CHAPTER III

STUDENT TEACHING AND INNOVATIONS

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Current approaches to Teaching
Practice - Characteristics of
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Student Teaching - Significance
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Student Teaching
CHAPTER III

STUDENT TEACHING AND INNOVATIONS

Student teaching is considered to be the most significant aspect in any teacher preparation programme. This is why it is called the 'key phase', 'the heartbeat', 'the climax', and the 'piece de resistance' etc. of teachers' training. But before going through the 'why' of its immense significance, it would be proper to study its concept, current approaches to it and its characteristics.

Concept of Student Teaching

Student teaching is a new term that has replaced the term practice teaching. However, in some countries including the developed ones, the term practice teaching or teaching practice is still prevalent. Generally, these terms are used to signify the school experience which a student teacher gets during his training.

Stones and Morris (1972) characterize practice teaching to be anachronistic and ambiguous. It is anachronistic due to two reasons: First, it is still alive in spite of its outdateness and second, the concept
A Comprehensive Picture Of Facts Concerning Student Teaching

Flow Chart-III

Student Teaching

Concept of Student Teaching
- Traditional
- Modern
- Anarchistic
- Vampiristic
- Unorthodox
- Theory-Based Activity

Current Approaches To Practice Teaching
- Model the Master Teacher
- Master the Teaching-Method
- Teaching as a Science
- Not Taught

Characteristics of Student Teaching
- Clarity of Objectives
- Definition of Proper Legal Responsibility
- Adequate Orientation of Student Teachers
- Consideration of Student's Interest
- Individual Differences
- Students' Initiative, Resposnsivity and Independence
- Experience Adequate and Long

Significance of Student Teaching
- Enables Student to Find Equilibrium of Thought of Trade
- Pictoral Gloom

Current Position of Student Teaching
- Innovations

Innovations
- Micro Teaching
- Minicourses
- Integration Analysis
- Simulation
- Programmed Learning
- CBTE
- Clinical Approach to Teaching

Innovations in Student Teaching
of teaching practice is based on the view that teaching is a craft and the student teacher is an apprentice who tries to learn it with the help of his teachers. The teacher follows the process of telling, demonstrating and imitating and thereby causing the student to submit before his authority.

Teaching practice is an ambiguous term. It has mainly three implications: the practising of teaching skills, the acquirement of school experience and proficiency in the practical aspect of the course. The problem is on which connotation the objectives and criteria of evaluation should be fixed.

By way of suggestion, Stones and Morris (1972) coin the idea of unitary concept of practice teaching. Explaining the nature of this term, Cohen and Manion (1977) state that the unitary concept is based upon a view of the whole college course as consisting of areas of study comprised of theoretical and practical elements.

Thus the unitary concept of teaching practice refers to precisely a theory based activity which is not limited to the practice teaching in schools only. It has wider application in the life situations also.
It includes all attempts which are made for putting the theoretical aspects into practical use. In sum, it brings rapprochement between theory and practice.

Some educationists prefer the term student teaching to practice teaching. They advocate that student teaching is more comprehensive because it is not only concerned with practising some steps of lessons but with total tasks of the teachers. It aims at developing imagination, initiative, resourcefulness and adaptability in student teachers.

Current Approaches to Teaching Practice

There are various approaches to teaching practice. Among them, the following are the important ones:

(i) Model The Master Teacher.
(ii) Master The Teaching Model.
(iii) Teaching As Caught Not Taught.
(iv) Teaching As A Science.

Model the Master Teacher: This approach is based upon the concept of craft apprenticeship developed by Stulurow (1965). It implies that for becoming a successful teacher one is required to follow the path of his effective teacher. But there are some arguments
that are placed against this approach.

(i) It leads towards traditionalism in teaching.

(ii) Teaching is highly personal activity and it disapproves the individuality of the student.

(iii) There are no fixed and well accepted criteria to help us to identify master teachers.

(iv) There is a problem to find out sufficient number of master teachers.

(v) It encourages to follow isolated elements of teaching behaviour and it is very difficult to integrate them on the part of student teachers.

(2) Master the Teaching Model: This approach lays emphasis upon following the teaching models. These models are developed through following the steps given below:

(i) A theoretical analysis of teaching behaviour

(ii) The construction of a conceptual model.

(iii) The conversion of the models into lesson plans.

(iv) Evaluation of the model.

Various types of teaching model have been given by educationists. The model given by Strasser (1967) is worth mentioning.
Figure 3.1: A CONCEPTUAL MODEL OF INSTRUCTION

It would be in fitness of things to explain some terms that have been used in the model.

**Teacher Planning.** Planning of the teacher is made keeping in view the pupils, the curriculum and situation where the teaching is to take place.
Teacher Behaviour Initiatory. It includes all the works which a teacher performs for starting the lesson.

Teacher Observation, Interpretation and Diagnosis of Learner Behaviour. It involves affective, cognitive and action aspects of the curriculum, the learning situation, the previous knowledge of the child and enhancement of child's concept etc.

Teacher Behaviour, Influenced/Influencing. It comprises the influenced behaviour of the teacher by observation and diagnosis of the pupils' behaviours as well as of the behaviour of the teacher himself which aims at enhancing learners' behaviour.

Information to Act on In Future. While teaching, the teacher gets some information about the learning behaviour of children which may not be relevant to that particular lesson but may be useful for future planning of lessons. So, he notes it down.

Continuing Tactic. It takes place when the initiatory tactic fails to achieve the desired result.

Closing Tactic. It occurs when the lesson is closed because the adopted new tactic does not bring
the desired result.

**Tactic: Child Self-concept.** This signifies the behaviour of the teacher which aims at enhancing the self concept of the child. This is not a part of the lesson plan of the teacher.

