, refresher courses, extension lectures, workshops, conference etc., may be organized and teachers may be deputed to them to improve their subject competence.

Aptitude and ability are the next important qualities of a teacher. A person who loves children and takes interest in teaching can be a good teacher, if he is given professional training. Those who have no aptitude for teaching cannot be good teachers by training. Those who have got the aptitude for teaching may be made able teachers by giving them competence in teaching techniques. Almost all the commissions on education of pre-independent and post-independent India have laid stress on teacher education. They made specific recommendations for teacher-training programmes.
Teaching is both skill and art. Because, it is a skill, training and practice are very important. That is why training programmes are designed to improve the efficiency of teaching. A teacher must keep abreast of modern development in teaching techniques. At the same time, teaching is an art also. So, the inborn tendency and aptitude are also equally important. NPE give importance to training of teachers especially secondary school teachers. Universities in co-operation with Teacher Training Institutes must conduct research in education to supplement the work of SCERT.

1.02. IMPORTANCE OF TEACHER EDUCATION IN MODERN INDIAN SOCIETY

In improving the quality of education proper training of teacher is of great importance. The impact of teacher training on the quality of instruction in schools should be obvious. But, it will depend on the quality of teacher training. The ultimate aim of teacher education is to prepare effective teachers who are capable of bringing desired behaviour changes in pupils.

Kothari Commission is very aptly stated at the very outset that ‘Destiny of India is being shaped in her classrooms’. The sole responsibility of it is on teachers who are in-charge of the classrooms. Their individual qualities, their devotion and dedication to the profession and their commitment determine the climate in the classroom. It is recognized today that education is an essential process of social progress and national development.

For instance, the expanded function of education in India when it is directly linked to national development requires a broadening and depending on teacher’s own knowledge and understanding. It also requires that the teacher see himself not as a prime source of knowledge but as an organizer of learning and learning experiences. This calls for a change in the concept of teacher education and consequent reorientation of the teacher education curriculum, both for enhancing the teacher’s educability as well as his
contribution to development. Teacher education will have to find an entirely different focal point in planning and implementing the various aspects of its programmes. It may be emphasized that for linking teacher education to the problems of national development, the changes in the teacher education programmes have to be such as would yield immediate dividends rather than provide long-term answers.

After the establishment of NCTE as a statutory body in 1995, it prepared the curriculum framework for Quality Teacher Education (1998) to provide a broad frame of reference for regional initiative to design curricula for teacher education, which are relevant in the area at specific contexts. An important contribution that the framework makes is the preparation of teachers for alternative systems like non-formal education, adult education, distance education and also education for +2 stage and vocational programmes.

A close scrutiny of all the attempts made at the national level leaves one with the impression that a lot has been achieved and lot more has to be achieved in the field of teacher education. The efforts are made at the national level for enhancing the efficiency of teacher education had its impact on the Secondary Teacher Education Programme (B.Ed.) in Kerala. But the B.Ed. programme has not changed substantially either in terms of curricular matter or the modes of its transaction.

Efficient and competent teachers are necessary tools in this process. Teacher education is a programme to turn out effective teachers in adequate members. Philosophers, educators and organizers have identified the objectives of the teacher education programmes.
1.03. INDIAN SOCIETY DEMANDS THAT A TEACHER WILL . . .

a) Be above ordinary in his competence and in his behaviour.
b) Have capacity to guide and lead the community.
c) Maintain a high standard of quality in personal and professional life.
d) Have a sense of responsibility.
e) Encourage, guide and lead pupils through their interest and occupation.

To meet these demands teacher-training institutions are organized with the assumption that these institutions will be able to turnout good teachers with impersonal identities from persons with average competence and general education. Proper teacher training programmes can help both group, who are born teachers and those who are not.

Teachers are the persons from whom society expects a lot. They are entrusted with the responsibility of moulding and motivating the students in accordance with the needs and requirements of the nation. Emphasizing the role of teacher, National Council for Teacher Education rightly states:-

"Enlightened, emancipated and empowered teachers lead communities and nations in their march towards better and higher quality of life. They reveal and elaborate the secrets of attaining higher values in life and nurture empathy for the fellow beings. Teachers are the torchbearers in creating social cohesion, national integration and a learning society. They not only disseminate knowledge but also, create and generate new knowledge. They are responsible for acculturating the role of education".

