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# Teaching of Skills

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Unit-I

Lesson No : 1

PSEDTC 105

Sem : I

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## CONCEPT OF TEACHING

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## 1.1 INTRODUCTION

Teaching is the specialized application of knowledge, skills and attributes designed to provide unique service to meet the educational needs of the individual and of society. The main focus of teaching is to facilitate learning, where there is teaching learning must be there. Teaching activities are designed to produce change in the behaviour of the learners. Teaching

is goal oriented process and it influences learning. Teaching and learning are closely related and now teaching and learning is considered as one concept.

If we look at the task of the teacher in today's context, we find that it is demanding and complex. The teachers not only have to fulfil their teaching commitments, but also inculcate among students universal values through their interaction with them and also ensure that students are able to apply their learnings in real life. With these expectations, the massive expansion of the education system and an increase in access to educational facilities, the traditional roles of the teacher have now all undergone a sea change.

It is important that the teacher trainees and teachers know about the latest trends in the art of teaching and equip themselves with a rich repertoire of teaching skills , so that their proper use during classroom teaching may bring about the desired behavioural changes in the students. This lesson will give the trainees an insight in the aspect of effective teaching.

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## **1.2 LEARNING OBJECTIVE**

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### **Learning Objectives**

After reading this lesson students will be able to understand :

- Concept of teaching
- Different phases of teaching
- Micro Teaching and its phases
- Different skills of teaching
- Cycle of Micro Teaching

### **Learning Outcomes**

After the completion of this lesson, the student will be able to :

- Comprehend teaching and its different phases
- Understand Micro teaching and its different skills
- Identify the steps of preparing a Micro cycle

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## **1.3 CONCEPT OF TEACHING**

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Different educationists have defined Teaching in different ways :-

According to Smith "Teaching is a system of actions intended to produce learning."

Clarke thinks " Teaching as referring to activities that are designed and performed to produce change in student (pupil) behaviour."

According to American Educational Research Association Commission in the Handbook of Research on Teaching (1962) "Teaching is a form of interpersonal influence aimed at changing the behaviour potential of another person"

In the words of Burton "Teaching is the simulation, guidance, direction and encouragement of learning"

For Ned .A. Flanders; "Teaching is an interaction process, interaction means participation of both teacher and students and both are benefitted by this. The interaction takes place for achieving desired objectives.

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### **1.3.1 PHASES OF TEACHING**

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Teaching is a complex task A systematic planning is required to perform this task. Teaching is a process .The different steps constituting the process are called the phases of teaching. There are the following three different phases of teaching :

1. Pre- active phase ----Planning stage
- 2 .Inter- active phase---Implementing stage
3. Post-active phase-----Evaluation stage

**1.3.1 (a) Pre-active Phase** –This is also the planning stage which takes place before actual class –room teaching .This includes such tasks as setting up the objectives, preparing the lesson plan, planning the content to be delivered in the class, planning the aids to be used by the teacher along with the illustrations and examples and deciding the strategy of teaching. In case, you as a teacher are at pre-active phase of teaching, you will have to focus on -

- Where am I going? (objectives)
- How will I get there? (steps by means of which the objective is achieved)
- How will I know when I have arrived? ( the use of appropriate evaluation procedures)

**1.3.1 (b) Interactive Phase** – This is the actual class- room teaching. At this stage the teacher uses a no. of strategies for achieving the goals already set. In interactive stage the behaviour

of the teacher is spontaneous. During this stage you as a teacher pays attention to the following operations:

- Perceiving the size of the class and identification of the students
- Diagnosing the achievement of the learners
- Action or achievement (initiation or response).

This involves the following operations-

- Selection of stimuli
- Presentation of stimuli
- Feedback or reinforcement
- Development of strategies of teaching.

#### **Self- assessment**

- a) Preparation of the content to be taught in the class
- b) Selecting the objectives of the content to be taught
- c) Interacting with the students
- d) Illustrating with examples
- e) Emphasizing important points on the Black board

1.3.