If seriously viewed, all the tactics described in the model contain four elements. These elements form a tactical loop which contains diagnosing, behaving, observing and interpreting. It has been shown in figure 3.2:

![Tactical Element Loop](image)

**Figure 3.2: Tactical Element Loop**

Thus these tactics play a major role in realising the objectives of the lesson.

'Mastering the teaching Model' is preferable on many counts. First, it provides the possibility of integration of theory and practice. Second, it offers
opportunity to both teachers and students to develop models and evaluate them cooperatively. Third, it does not negate the individuality of the child.

Teaching Caught Not Taught

This approach is based upon the view that teachers are born and not made. It approves that teaching is an intuitive activity. Therefore, the aim of teaching practice should be to provide an appropriate environment in which the teacher can display his latent teaching ability.

This approach appears to be dubious and unacceptable due to some reasons. First, it discards any systematic and rational approach to teaching practice. Second, it assumes the existence of general teaching ability which is not true practically. Third, it lays emphasis upon the genetic factor only and undervalues the environmental factor which can be disapproved by experience and findings of many studies.

Teaching as a Science

The nature of this approach is similar to that of 'Master the Teaching Model'. It assumes that teaching behaviour can be subjected to scientific observation and analysis. It also believes that the
behaviour of teaching can be rectified by systematic feedback. Moreover, like the theory of learning, the behaviour of student teachers can be studied, controlled and modified. On the basis of all these elements, teaching work has become systematic and scientific. Today on the basis of several researches in the various fields of teaching, a coherent theory of teaching can be formed.

Characteristics of a Satisfactory Programme of Student Teaching

(i) Objectives of student teaching are stated clearly and sufficiently.

(ii) Areas of professional responsibility of various participants in the programme are clearly defined and fixed.

(iii) The student teachers are sufficiently oriented to the programme.

(iv) The interest of the pupils is also taken into consideration while planning or organizing the programme.

(v) The student teaching experiences are sufficiently long to enable the intending teacher to get various types of experience.

(vi) The programme of student teaching should be framed to suit the abilities, and needs of individual student teacher.

(vii) A good programme makes provision for student's initiative, resourcefulness and independence.
Significance of Student Teaching

The following reasons can be placed to justify the significance of student teaching:

(i) It provides an opportunity to apply the theoretical learning which the student teachers get in the college.

(ii) The idea of 'learning by doing' is applicable to student teaching. In other words, the only way in which one can learn to teach is by teaching.

(iii) It enables the student teacher to evaluate his merits, weaknesses and potentialities under the guidance of his supervisors.

(iv) It determines the methods and ways of ensuring self improvement in future.

(v) It ensures the student teacher to learn to analyze, criticise and control his behaviour.

Current Position of Student Teaching

Student teaching presents a highly paradoxical picture. On one hand, it occupies its foremost place in teacher education programme and on the other hand it is a source of frustration and dissatisfaction because of its several shortcomings. Its justification depends upon its face validity only. It provides more or less trial and error learning experience. It encourages the student teachers to follow stereotyped procedures and is least bothered about the outcomes. This is why it has been a failure to produce technically competent persons.
It would be interesting to study the position of student teaching in India. It should be noted that the term 'student teaching' has not gained much currency in India and it is in its initial stage. The actual picture of student teaching has been revealed by a survey conducted by Palsane and Ghanchi in 1964. The salient points are:

(i) Objectives of student teaching are not clear.

(ii) The number of lessons to be given by a trainee are fixed arbitrarily and not in view of individual needs and abilities.

(iii) There is a lack of adequate orientation programme for initiating student teaching.

(iv) The trainees do not get practice in teaching continuous units and they have no scope to develop dynamism, initiative and resourcefulness as teachers.

(v) The trainees lack opportunities for responsible planning through cooperative work with pupils, teachers and supervisors.

(vi) The training colleges and schools need to come close and cooperate in planning programme for student teachers.

(vii) There is absence of block teaching and want of an organised internship experience.

(viii) The assessment of student teachers is not continuous and integrated which could carry the seeds of further progress.

(ix) The student teaching programmes need to be objectively studied and reoriented in all the aspects.
The aforementioned shortcomings of student teaching programme underline the important need for trying out some innovative alternatives. A similar need was felt by western educators also. Hence these lapses led to the birth of some innovations in the field of teacher education. Among them, Microteaching, Simulation, Interaction Analysis, and Programme Learning are notable.

**Microteaching, Its Concept and Principles**

Microteaching is one of the most important innovations that have been carried out in the field of teacher education. It was developed at Stanford University in 1960 by Allen and others. Initially its aim was to provide student teachers some practice teaching before their entry into practising schools. The main philosophy behind this approach is that teaching is a complex task which creates a lot of difficulties before the prospective teacher in the beginning of the course. Micro-teaching tries to turn the task easier and manageable.

There is no acceptable definition of Micro-teaching because this concept is still in the process of development.
Allen (1966) states:

"Microteaching is a scaled down teaching encounter in class, size and classtime."

(quoted in Chavan, 1979, p.132)

Peck and Tucker opine:

Microteaching is a combination of a conceptual system for identifying precisely specified teaching skills with the use of video-tape feedback to facilitate growth in these teaching skills.

(quoted in Passi and Shah, 1974, p.4).

From the above mentioned definitions, it is clear that it is a scaled down technique in terms of class, size, length of the lesson, teaching time and teaching competency. This is called microteaching because a teacher practises only one skill at a time through a single concept on a small group (6-10 pupils) for a short time (5-10 minutes).