Almost all the review committees and commissions on education in the post-independent India have highlighted the need for improving the teacher education curriculum and various other aspects related to it.
1.04. COMMISSION REPORTS ON TEACHER EDUCATION

A thorough look into the various reports on teacher education shows that the quality of teacher is an important factor determining the quality of any educational system. The best-formulated educational policies can be successful only in the hands of properly trained teachers. "... destiny of classrooms is being shaped in departments of education and teacher education institutions".

Another major exercise towards the revision of teacher education curriculum was initiated by the University Grants Commission through the Curriculum Development Centre established in the Department of Education, University of Kerala in 1990. The programme of the center was confined to teacher education of the secondary school stage. The centre critically examined the existing secondary teacher education curricula of various universities and highlighted the need to base knowledge components for programmes of teacher education on disciplines cognate to education.

Wood's Despatch (1854) emphasized the need for training teachers. It was suggested that teacher training programmes similar to the one in England should be organized for Indian teachers also. To encourage them to undergo this training programme, they must be given scholarship.

According to Hartog Committee of 1929 pointed out no system of education is successful without dedicated teachers. The committee felt that the condition of teachers was deplorable. Their salary was low, there was no security of service, there was no proper training for them, their social status was not desirable and most of them were not qualified. Without doing something to remove this situation, it was not possible to improve secondary education. So, the committee recommended to train teachers, their salary and service conditions should be improved; steps should be taken to improve their social status and so on.
According to Abbot-wood Report (1937), there was specific recommendation regarding the training of teachers. The training programme for primary and middle schools should consist of two stages. The first is the pre-employment stage. This was for a period of three years after middle school. The second stage was for those who were in-service.

The Sargent Report (1994) made specific recommendations for the training of teachers of pre-primary, basic and high schools. Refresher courses for all teachers were also recommended. The report maintained that teachers should be paid good salaries so that the best might be attracted to the teaching profession.

Secondary Education Commission Report (1953) gives proper attention to teachers and teaching methods. According to Secondary Education Commission, the teacher is “the most important factor in the contemplated educational reconstruction. His personal qualities, his educational qualification, his professional training and the place, he occupies in the school as well as in the community, all these factors will have a definite impact on the educative process”. This report also point out the importance of teachers. Teachers are the pivot of the whole system of education. So, their academic, professional, social and economic condition should be improved. They recommended that high school teachers must be trained graduates.

Teachers must be given special privileges so that their social status is better. The method of teaching must also undergo reformation. The method of instruction should be based on activity method and project method. The method of instruction should develop in the student’s desirable values.

The Education Commission (1966) pointed out that “all the different factors which influence the quality of education and its contribution to national development, the quality, competence and character of teachers are
undoubtedly most significant”. According to this report, teacher plays a crucial role in any programme of education. The Commission recommends that a ‘State Board of Teacher’s Education’ should be established in each state to take care of teacher’s education. The training period for teachers depend on the type of general education they have received. Those who have passed the secondary school must undergo two years training and those who have passed degree must undergo one year training. They must be given practice in teaching in selected schools under proper guidance during the training period. Teacher in Training Colleges should be post-graduate with a degree in education. UGC should take the responsibility of maintaining the standard of teacher education. It has also been recommended that the curriculum of teacher education should be re-organized so that the teachers would be more practical and theoretical. Teacher trainees should receive free education. Loans and scholarships must be made available to them. Teacher training programmes must be expanded to fulfill the requirements of the large number of teacher in education.

National Education Policy (1986) envisages training programme, selection procedures, better service conditions etc., for making teaching profession attractive. For the successful implementation of the policy teachers will have to be motivated. Teacher orientation will receive attention. This will require preparation of teachers at the beginning of the service as continuing education thereafter teacher’s performance will be systematically assessed. Orientation programmes, refresher courses and seminars will be arranged for the teachers. Thus, the teacher’s will be prepared to meet the challenge.