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active

Scoring

Statements a,b, indicate Pre-active phase and c,d,e indicate inter active phase.

active phase the following operations are involved.

- Assessing the suitability of the objectives determined.
- Deciding whether content has to be re-taught or taken up further.
- Assessing the suitability of the instructional material.
- Assessing the impact of the classroom environment.

Thus, Teaching is a process, which helps the child to learn and acquire knowledge, skills and socially desired behaviour for effective living in the society. This brings into living light well important factors in teaching namely- ‘Why,’

‘why’ of teaching – The teacher is to teach with definite objectives in view so that desired behavioural changes are acquired in the students.

**‘What’ of teaching-** It signifies the selection of suitable teaching subject matter, activities and experiences. The selection has to be made keeping in view the pupils and their needs, interests, achievements on one hand and the objectives of teaching on the other.

**‘How’ of teaching-** It relates to the methods and techniques which go on changing as a result of researches in the fields of education and educational psychology.

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### 1.3.2 CHECK YOUR PROGRESS -1

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Note : Write your answers in the space given below ;

Q1. What are the various steps that a teacher follows at Pre-active phase of teaching ?

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Q2. Discuss which operations are important during Interactive phase of teaching.

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## 1.4 MICRO TEACHING.

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A teacher, Mrs. Jolly was hardworking, dedicated and creative. Another teacher Mrs. Singh was equally hard working and dedicated but she was not as effective as Mrs. Jolly. What would have made the difference in the two cases? Mrs. Jolly was well versed with different skills of teaching which is an important part of Micro teaching.

‘What is Micro teaching’? Does it have something to do with the microscope? It is not wrong to seek similarity with the microscope for this technique we examine each teaching skill as though it were being put under a microscope or being seen through a magnifying glass. Teaching is a many sided activity consisting of a number of verbal and non-verbal acts like questioning, explaining, drawing, rewarding, smiling, nodding, gestures, movements etc. This complex task of teaching has been analysed into limited but well defined components called ‘teaching skills’ that can be defined, observed, practised, evaluated and controlled. Each skill is thus put under a microscope or a magnifying glass and practised by the teacher in the beginning. Microteaching is thus essentially a training technique which is called ‘micro’ since a teacher practices with a small group (6-10 pupils) for a short duration (5-10 minutes) a simple concept lesson and concentrates on a simple skill which is magnified and exaggerated.

Micro teaching is one of the most important developments in the field of teaching practice. It was developed at Stanford University in 1960 by Aleen and others. It was considered a mechanism of feedback device for the modification of teacher trainees. Micro teaching is like a simulated social skill teaching to provide the feedback to teacher-trainee for the modification of teacher- behaviour. It is a training concept that can be applied at various pre-service and in-service stages in the professional development of teachers .Micro teaching provides teachers with a setting or instruction in which the normal complexities of class-room are reduced and in which the teacher gets feedback on the performance.

Basically, Micro teaching is a ‘scaled-down teaching encounter’ in which a teacher teaches a small unit to a group of 5 to 10 students for a small period of 5 to 10 minutes and one teaching skill is practised during the teaching .Micro teaching is a new training design for pupil teachers which provides an opportunity to practice one teaching skill at a time and with information about their performance immediately after completion of their lesson.

Micro teaching is a clinical teaching programme which is organized to explore the trainee to an organized curriculum of miniature teaching encounters, moving from the less complex to the more complex.

Micro teaching was initially designed to provide teacher-trainees with practice in leaving before they entered the schools. The rationale for this approach is that teaching is a complex and demanding activity, involving techniques of organization, control and command of

teaching skills well beyond the prospective teacher at the beginning of her course. Microteaching thus attempts to reduce the situation to manageable proportions.

Allen (1966) defines Micro teaching as “Scaled down teaching encounter in class size and period “ It is a system of controlled practice that makes it possible to concentrate on specific teaching behaviour and to practice teaching under controlled conditions.

Clift and others (1976) have recently defined “Micro teaching as a teacher training procedure which reduces the teaching situation to simpler and more controlled encounter achieved by limiting the practice teaching to a specific skill and reducing teaching time and class size.”