Principles of Microteaching

The basic principles of micro teaching are simple and appear to have been influenced by the behaviourists. It seems to follow Programed learning which lays emphasis upon small steps, giving quick and regular reinforcement with controlled practice. In simple words, it believes that a teacher will learn those skills which are duly rewarded with frequent practice and eliminate those ones which are deemed useless.
Steps of Microteaching

(1) **Orientation.** The student teachers should be acquainted with the various theoretical aspects of microteaching.

(2) **Discussion of Teaching Skills.** Teaching skills should be clearly discussed before their practice.

(3) **Presentation of Model Lessons.** Model lessons in every skill should be given by expert teacher educators.

(4) **Preparation of Micro-Lesson Plan.** At this stage, the student teacher selects one unit concept and prepares micro lesson plan.

(5) **Microteaching Setting.** The steps that are followed have been demonstrated in figure 3.3.

Figure 3.3: Microteaching Cycle
These steps have been demonstrated keeping in view a period of 36 minutes in figure 3.

Figure 3.1: Microteaching Cycle (36 minutes)

Thus the setting of microteaching requires the following steps:

1. Teach
2. Feedback
3. Replan
4. Reteach
5. Refeedback

A student teacher generally requires two cycles for practicing one skill. Some teachers may require
three, while some may get proficiency through only one cycle.

(6) Simulated Condition. Student teachers should act as peer supervisors as well as pupils. Besides, it should be organized in the college campus itself.

(7) Practice of Teaching Skills. Several skills have been identified by research workers. Student teachers should practice at least the important ones. Some of them are given below:

(i) Skill of writing instructional objectives;
(ii) Skill of introducing a lesson;
(iii) Skill of stimulus variation;
(iv) Skill of reinforcement;
(v) Skill of keeping silent and using non-verbal cues like gestures and body movements;
(vi) Skill of asking probing questions;
(vii) Skill of explaining and illustrating with examples;
(viii) Skill of using the blackboard;
(ix) Skill of using audio-visual aids;
(x) Skill of closure;
(xi) Skill of lecturing; and
(xii) Skill of classroom management and organization.
(8) **Observation of teaching skills.** In western countries, television cameras and other educational technology are used for observing microteaching. However, simple paper and pencil schedules can be used for assessing the performance of student teachers. The observation should be done by the college/peer supervisors.

(9) **Feedback.** Immediate feedback should be provided by the supervisors. Feedback should be done on the basis of tallies and ratings should be made on the observation schedule.

(10) **Teaching time.** Normal time for completing one cycle should be of 35 minutes duration.

**Advantages of Micro teaching**

Allen and Fayon (1969) have defended micro-teaching on six grounds:

- **It is a safe practice.** In traditional method, the practice is to ask the beginners to confront a full class of 40 to 60 students on the very first day of teaching. Majority of teachers lose confidence while facing the fearful ordeal. It is tantamount to throwing a beginner (in swimming) into the deep pool and thus
allowing him to either swim or drown. In refreshing contrast, microteaching provides simple and non-threatening context. It is simple because the student teacher practices only one skill rather than all the skills at a time and non-threatening because the number of students is barely five to ten. Thus micro-teaching provides opportunities to the student teacher to rehearsal the teaching skills like medical and law students before entering to face the real situation.

**A focused instrument.** Microteaching offers opportunity to the student teacher to concentrate his attention upon the acquisition of some teaching skills. Provision of immediate feedback and reasonable practice ensure success in this context. It also enables him to work in the spirit of mastering the teaching model rather than model the master teacher.

**Developing Classroom skills.** It is through microteaching that the student teacher under the guidance of his supervisor learns some classroom skills which are crucial for good teaching.

**A vehicle of continuous training.** It can be worthwhile for those trained teachers who have reached professional plateau. It can be used as a diagnostic
technique to find out weaknesses and thereby pave way for wiping them out.

A new approach to supervision. In traditional pattern, the supervisor sits in the rear of the classroom and writes a few stereotyped remarks. In this way, the student teacher does not get solid support to improve his teaching. But in microteaching, the supervision becomes more scientific and objective and the variation between the views of the supervisor and the student is limited to minimum because the student teacher is himself involved in the assessment of his lesson. After the end of the lesson, the student teacher gets useful suggestions and thus gets help to improve his teaching.

A research tool. Research in education involves a lot of difficulties because the variables under study are not easily controlled. Microteaching provides opportunity to control variables such as time, content, students and teaching techniques. It can be a dependable device for the construction of pilot studies which can provide useful information for carrying out research on wider scale.
Limitations of Microteaching

In spite of the above mentioned advantages, microteaching cannot become a panacea for all the weaknesses. It has certain limitations and especially in the context of our country. They are:

(i) It cannot be a substitute of actual teaching with real pupils. It can be used as a supplementary device only.

(ii) The teaching skills of microteaching may not interact with general skills properly. Moreover, integration of skills is not an easy task for every teacher.

(iii) In microteaching there is a provision of practising a skill on 5 to 10 students. But this practice on small class may frustrate the student teacher when he will have to encounter big class of forty to sixty students.

(iv) As it lays emphasis upon mastering skills, there is every possibility of poor content coverage.

(v) Administrative problems in arranging micro-lessons and changing the time table may appear. Problems of space and furniture may also arise.

(vi) The difficulties related to material resources and trained supervisors may pose serious challenge. Setting up micro teaching laboratory, video recording and closed circuit television will involve heavy expenditure.

The above mentioned difficulties create unsuitable atmosphere for the use of microteaching in
our country. But such barriers appear naturally in the wake of every innovation. So they must be settled one by one in a planned way.

**Mini courses**

The basic concept concerning 'Mini courses' was devised by Borg and his colleagues at the Far west Laboratory in California. For the sake of convenience these courses are called "Microteaching Packages". According to Borg (1968) the decision to give birth to this concept was affected by two reasons: First, method courses were found to be less effective in achieving the desired result and the other two areas (curricular content and professional knowledge) of teacher education programme. Second, microteaching should be developed as a better tool for improving the task of the teachers.