1.05. AIMS AND OBJECTIVES OF TEACHER EDUCATION

Since, the teacher has the responsibility for the total development of the child, education and training should lead to the inculcation of similar values
and skills based on appropriate learning experiences. In other words, an intending teacher in addition to acquiring professional skills would do well to acquire the necessary knowledge, skills and attitudes so as to enable him to play his role effectively in bringing about the desired social change through education.

The document of National Council for Teacher Education (NCTE), entitled 'Teacher Education Curriculum: A Framework - 1978', which claims to reflect the national consensus in respect of future teacher education in India suggests a set of objectives of teacher education at various levels of the curriculum.

The objectives may be central to any teacher education programmes in India, regardless of the structure and stage or level may be as follows.

a) To develop concepts and acquire understanding of those areas and aspects of knowledge which have professional significance.
b) To develop an understanding of educational theory which will inform professional judgement and actions.
c) To develop the technical skill necessary for the achievement of professional competence.
d) To develop an understanding of teaching-learning process.
e) To develop skills and
f) To develop faith in democratic, socialistic and secular values.

1.06. PROGRESS OF SECONDARY TEACHER EDUCATION IN INDIA

The education of teacher is of recent origin in India. The first institution to train secondary teachers was the Government Normal School in Madras opened in 1856 and later called the Teacher's College. A similar institution was also established in Lahore in 1880. Thus, there were only two training centres for secondary teachers in existence when the education commission was appointed in 1881.
This number rose to six by 1920. Later, new training colleges came into existence, such as secondary training colleges in Bombay in 1906 and David Hare Training College in Calcutta in 1908. In 1913, the Government supplied a further study by declaring no teacher should be allowed to teach without a certificate of qualification as a teacher. By 1922, the number of training colleges increased to thirteen. The Hartog Committee in 1929 expressed general appreciation of the work done in secondary teacher’s training in the preceding years, but pointed out the great disparity in the nature of instructions given in the training colleges of different provinces. The position in 1937 was that the number of training colleges figured to fifteen with 1488 students including 147 women students, studying in them. In 1947, India got independence. A very good thinking and trend developed since independence, i.e., to improve the teacher’s training and trend developed since quantitatively. At the secondary level, hardly 51% teachers were trained out of 88,000 teachers and the number of secondary training colleges all over the country was forty-seven with an intake capacity of three thousand teachers. The planning started in India in 1951. Greater emphasis and facilities were provided during the first three Five Year Plan Period (1951-65) on education and training of teachers.

According to the Fourth All India Educational Survey conducted by NCERT in 1978, there were 8,38,279 teacher working in the secondary and higher secondary schools. Among the teachers working in secondary and higher secondary schools, 87.50% are trained. Here, Kerala and Tamilnadu having more than 90% trained teachers. As regards the progress in the position of colleges of education, according to a survey conducted by DTE and NCERT, there were 494 colleges of education upto 1979-80, out of them 373 colleges having only B.Ed. course.
1.07. THE ONE-YEAR TEACHER TRAINING COURSE

The usual pattern of teacher's training at the secondary level is to have graduates in arts and science for one year training in the secondary training colleges. After one-year study, would be teachers get the B.Ed. degree. The one-year course has been divided into two broad sections - Part I (Theory) and Part II (Practical skill in teaching). The weightage in the shape of marks roughly works out to be 1/3rd for theory and 1/3rd for skill in teaching. Gradually, however, thinking on this aspect has been undergoing a change and the theory portion is being cut down to give a greater stress to the practical aspect. Many training colleges now have at least one paper quite an elaborate programme of demonstration lessons, criticism lessons and long-practice teaching.

1.08. CONCEPT OF TEACHER TRAINING

Teacher education, like any other professional education, has two components - the theory of education and the practice of teaching. The theory of education consists of educational psychology, educational sociology, principles of teaching and learning, history of education, educational administration and supervision, health education etc. The professional experience undergone by the teacher trainee during this period is known as “Teacher Training”.