Micro teaching is defined as “ a teacher education technique which allows teacher to apply well defined teaching skills to a carefully prepared lesson in a planned series of five to ten minutes counters with a small group of real classroom students, often with an opportunity to observe the performance on videotape”.

The basic principles of micro teaching are simple and have been influenced by the behaviourist school of psychology. It is based on the belief that teachers will learn those patterns of behaviour most effectively for which they are given due praise or reward with frequent practice in the early stages, and eliminate those patterns which are considered undesirable.

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#### 1.4.1 THE CHARACTERISTICS OF MICRO TEACHING

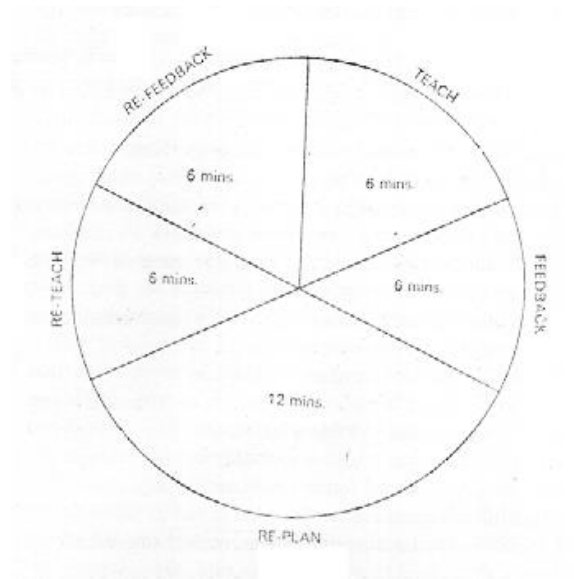
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The above definitions indicate the following **features** of Micro teaching:

- It is a real teaching but focuses on developing teaching skills and competencies.
- It is a scaled down teaching.
- The teacher teaches a short lesson of about 5-10 minutes duration.
- She teaches a very small group between 5-10 pupils or peers.
- She concentrates on practising one specific skill which she maximizes.
- She plans a lesson with a single unit in mind as she teaches for only 5-10 minutes.
- Immediately after teaching, she receives feedback or a critique of her lesson from her supervisor, peers or from ‘Self –appraisal devices’.
- She then re-plans her lesson in the light of the suggestions received.
- She then re-teaches her lesson to a different group of pupils or peers.



- She again receives feedback and may resume the cycle of teach-feedback-re-teach till she is satisfied that she has achieved the desired level of performance.



## MICRO CYCLE

### Self Assessment

Reflecting on your experience as a teacher identify the activities that you will integrate in your teaching while delivering a Micro lesson in the class of your choice.

## 1.5 TEACHING SKILLS

As many as seventeen skills have been analysed by the centre of Advanced studies in Education. Baroda, but many more skills have been added. These are listed below:-

1. Skill of writing instructional objectives.

2. Skill of organizing the content.

3. Skill of set induction.

4. Skill of introducing a lesson.

5. Skill of questioning.

6. Skill of distributing questions.

7. Skill of response management or probing questions.
8. Skill of explaining.
9. Skill of illustrating with examples.
10. Skill of using teaching aids.
11. Skill of stimulus variation.
12. Skill of reinforcement, or encouraging desirable behaviour in pupils by praise.
13. Skill of explaining and illustrating with examples.
14. Skill of using the blackboard.
15. Skill of using audio-visual aids.
16. Skill of closure.
17. Skill of lecturing.
18. Skill of classroom management and organization.

In microteaching each skill is mastered individually during the training period. Once the teacher has become proficient in the use of each skill in the laboratory situation, she must then integrate all the skills into the complex act of teaching in the real class-room. In other words, having broken down the teacher into several pieces, we must put the teacher back together again.