**Nature of Mini Courses**

Cohen and Manion (1977) state:

The minicourse is a self instructional package which includes microteaching elements together with techniques enabling the user to make a systematic analysis of his teaching behaviour. (Cohen and Manion, 1977, p. 24).

Thus minicourses contain self instructional package with the help of which a teacher in his service
can improve his teaching without the help of supervisor. These courses are produced by the staff of the teaching laboratory and then validated in schools after making several modifications and revisions.

Though minicourses are the extended and adapted form of microteaching, yet they differ from it in some ways. First, in minicourse, feedback is given through self-evaluation while in microteaching supervisors are required to do it. Second, minicourse lays more emphasis upon models than feedback which attracts much attention in microteaching.

The first minicourse devised by Borg and others contains twelve specific skills. These skills can be used by a teacher of intermediate grade to improve his questioning style in a discussion lesson. It has been shown in Table 3.1.

Table 3.1 MINICOURSE 1 SKILLS

INSTRUCTIONAL SEQUENCE I

Skills covered:

1. Ask question, pause 3 to 5 seconds, then call on pupil.

2. Deal with incorrect answers in an accepting, non-punitive manner.
3. Call on both volunteers and non-volunteers in order to keep pupils alert and distribute participation.

INSTRUCTIONAL SEQUENCE II

Skills covered:

4. Redirection - directing the same question to several pupils.

5. Framing questions that call for longer pupil responses.
   (a) Ask for sets or groups of information when framing information level questions.
   (b) Avoid yes-no replies.

6. Framing questions that require the pupil to use higher cognitive process.

INSTRUCTIONAL SEQUENCE III

Skills covered:

7. Prompting to improve a week pupil response.

8. Seeking further clarification of the pupil's response.

9. Refocussing the pupil's response.

INSTRUCTIONAL SEQUENCE IV

Skills covered:

10. Teacher should not repeat his questions.

11. Teacher should not answer his own questions.

12. Teacher should not repeat answers.

From Stones and Morris, 1972, p. 223.
Advantages of the Minicourse Model

(i) Minicourses can be used in any school without the botheration of local facilities.

(ii) They provide opportunity to try out new methods and devices in less difficult situations.

(iii) Like microteaching, minicourse model offers the teachers an opportunity to learn teaching skills through practice.

(iv) The teacher gets immediate feedback from the video tape that records his teaching. In this way, he can rectify his weakness and improve his teaching.

(v) Minicourses are concerned with particular skills rather than generalities.

Due to these advantages, several minicourses have been identified and are expected to be developed in almost all those skills which are essential for maintaining an effective teaching learning situation.

Interaction Analysis

Several techniques have been designed and developed to analyse the communication system of classroom but the pioneer work was done by Flanders in 1959. This technique basically aims at analysing and thereby improving teaching behaviour.

What is Classroom Interaction Analysis?

Cohen and Manion say:

Interaction analysis refers to one of the numerous methods that have been developed to
describe in a systematic way, the frequency and type of spontaneous interactions that occur between teachers and pupils. (Cohen & Manion, 1977, p. 18).

In interaction analysis data about verbal interaction are collected and analysed to study the pattern of teaching behaviour. In this way, it provides remedial strategies also for reconstructing teaching behaviour.

**Flanders Model of Interaction Analysis**

Flanders developed this model as a part of research concerning teacher influence and pupil attitude and achievement. In this system the total classroom interaction has been divided into three parts: (a) Teacher talk, (b) Student talk, and (c) Silence or confusion.

Flanders interaction analysis categories have been shown in figure 3.5.
A brief account of these three major sections is given below:

**Teacher Talk - Indirect Influence**

Category 1: **Acceptance of feeling**. The teacher accepts the feeling when he, instead of punishing the pupils, encourages them to express their feeling without any fear.
Category 2: **Praise or encouragement.** It contains those jokes which aim at decreasing tension of the class. It should not annoy any particular pupil.

Category 3: **Accepting ideas.** It is quite similar to category 1. But it should be mentioned here that it is related to ideas and not the expressed emotions of the pupils.

Category 4: **Asking questions.** All the questions asked by the teacher in the class are included in this category.

**Direct Influence**

Category 5: **Lecturing.** It is used when the teacher gives explanation, conducts discussions and gives opinion to the children.

Category 6: **Giving directions.** The teacher directs the pupils to perform certain duties. It should be noted that direction is different from command because in direction the pupils enjoy more freedom.

Category 7: **Critizing or Justifying authority.** If a teacher criticizes a particular pupil and explains his authority in a bid to defend or justify himself
before the class, the statement comes into this category.

**Pupil Talk**

**Category 8: Pupil talk-response.** It includes everything that the pupil says in response to initiation by the teacher.

**Category 9: Pupil talk initiation.** In this category, the pupil takes his own initiative by raising his hand to say something or asking a question when he has not been encouraged by his teacher to do so.

**Other Events**

**Category 10: Silence or confusion.** It covers all those things which have not been included in the other categories. It marks a period of confusion in which it is difficult to decide who is talking.

**The Observation Procedure**

First of all, the observer takes five or six minutes for being acclimatized to the classroom situation. After doing so, he takes decision about the category that properly represents the communication events at the end of each three second period. He writes this category number on the data sheet and continues the same procedure to get twenty to twenty five observations per minute. During observation, if any sudden change takes place in the classroom, double lives are drawn on the record sheet.
and the time is noted. At the end of the total observation, some useful points, if any, are noted for recall and adequate interpretation.