‘Student Teaching’ is a particular phase of teacher education. When the student teacher practices school activities including teaching in a school or simulated situation and integrates the principles of teaching into his teaching behaviour under the guidance of supervisor. Student teaching has become a very wide term, which includes all those activities, which a teacher is expected to do in the school situation. The curricular, co-curricular and administrative duties that a teacher will be called upon to discharge when he is employed in a school are to be learnt during his professional preparation.
All these experiences are included in student teaching. The curricular programmes that a student teacher undergoes during student teaching include planning of the lesson, writing instructional objectives, selecting and constructing different media to be for communication of knowledge, organizing the learning material in a particular unit to be presented in one lesson and also dividing a big unit into different sub units to be taught over a longer period of time. The Secondary Education Commission (1952-1953) was of the opinion that student teaching should be conceived broadly and it should include such activities under it as:

1. Construction of achievement tests.
3. Preparing teaching aids.
4. Participation of student teachers in co-curricular activities.
5. Follow up of assignments given to pupils.

1.09. PROBLEMS IN STUDENT TEACHING

Student teaching in most of the training colleges is done in schools. For successful student teaching programme, co-operation of the school selected for practice teaching is essential. Schools with indisciplined pupils and unhealthy organizational climate are hardly conducive to student teaching. Considering this, the University Education Commission (1949) had recommended that only “good school selected for practice teachings should be selected for student teaching”. Secondary Education Commission also recommended that every training college must have an experimental school where new methods and innovative ideas could be practiced. However, all training colleges do not have experimental schools. Therefore, they select other schools and the training colleges do not control the quality of these schools.
For the success of student teaching, good supervision is very important. But unfortunately, the traditional student teaching programme suffers greatly because of the defective supervision, feedback and evaluation. And this great defect renders the entire student teaching programme ineffective. As the number of lessons to be given varies from university to university, the number of lessons to be supervised also varies.

On principle, it has been accepted that practice teaching should be given at least 50% weightage and remaining 50% may be assigned to the theory course. The NCTE has recommended 50% weightage to practical work. But in most of the universities, practice teaching gets less weightage than the theory part. If we accept the fact that the goal of teacher education is to produce a competent classroom teacher, then practice teaching should get more weightage and prestige than is according to it at present.

In the training of teachers, the role played by teacher education is of great significance. The method of teaching adopted, their habits of work, their attitude towards the work done and the interests shown by them, are bound to have the influence upon the teacher's professional preparation. We assume that the training of teachers is bound to bring about some change in their attitude towards the type of work to be undertaken by them in future. It is universally accepted that the practical experience of a student teacher plays a role in his preparation for work in future. On the other hand, it is found on casual observations of the practice teaching programme that it is hardly related to the job requirements. It also becomes evident that the programme is not objective oriented. Thus, the need to study the prevalent problems of student teaching programme is essential so that the existing programme of student teaching may be improved and enriched.
1.10. NEED AND IMPORTANCE OF THE STUDY

Practice teaching is an important aspect of the programme of teacher education. The objectives of teacher education are not likely to be achieved, so much by the theoretical knowledge a teacher possesses, as by the skill he has in providing for truthful learning experience to children.

It is a general complaint that the trained teachers when they go to teach in schools are in no way superior over their untrained colleagues. They do not bring any improvement or quality in teaching. If they are asked for the impression about practice teaching, which they had in their training period, they mostly express their dissatisfaction with it. The trainees too consider 'practice teaching' as a hard and unwanted task. They try to finish the allotted number of lessons some how without taking much interest, and want to get rid of it as early as possible.

They have a feeling that practice teaching which is done in training colleges has no similarity with the real teaching in the schools. They also find that there is a wide gap between the practice teaching programme and the educational theory, which they learn during their training period. The teacher educators too feel that present practice teaching programme should be reshaped or improved; otherwise the product of training institutions will not be of much use in the field.

The Education Commission has also emphasized the need for the improvement of present teacher education programme. The commission report says, at present, student teachers are commonly required to give a specified number of isolated lessons, many of which are often unsupervised or ill supervised.