### **Advantages.**

- It reduces the complexity of teaching skill, class, size, time and content are all reduced. It focuses on controlled practice of specific skills, rather than on vague, generalized practises of all the skills simultaneously.
- It gives systematic and pin pointed feedback from several sources to help the trainee to improve.
- For the teacher trainee the advantage is that it is economical in time.
- It makes supervision more potent and teacher evaluation more objective and reduces the conflict between the supervisor and trainees view for student herself is involved in the appraisal of her micro lesson.

- It can be used as a diagnostic technique to identify weaknesses in a teacher and help to remedy those specific weaknesses.

### **Limitations**

- It cannot be a substitute for macro teaching or replace actual teaching with real pupils, but can exit as a supplementary approach.
- There may be administrative problems in arranging for micro classes and modifying the time table accordingly.
- There may be problems of space, and furniture.

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### **1.5.1 CHECK YOUR PROGRESS 2**

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Note: (a) Write your answer in the space given below:-

(b) Compare your answer with those given at the end of the lesson/above sub-section.

1. Fill in the blanks:-

- (i) Pre active phase of teaching is the \_\_\_\_\_ phase of teaching.
- (ii) Micro teaching was developed by \_\_\_\_ in \_\_\_\_\_.
- (iii) Simple steps of Micro teaching involves Teach ,\_\_\_\_\_,Re-plan and \_\_\_\_\_.
- (iv) Teaching analysed into limited but well defined components is called \_\_\_\_\_.
- (v) Micro teaching is a \_\_\_\_\_ teaching.

2. What are the characteristics of Micro teaching?

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3. What are the important factors in Teaching?

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### **1.6 LET US SUM UP**

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From the above discussion, we conclude that Teaching is a complex task. It is important to have a systematic planning to perform this task efficiently. There are three different phases of teaching- Pre-active phase which is the planning stage, Inter-active stage which is the implementing stage of teaching and Post-active phase which is the evaluative stage of teaching.

This complex task of teaching has been analysed into well -defined components of teaching called ‘teaching skills’. To train the pupil teachers each skill is put under a microscope or magnifying glass and practised by the teacher in the beginning to acquire the skill efficiently.’ Micro teaching’ is thus a training technique in which a teacher practices with a small group of 6-10 pupils for a short duration of 5-10 minutes, a simple concept and concentrates on a simple skill which is magnified and exaggerated. Immediately after teaching the teacher receives feedback, then sh/he re-plans in the light of suggestions and re-teaches her/his lesson and again receives feedback and thus by following this cycle the pupil teacher acquires the desired level of performance.

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## 1.7 KEY WORDS/GLOSSARY

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**Stimuli** : Anything which comes from the environment and evokes a response is stimuli

**Reinforcement** : is a specific type of conditioning which increases the probability of a given response of behaviour on subsequent occasion.

**Micro** : Micro means minute and Micro Teaching is the scaled down teaching.

**Teaching Skills** : The task of teaching analysed into well defined components of teaching is called teaching skills.

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## 1.8 SELF –ASSESSMENT QUESTIONS

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1. Give the concept of teaching.
2. Explain different phases of teaching.

3. Describe Micro teaching.
  4. Explain various steps of Micro cycle.
  5. Give any three advantages of Micro teaching.
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### **1.9 SUGGESTED READINGS**

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1. Paintal Iris : Micro teaching, a handbook for teachers
2. Singh L.C & Sharma R.D: Micro Teaching Theory and Practice
3. National Council for Educational Research and Training; Department of Teacher Education, (1975-79) Micro Teaching Series 1-8, New Delhi : NCERT.
4. Perrott. E (1977) Micro Teaching in Higher Education ; Research Development and Practice.
5. Gupta Renu: Mastering Teaching skills.
6. Brown, G.A.(1975) : Micro Teaching