**Construction of an Interaction Matrix**

A ten by ten matrix is constructed for the ten categories of interaction. Before arranging the observations into the matrix, an attempt is made to ensure that the entire series begins and ends with the same number. Usually a 10 in the beginning and end of the entire series is added if it is already not present there. For example, if 7, 8, 7, 5, 1, 3, 9 and 5 categories have been noted down, the pair formation would be as follows:

\[10, 7, 8, 7, 5, 1, 3, 9, 5, 10\]

Category numbers are placed in sequence pairs in such a way that each number is entered twice (once as the first and once as the second number in each pair). For instance, in the stated example, the first pair is 10-7 and the second one is 7-10. In this way each pair overlaps with the next. The location of these pairs have been shown in Table 3.2.
Table 3.2 Sample Interaction Matrix

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<tr>
<th>Sr. No.</th>
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<th>7</th>
<th>8</th>
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<td>0</td>
<td>2 9</td>
</tr>
</tbody>
</table>

From Chavan, 1979, p. 147.

Interpretation of the Classroom Interaction

After arranging the data into the matrices, it is easy to do various types of analyses. At the outset, percentage of tallies in each of the columns is calculated. It presents the share of the total interaction found in each category. I/D ratio can also be calculated. This
reveals the ratio of indirect to direct statement given by the teacher. For its calculation, the total number of tallies in the indirect talk (1, 2, 3, and 4) are divided by the total number of tallies which fall in all the teacher talk (columns 1 to 7) categories. Similar calculations can be made by obtaining the ratio of pupil initiated talk to teacher talk. Heavy loading on both 4 and 5 rows and columns reflect emphasis on content. Like these, several other calculations can be made to know the classroom interaction.

The Modified Form of Flanders Interaction Analysis

There are several systems to study the classroom interaction. Amidon and Simon (1965) found in a survey that there are more than twenty systems for classifying verbal classroom interaction. The researcher deemed it proper to present the modified form of Flanders' interaction analysis because it helps to analyse the specific aspects of teaching. Modified categories have been shown in Table 3.3.
Table 3.3: Modified Categories of Flanders Interaction Analysis

<table>
<thead>
<tr>
<th>TEACHER TALK</th>
<th>1. Accepts Feeling</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.a</td>
<td>Praises</td>
</tr>
<tr>
<td>2.b</td>
<td>Praises using public criteria</td>
</tr>
<tr>
<td>2.c</td>
<td>Praises using private criteria</td>
</tr>
<tr>
<td>3.</td>
<td>Accepts idea through:</td>
</tr>
<tr>
<td></td>
<td>(a) Description</td>
</tr>
<tr>
<td></td>
<td>(b) Inference</td>
</tr>
<tr>
<td></td>
<td>(c) Generalization</td>
</tr>
<tr>
<td>4.</td>
<td>Asks:</td>
</tr>
<tr>
<td></td>
<td>(a) Cognitive memory question</td>
</tr>
<tr>
<td></td>
<td>(b) Convergent question</td>
</tr>
<tr>
<td></td>
<td>(c) Divergent question</td>
</tr>
<tr>
<td></td>
<td>(d) Evaluative question</td>
</tr>
<tr>
<td>5.</td>
<td>Lectures</td>
</tr>
<tr>
<td>6.</td>
<td>Gives Direction</td>
</tr>
<tr>
<td>7a.</td>
<td>Criticizes</td>
</tr>
<tr>
<td>7b.</td>
<td>Criticises using public criteria</td>
</tr>
<tr>
<td>7c.</td>
<td>Criticises using private criteria</td>
</tr>
<tr>
<td>STUDENT TALK</td>
<td>8. Pupil Response:</td>
</tr>
<tr>
<td></td>
<td>(a) Description</td>
</tr>
</tbody>
</table>
It can be seen from Table 3.4 that with the addition of more categories, the possibility of collecting more data regarding classroom verbal interaction has been increased. It will undoubtedly give more knowledge to the teachers about their teaching behaviour. For example, a teacher who wishes to analyse his questioning technique would use thirteen categories which comprises ten basic categories and four added (4a, 4b, 4c & 4d) subcategories. This expansion would undoubtedly provide wider and more clear picture of this component of teaching behaviour.
Keeping in view these accounts, it appears that the interaction analysis system is certainly a useful tool for good teaching. But some educationists point out its limitations also. It is applicable to formal teaching only, it is not concerned with the totality of classroom activity, it is content free, it is costly and it pays relatively less attention towards students' talks etc. are some drawbacks connected with it. Inspite of these allegations, its utility cannot be overlooked. Its approach to unfold what goes on in the classroom is indeed a creditable point that can be placed in its favour. It enables the students to study their own teaching behaviour. Moreover, it can provide a vast area for research work. Due to these points, Flanders inter-action analysis is regarded as dependable device for preservice as well as inservice education of teachers.

Simulation

The history of the existence of simulation in the world is very old. But it came to limelight only after first world war when training of pilots in airforce was started through its application. Today, it is widely used in military, medical, motor training and business spheres. In the field of education it was
developed to acquaint preservice students with several tasks which they will be required to perform in actual teaching life but which are not generally covered in teacher training programme.

Nature and Scope of Simulation

According to Cohen and Manion (1977) "Simulation are models of real things or real situation." (Cohen and Manion, 1977, p.15). Simulation is representative of actual situation. Though it is not the replica of real situation but it successfully reflects its picture without its complexities.

Zuckerman (1979) gives a new name "Hey teach" and includes the following sequence of activities into its scope:

(a) School and classroom environment;
(b) Examination of instructional activities;
(c) Management courses;
(d) Production of material and activities;
(e) Introduction to the concept of curriculum;
(f) Administrative tasks.