These all clearly indicate that there is no co-ordination between educational theory and educational practice. There is a need to reorient
practice teaching programme. So, the programme is to be restructured on the basis of needs at student teachers and facilities available in the institution. In the present circumstances, we can only follow the traditional methods. But these methods are not suitable for the individual needs of student teachers. A study on these problems may result in changing the methods of practice teaching and modes of teaching of student teachers. It is hope that the findings of the study will also help to reduce the existing gap between teacher educators and student teachers. An attempt is made to locate major problems faced by the student teachers and the weaknesses of the practice teaching programme. On the basis of the findings, it may be possible to give some suggestions in order to improve upon the prevalent student teaching programme.

1.11. SIGNIFICANCE OF THE STUDY

Improvement in teaching can be affected only by a clear knowledge of the factors that are important in successful teaching. This, in turn, can be achieved through research. The teacher trainees should be able to decide upon apt instructional procedures and suitable aids that would help to produce planned learning outcomes efficiently and economically. All the abilities and skills of planning and instruction, effective use of media and evaluation technique should form part of terminal behaviour of teacher education.

But unfortunately observation of student teachers during their teaching practice shows that it is very haphazard and highly disappointing. Only suggestions are given by supervisors after observing the class generally for 5 or 6 minutes. It is very difficult for the student teacher to incorporate the suggestions in subsequent lessons. A big gap exists between student teachers and supervisor who is generally the teacher educator. These develop an atmosphere of tension and artificially during practice teaching.
The result is that majority of student teachers develop unfavourable attitude towards practice teaching. They just want to complete the specified number of teaching lessons without their own satisfaction and the satisfaction of their teacher educators. In practice teaching, majority student teachers cannot exhibit the generally accepted teaching behaviours and skills and also seen that are developing inappropriate and wrong teaching skills. It is hoped that the findings of the study will also help to reduce the existing gap between teacher educators and teacher trainees.

1.12. STATEMENT OF THE PROBLEM

AN INVESTIGATION INTO PROBLEMS FACED BY NATURAL SCIENCE STUDENT TEACHERS DURING PRACTICE TEACHING PROGRAMME

1.13. OPERATIONAL DEFINITIONS

Investigation

'Problem is usually defined as any situation arising from the person or form his physical or social environment to which has no immediate solution available' (Kanawalla, 1973).

"Any significant perplexity and challenging situation real or artificial with the solution of which requires reflective thinking" (Good, 1945, P.300).

Natural Science

"The curriculum of the secondary schools in Kerala under heading Botany and Zoology".

Student Teacher

"A student, who is learning to teach, i.e., going through a teacher training course" (Rowtree, 1981).
Practice Teaching

“A term sometimes used to designate only those activities involved in actual teaching by a student teacher as contrasted with student teaching, which may include observation and participation as well as practice teaching” (Good, 1945, P. 412).

Programme

“A plan of procedure, a definite organized plan allotting a certain time for study in and or out of school” (Good, P. 313). “Any pre-arranged plan or course of proceedings a schedule of regular work or duties” (Funk and Wagnall, 1958).

1.14. OBJECTIVES

General Objectives

1. To find out the level of problems faced by natural science teacher trainees during practice teaching programme with regards to different dimensions and dimensions as a whole.

2. To find out the significant difference, if there is any, in the problems faced by natural science teacher trainees with reference to sex, educational qualification, age of student, teachers, subject specialization, teaching experience, locality of training college, management of training college, locality of school selected for practice teaching, management of school selected for practice teaching, type of school, during practice teaching programme.

3. To find out the opinions and suggestions of student teachers of natural science regarding the existing problems of practice teaching.

4. To find out whether the existing facilities provided to the student teachers (both in training college and school selected for practice teaching) are adequate to practice teaching programme.
Specific Objectives

1.1. To find out the level of problems faced by male and female natural science teacher trainees during practice teaching.

1.2. To find out the level of problems faced by teacher trainees with minimum qualification and high qualification during practice teaching.