**Structure**

## 2.1 Introduction

## 2.2 Learning Objectives

## 2.3 Peer Teaching

## 2.3.1 Principles of Peer Teaching

## 2.3.2 Forms of Peer Teaching

## 2.3.3 Benefits of Peer teaching

## 2.3.4 Disadvantages of Peer Teaching

## 2.3.5 Check your progress 1

## 2.4 Team Teaching

## 2.4.1 Types of Team teaching

## 2.4.2 Procedure of conducting Team Teaching

## 2.4.3 Check your Progress 1

## 2.5 Let us sum up

## 2.6 Key words/Glossary

## 2.7 Lesson End Exercise

2.8 Suggested Readings

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**2.1 INTRODUCTION**

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With the introduction of educational technology in the discipline of education, great changes have taken place in the process of teaching- learning and training of teachers. Class-room teaching has been changed considerably with the application of technology of teaching. The emphasis is being given to evolve new practices in teaching so as to raise the academic

performance and individual differences of the students in teaching- learning situations. As a result various innovative practices have been evolved in this area. The two important innovative practices of teaching have been discussed in this chapter:

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## **2.2 LEARNING OBJECTIVES**

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After reading this lesson, you shall be able to :

- Describe Peer teaching
  - Explain different forms of peer teaching
  - Team teaching
  - Procedure of team teaching
  - Importance of peer teaching and team teaching in classroom learning
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## **2.3 PEER TEACHING**

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Peer teaching is one of the best ways to master a particular subject. It is a method of teaching where a student instructs another student who is a novice. This assisted teaching helps the students to enhance their teaching skills. Peer teaching is a teaching and learning strategy where students, by design, teach other students. It is a process between two or more students in a group where one of the students acts as a tutor for the other group mates. This paves the learner student to learn without depending upon the teacher, and the teacher- student to revise the topic again, on the belief that “to teach is to learn twice “(Collins)

Through the direct interaction between students, peer teaching promotes active learning as well as participation within themselves. Student teachers enhance their own depth of knowledge in the topic by instructing others.

### **Components of effective peer teaching**

The following are the important components of peer teaching:

- Communication with team mates
- Encouraging team work

- Cardial relations with in the team
- Encouraging critical and creative thinking
- Sharing of books and information

### **Procedure**

When planning a Peer learning exercise, the following activities can be useful in peer teaching;

- Organising Role Play for the students
- Creating a reward system in the group
- Teaching students the tutoring skills
- Teaching students the proper ways of giving feedback
- Providing written prompts to the learners
- Filling knowledge gaps
- Allowing students to take turns in teaching
- Encouraging students to be partners with the pupils of another class

**Steps** that should be followed by the peer tutor

Before going for peer tutoring following steps should be considered by the peer tutor:

- He should decide how he wants to teach
- He should decide what mode of delivery he is using while tutoring
- He should work in a team
- He should know how to build on existing resources
- He should master the technology
- He should set appropriate learning goals
- He should focus on designing course structure and learning activities.

### **2.3.1 PRINCIPLES OF PEER TUTORING**

#### **Confidentiality:**

It is important to maintain confidentiality about the learner who is being tutored. As a tutor it is important that the academic performance or any disabilities or personal situations about which you as tutor is aware of should not be disclosed.

#### **Professionalism**



The peer tutor should prepare for tutoring session in advance.

### **Respect**

In peer teaching both the peer tutor and learner should respect each other.

### **Constructive Feedback**

The peer tutor should be well aware of how to give constructive feedback . Initially it should be done under the guidance of the teacher.

### **Communication**

Good communication between the peer tutor and the learner is of utmost importance.

## **2.3.2 FORMS OF PEER TEACHING**

**Co-operative learning:-** Co-operative learning is the instructional use of small groups so that students work together to maximize their own and each other's learning. Class members are organized into small groups after receiving instruction from the teacher. They then work through the assignment until all group members successfully understand and complete it. Co-operative efforts result in participants striving for mutual benefit so that all group members share a common fate, knowing that one's performance is mutually caused by oneself and one's colleagues, and feeling proud and jointly celebrating when a group member is recognized for achievement.

**Class- wide peer teaching:-** This methodology of teaching involves grouping the entire class into pairs, and peers mentoring each other by giving prompts, error correction and helping each other. In this method every student is given cards for the task to keep them focused on the goal. After this the tutor takes the cue cards and marks the skills mastered by the particular student. The main benefit of this approach is that no student is singled out. Every student has to participate compulsorily regardless of their disabilities.