Techniques of Simulation

From amongst several techniques of simulation sociodrama, In Basket and Single Case study are important.
Sociodrama. It is an unstructured form of simulation. Students are given some orientation about subject, method, level of pupil competence and so on. Sometimes some guidelines are provided before a group of students about the classroom situations.

In Basket. It is highly structured and more comprehensive. Cruickshank (1968) developed a technique in which there are thirty-one different simulated problems related to teaching. The student teacher is introduced in a new factitious school as if he were a real teacher. He is also supplied information about pupils, curriculum and rules and regulations. After the presentation of each problem, the student teacher records his response in 'Incident Record Sheet'. After this, group discussions follow. In this way, the simulated laboratory experiences are provided.

Single Case Study. In this study, a small book is prepared which contains detailed information about a child as well as his home and school environment. Student teachers give reply to all the problems presented before them. His replies on the basis of group discussions.
**Advantages of Simulation Technique:**

(i) It helps to establish close links between theory and practice.

(ii) It provides opportunities for the participants to analyse critical teaching problems.

(iii) It provides relatively inexpensive practice and experience.

(iv) Controlled feedback is available.

(v) Student teachers are motivated for active participation which results in better learning concerning their job.

(vi) It frees the student teachers from the dangers and complex situation of actual teaching learning situation.

(vii) The domination of teachers in the class is ended. Students participate in the classroom activities without any fear.

Inspite of these advantages, there are some limitations of simulation technique. For example, it reduces the seriousness of learning, it requires a lot of preparation on the part of teachers, and it is difficult to maintain a detailed record of various teaching incidents. However, its overall advantages appear to outweigh these limitations and project it still as a reliable technique.

**Programmed Instruction**

Programmed instruction has emerged out of behaviouristic psychology. Skinner was the first man
to develop and bring it into education. It is based on the principle of operant conditioning which is related to the principle of reinforcement to make behavioural changes in successive approximation till the desired end is obtained.

**Nature of Programmed Instruction**

Skinner's concept of programmed instruction is called 'Linear teaching programme'.

Page and Thomas (1977) define:

"A linear programme is a series of teaching frames or units of information to which a pupil may respond. (Page and Thomas, 1977, p.206).

It is a device of teaching in which the whole programme is divided into very short frames or units. The learner responds to every frame. Right responses are reinforced immediately and for wrong ones, he is required to see the correct responses. Generally, frames are presented by machines or texts and they are in the form of questions, blanks, diagrams and pictures etc. The learner is given opportunity to learn at his own pace. These procedures are followed until all the frames are presented and learnt by the pupils."
Principles of Programmed Instruction

In programmed instruction the following principles are involved:

(i) **Principle of small steps.** The subject matter is split into meaningful segments of information.

(ii) **Principle of active responding.** Active responding on the part of learner means his active involvement in the learning process.

(iii) **Principle of immediate confirmation or feedback.** The knowledge of progress is given immediately to the learner.

(iv) **Principle of self-pacing.** The learner proceeds at his own pace and is not forced to go ahead with other students of his class.

(v) **Principle of testing.** The teacher regularly assesses the progress of his students and makes revision of the programme on the basis of the students' performance.

Types of Programmes

Description of the linear style developed by Skinner has been made earlier. Another important style was given by Growder in 1950. His style of programming is called Branching or Intrinsic. It is different from linear style in respect of its approach and rationale. In Branching, the subject matter is divided in larger steps and multiple choice questions are presented. The learner chooses the correct answer.
and proceeds further. If he chooses an incorrect answer, he is required to review the preceding unit of information. After that, the nature of his error is explained to him and he is retested. Thus a linear programme is arranged to avoid errors whereas in branching errors are anticipated and attempts are made to correct them.

Besides these two popular styles, other styles such as computer assisted instruction and Learner controlled instruction have also been developed in this context.

**Advantages**

1. Those skills which require drill such as spelling, and foreign language vocabulary are very efficiently taught through this method.

2. It encourages students for creative thinking and making sound judgement.

3. Teachers, being free from stereotyped classroom activities, get opportunity to perform some creative activities.

4. Many social and emotional problems including the vexed problem of indiscipline can be solved easily.

5. The self instructional device caters to the need of individual students.

6. It enables the teacher to make diagnosis of the problems of individuals as well as of the group.
(vii) It provides motivation to the students and keeps their interest enlivened.

(viii) It can be used as an effective teacher training tool.

**Limitations**

(i) Social traits such as cooperation and teamwork cannot be developed.

(ii) Programming cannot be made in respect of such subjects as Philosophy, Literature and Music.

(iii) Application of machine in the process of programming is harmful. It will replace the teachers, hinder the quality of self-expression and adversely affect group discussion.

(iv) The technique emphasizes more upon methods and less on content coverage.

(v) Lack of good programmers and adequate fund punctuated with resistance on the part of teachers come in the way of its successful application.

It is now evident that the programme instruction is not a panacea for curing all types of ills that arise in the teaching-learning process. In order to get maximum benefit from it, it is to be considered a subordinate to teachers' natural works.

**Team Teaching**

The concept of team teaching was developed in fifties in U.S.A. with the purpose to improve the instructional programme. Due to its value and utility,
even in the wake of several innovations developed in the field of teaching-learning process, it still continues to flourish.

**Nature of Team Teaching**

Team teaching is also called cooperative teaching. Some educationists treat it as a means of grouping of teachers and thereby utilizing them in the best possible way. In team teaching two or more teachers form a team to teach a group of students. The group is benefitted by the expertise of the team of teachers.

**Carlo-olsen defines:**

> It is an instructional situation where two or more teachers possessing complementary teaching skills cooperatively plan and implement the instruction for a single group of students using flexible scheduling and grouping techniques to meet the particular instruction. (quoted in Chavan, 1979, p.114).