1.3. To find out the level of problems faced by natural science teacher trainees with age group between 21-25, 26-30 and above 30 during practice teaching.

1.4. To find out the level of problems faced by natural science teacher trainees with subject specialization zoology and botany during practice teaching.

1.5. To find out the level of problem faced by experienced and inexperienced natural science teacher trainees during practice teaching.

1.6. To find out the level of problems faced by natural science teacher trainees from rural training colleges and urban training colleges during practice teaching.

1.7. To find out the level of problems faced by natural science teacher trainees from aided, unaided and university training colleges during practice teaching.

1.8. To find out the level of problems faced by natural science teacher trainees who selected rural schools and urban schools for practice teaching.

1.9. To find out the level of problems faced by natural science teacher trainees who selected government schools and aided schools for practice teaching.

1.10. To find out the level of problems faced by natural science teacher trainees who selected boys and girls or co-education schools for practice teaching.
2.1. To find out the significant difference between male and female natural science teacher trainees in their problem during practice teaching.

2.2. To find out the significant difference between natural science teacher trainees with minimum qualification and high qualification in their problem during practice teaching.

2.3. To find out the significant difference between natural science teacher trainees with subject specialization zoology and botany in their problem during practice teaching.

2.4. To find out the significant difference between natural science teacher trainees with teaching experience and without teaching experience in their problem during practice teaching.

2.5. To find out the significant difference between natural science teacher trainees from rural training college and urban training college in their problem during practice teaching.

2.6. To find out the significant difference between natural science teacher trainees who selected rural school selected for practice teaching and urban school selected for practice teaching in their problem during practice teaching.

2.7. To find out the significant difference between natural science teacher trainees who selected government school selected for practice teaching and aided school selected for practice teaching in their problem during practice teaching.

2.8. To find out the significant difference among natural science teacher trainees with age group between 21-25, 26-30 and above 30 in their problem during practice teaching.

2.9. To find out the significant difference among natural science teacher trainees from aided and unaided and university colleges in their problem during practice teaching.
2.10. To find out the significant difference among natural science teacher trainees from boys', girls' and mixed school selected for practice teaching in their problem during practice teaching.

1.15. NULL HYPOTHESES

2.1. There is no significant difference between male and female natural science teacher trainees in their problem during practice teaching.
2.2. There is no significant difference between natural science teacher trainees with minimum qualification and high qualification in their problem during practice teaching.
2.3. There is no significant difference between natural science teacher trainees with subject specialization zoology and botany in their problem during practice teaching.
2.4. There is no significant difference between natural science teacher trainees with teaching experience and without teaching experience in their problem during practice teaching.
2.5. There is no significant difference between natural science teacher trainees from rural training colleges and urban training colleges in their problem during practice teaching.
2.6. There is no significant difference between natural science teacher trainees who selected rural schools selected for practice teaching and urban schools selected for practice teaching in their problem during practice teaching.
2.7. There is no significant difference between natural science teacher trainees who selected government schools selected for practice teaching and aided schools selected for practice teaching in their problem during practice teaching.
2.8. There is no significant difference among natural science teacher trainees with age group between 21-25, 26-30 and above 30 in their problem during practice teaching.
2.9. There is no significant difference among natural science teacher trainees from aided and unaided and university colleges in their problem during practice teaching.

2.10. There is no significant difference among natural science teacher trainees from boys', girls' and mixed school selected for practice teaching in their problem during practice teaching.

1.16. LIMITATIONS OF THE STUDY

1. The study confined only training colleges in Kerala University in Kerala State.

2. The investigator has dealt with the problems of natural science teacher trainees only.

3. There are different types of problems for teacher trainees during practice teaching, but the investigator has taken for his study only eight dimensions like practising school, lesson planning, method of teaching, nature of teaching, pupil response, teaching aid and biology text, classroom management and discipline and evaluation. Each dimension has its own scope for elaborative study. Because of time limit, the investigator limited the study by taking the dimensions together.

4. There are a lot of problems related with restructured curriculum of B.Ed. course in Kerala University. But, the investigator has selected only one aspect like practice teaching programme for study.