**Objectives of Team Teaching**

The intent of team teaching is to design and improve the instructional system. Following are some specific objectives of team teaching:

(i) **Team planning and management.** The teacher will demonstrate his ability in planning and management of the teaching programme.
(ii) **Human relationship in team teaching.** The teacher will display his ability to work in a team maintaining cordial relationship with other teachers.

(iii) **Utilizing better talents and interests of teachers.** Through team teaching, special talents and aptitudes of teachers will be utilized for the benefit of students.

(iv) **Improvement in the quality of instruction.**
As already mentioned earlier, the team teaching consisting of good teachers will improve the quality of instruction.

**Principles of Team Teaching**

There are no fixed principles of team teaching because they vary according to the local conditions of the school. However, following are some common principles:

(i) **Composition of the group.** The size of the group should be fixed in accordance with the goal of team teaching.

(ii) **Time factor.** Time should be fixed according to the nature and importance of the subject.
Flexible time-table is always preferred.

(iii) **Learning environment.** The learning environment should be congenial. For this, library, laboratory, workshops and enough accommodation facilities should be provided.

(iv) **Distribution of teachers' duties.** Interest, qualification and special aptitude of teachers should be taken into consideration while apportioning duties to every individual teacher.

(v) **The nature of instruction.** The nature of instruction should be in accordance with the general level of comprehension of students.

**Advantages**

(i) Team teaching offers the opportunity for free expression to all the teachers of the team. Hence, it is a means of increasing expression capacity.

(ii) Team teaching enables teachers to share ideas with and support from the team members. It results in forging good relationship among them.

(iii) In team teaching, the teachers are required to equip themselves with fresh knowledge. So they
work hard and enhance their professional efficiency.

(iv) It provides freedom from the beaten path of traditional teaching pattern.

(v) The teachers evaluate each other and through mutual suggestions get the chance to remedy their lapses.

(vi) Personality conflicts between students and teachers can be minimized through cooperative teaching and efforts.

(vii) It provides training to the teachers to assume various roles of teacher aide, tutor, small and large group instructor.

(viii) It reduces the pupil teacher ratio and paves way for providing good guidance.

(ix) It is a way to bring improvement in the quality of teaching.

Limitations of team teaching

(i) There is a lack of cooperation in team teaching due to personal conflicts among the teachers.

(ii) Team teaching requires big room which are generally less common.
(iii) Team teaching causes loss of individual teachers' personal contact with children.

(iv) It tends to focus more attention upon the subject matter rather than upon the learner.

(v) It is costly and teachers do not want to deviate from the traditional path of teaching.

Despite these limitations and concerns, many teachers support and pin their high hopes on team teaching and its usefulness for meeting their as well as students' needs. This is why it is maintaining its progressive growth.

Competency Based Teacher Education (CBTE)

It is a fact that teacher education programme has always remained in a state of crisis and challenge. Some people think its utility as lost because it is without any worthwhile purpose. Competency Based Teacher Education which has been the watchword in the field of teacher education for almost a decade attempts to prepare prospective teachers basically in terms of identified goals.

Nature of Competency Based Teacher Education

Describing the nature of CBTE, Elam maintains that:
It is a programme in which performance goals are specified, and agreed to in rigorous detail in advance of instruction. The student must either be able to demonstrate his ability to promote desirable learning or exhibit behaviours known to promote it. He is held accountable not for passing grades but for attaining a given level of competency in performing the essential tasks of teaching. (Quoted in Baird, p.14).

Competency based teacher education is a process which involves:

(a) Fixation of objectives;

(b) Identification of strategies to attain the objectives; and

(c) Assessment.

This programme attaches more importance to the field work and skills which are important from the point of view of actual teaching. A model of competency based teacher education has been given in figure.

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**Figure 3.6: The Basic Structural Model for CBTE**

Assumptions of CBTE Programme

(i) The skills, knowledge and attitude of the programme are important and worth achieving.

(ii) The students who participate in the programme do not possess the skills, knowledge and attitude that symbolize the objectives of the programme.

(iii) The training activities are potent and effective in turning the prospective teachers into successful teachers.

(iv) The teacher who completes the programme has attained the objectives of the programme.

(v) The teachers apply the learnt skills in the classroom to bring about desirable improvement in the learning of pupils.

Essential Elements of the Programme

(i) The programme is based upon those skills which are essential for effective teaching.

(ii) Teaching competencies to be realized are stated in behavioural terms and made public.

(iii) Methods of assessment are specified. Assessment is fundamentally concerned with performance.

(iv) A design of instructional activities is prepared to realize the objectives.

(v) The progress of students depends upon his competency attainment. In other words, it provides self-pacing.

(vi) Each programme includes self-evaluation and procedures for follow-up.
(vii) The learner is encouraged to give his personal impressions about the adequacy and relevance of the programme.

Toxonomic Approach to Evaluation of Student Teaching

Toxonomic approach is behavioural. It makes an analysis of student's competencies and measures the changes that take place in his behaviour as a result of teacher preparation programme.

Brinkerhoff (1978) states:

Competency assessment is a process that produces information about the extent to which students have mastered particular skills, knowledge and attitudes.

(Brinkerhoff, 1978, p. 22).

Two conclusions can be drawn from this definition. First, assessment is a process and not an end in itself. Second, it is a source of information about the progress of students through which decisions are made. Most CBTE programmes try to answer three questions:

(i) Does the prospective teacher possess the required ability to learn a particular skill?

(ii) Has he demonstrated the skill in required situations?

(iii) What are his feelings and attitudes towards the programme itself?

Figure 3.7 shows in a very simple way the functioning of CBTE program and its evaluation.
Figure 3.7: Rationale/Structure of A Teacher Education Programme

(From Brinkerhoff, 1978, p. 21).
In Figure 3.7, 'A' signifies to turn students into teachers. These teachers will teach pupils in schools. 'B' denotes the achievement of learning objectives by pupils.

Steps of Assessment

(i) **Identification of the Competency.** Many programmes have identified competencies essential for effective teaching. Those competencies which are most important should be chosen.

(ii) **Analysis of the Competency.** At this stage, the chosen competencies are defined.

(iii) **Selection of measurement modes.** The purpose of this step is to provide data concerning each competency and facilitate and economize the next step.

(iv) **Definition of Variables.** After a competency has been analyzed and a mode of measurement fixed, the specific variables and performance indices should be worked out.

(v) **Construction of an instrument.** An instrument is a means of recording observations on the basis of predetermined categories. At this stage, an instrument is constructed to record the behavioural changes of students.
Areas of Competence in Student Teaching

The areas of competence are determined in accordance with different roles a teacher is required to play in his teaching process. Following are the main areas of competence which should be considered for development and evaluation.

1. **Instructional planning.**
2. **Instructional execution.**
3. **Instructional evaluation.**
4. **Instructional follow-up.**

**1. Instructional planning.** The student teacher should be given knowledge about instructional planning. Determination of appropriate objectives is the most important requirement for effecting good planning. Objectives are mainly concerned with three areas: (1) Cognitive domain; (ii) Psychomotor domain, and (iii) Affective domain. Keeping in view these objectives, planning for presenting the content can be successfully made.

**2. Instructional execution.** At this stage, the content is presented. For getting success in this area of competence, the student teacher should be made aware of the latest trends and techniques of instruction. The student teachers should be given information about classroom administration and management also.
(3) **Instructional evaluation.** The student teachers should be properly trained to evaluate and record the learning outcomes of pupils in an objective and scientific manner.

(4) **Instructional follow-up.** The student teacher should be made competent to make diagnosis and find out remedy for ills concerning teaching learning process.

Figure 3.8 indicates the process of taxonomic approach in the evaluation of student teaching.

Determination of objectives of Student teaching

![Toxonomic Approach of Evaluation of Student Teaching](From Murthy and Lulla, 1978, p.112).
From these accounts given about CBTE, it is obvious that the new approach is different in many respects from the traditional approach of imparting training to the intending teachers. The points given in Table 3.4 will clarify the differences between these two approaches:

Table 3.4: Comparison Between CBTE and Traditional Education Programme

<table>
<thead>
<tr>
<th>Competency Based Programme</th>
<th>Traditional Education Programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)  The main indicator of student achievement is ability to do the job effectively and efficiently.</td>
<td>(i)  The main indicators are knowledge and ability to do the job effectively and efficiently.</td>
</tr>
<tr>
<td>(ii) Time is not a factor. Some students finish early, some late.</td>
<td>(ii) There is, specified time limit.</td>
</tr>
<tr>
<td>(iii) The criteria of success (iii) is demonstration by the ability to do the job.</td>
<td>The criteria of success are better grades or degrees.</td>
</tr>
<tr>
<td>(iv) Opportunities are provided to acquire competencies in practical field.</td>
<td>(iv) Practical field experiences are limited in nature.</td>
</tr>
<tr>
<td>(v) Competencies are presented in small learning units.</td>
<td>(v) Learnings are organised into courses.</td>
</tr>
<tr>
<td>(vi) The criteria for good instructor is the extent to which he is effective in helping students to acquire competencies they are seeking.</td>
<td>(vi) The criteria of a good instructor is how much he knows about his subject and how well he presents it.</td>
</tr>
</tbody>
</table>

contd..
The nature and various aspects of CBTE have been discussed. The complaint that there is no consensus about what constitutes effective teaching may be avoided by this new programme which defines a set of individual competencies each of which is believed to add something to a teacher's effectiveness.

Clinical Approach to Teacher Education

This new concept has been widely in use in the field of teacher education for over a decade. Several related terms such as clinical experience, clinical schools, clinical supervisors and clinical professors have gained much currency recently. Due to its utility, many educationists opine that clinical experience is not only desirable in the preparation of teachers but essential also.

Clinical Concept in Teacher Education

The clinical concept has been used in many
different ways in teacher education. It is difficult to illustrate its concept which is acceptable to all. However, three terms: clinical professor, clinical experience and clinical supervisor have been in much use. The explanation of the nature of these terms would be worth-while.

Clinical Professor. Conant (1964) coined the term to describe a special type of college educator who is competent both in subject matter and pedagogy and should serve as a link between the college and practising schools.

Many institutions in the U.S.A. use this term for that college faculty member who supervises student teaching.

Some training colleges use this title for a student teacher who serves as a part time teacher in an institution.

Clinical Supervision. This term was originally given by Goldhammer in 1969. It denotes data based supervision which is different from traditional supervision. In this form, the supervisor collects data through actual observation of classroom teaching. The collected data are analysed and used in post
observation meeting with student teachers. At the end, both supervisor and student teachers make joint planning for professional growth. In this way clinical supervision is based upon global value judgement. It makes the student teacher self-correcting, self-dependent because it moves him from supervision to self-vision.

**Clinical experience.** Educationists define the term in several ways. Andrews (1964) used it for that opportunity when the prospective teacher teaches those pupils who have some learning problems. The diagnosis, prognosis and remedial measures of the teacher are included in this concept.

Broudy (1972) related this term to clinical teaching. This teaching is conducted by the experienced practitioner after the teaching practice is over and the teacher trainee is required to observe it like a medical student.

These procedures of clinical approach can be used for the benefit of trained teachers also. Hence, it provides a mechanism for improving both teaching and teacher education.
List of References Cited