**Crisscross or cross age peer teaching:-** In this method children in different age groups and ability levels are paired together to work for a task. The elder student or the student with a higher level of intelligence is assigned the role of tutor whereas the other student is assigned the role of tutee. Besides learning from each other the students also improves their interpersonal skills. Surrogate teaching:- This implies giving some teaching responsibility to high year group for the low year group.

**Proctoring programmes:-** This implies one to one tutoring by learners who are slightly ahead of their peers or who have successfully demonstrated proficiency with the material in the recent past.

**Reciprocal peer teaching:-**A specific version of co-operative learning in groups in which classmates prepare to tutor each other.

**Surrogate teaching:-** This implies giving some teaching responsibility to high year group for the low year group.

In short peer teaching emphasises on encouraging teaching among peer, which involves learners and teachers of the same or different age groups or levels of intelligence. This assisted teaching helps the students not only to enhance their teaching skills but also makes them confident and removes their stage fear.

### **2.3.3 BENEFITS OF PEER TEACHING**

Peer teaching is not a novel concept, as it was seen right from the time when the system of education prevailed in our society. Since then, it was an effective method of teaching as well as learning. Nowadays peer teaching is quite popular among students of all ages.

- Learners receive a more personalized learning experience.
- Direct interaction between learners promote active learning.
- Learners feel more comfortable in the open when interacting with the peers.
- It enhances the students level of creativity in expressing ideas as well as in grabbing new concepts.
- Peers share a similar vocabulary allowing for greater understanding.
- Peer teachers reinforce their own learning by instructing others.
- Research also includes that peer teaching activities help for more team building, supportive learning networks, greater psychological well being, social competence, communication skills, high achievements and greater productivity in terms of enhanced learning outcomes.
- It encourages students to ask questions and improve his comprehension levels.
- Feeling at ease with a peer tutor allows a student to concentrate better on the important points of the lesson which encourages transfer of learning effectively.

- Peer teaching involves direct interaction between the learner student and the teacher student, which help them to promote the active learning along with interpersonal skills.
- Peer teaching is helping in breaking the monotonous teaching learning process.
- This method is helpful in making the class vibrant, sharing responsibilities of teachers with students which are beneficial to them. But on the other side, it increases the role of teacher in monitoring and administering the students.

#### **Self Assessment**

Reflecting on your own experiences list the benefits of Peer Teaching.

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#### **2.3.4 DISADVANTAGES**

- There are chances of communication gap within the student and the teacher, which may often lead to the failure of assigned activities.
- The students are usually reluctant in initiating the assigned duty. There may be students who are willing to teach and there may be students who are hesitant to work out of their comfort zone. Hence this becomes a challenge for the teacher.
- Parents may take it in a derogative manner that their kid is being taught by some other kid of the same age and the teacher is sitting idle. So, there may be complaints from the side of the parents until and unless they are completely given the justification behind the concept of peer teaching.

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#### **2.3.5 CHECK YOUR PROGRESS 1**

Note: Write your answer in the space give below ;

Q1. Explain Co-Operative Learning as a form of Peer teaching.

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Q2. Explain the terms given below;

Crisscross or cross age Peer Teaching , Surrogate Teaching

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## **2.4 TEAM TEACHING**

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The concept of 'Team teaching' has its origin in the America during the mid1950s. It reached England in the 1960s. Harvard University is the first institution which has initiated an internship plan in 1955. It is difficult to trace the origin of team teaching because so many individuals and organisations have been conducting studies in their own areas for last two decades all over the world. In India, many educationist are aware of this system; but they are not confident to implement it even though it will best suit to our teaching learning situations.

### **Definitions**

Team teaching has been defined as: "A type of instructional organization, involving teaching personnel and the students assigned to them, in which two or more teachers are given responsibility working together, for all or significant part of the instruction of the same group of students."

Carlo Orson has defined the term learn teaching," 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."

It may be inferred from the definitions of team-teaching that it has the following characteristics:

## Characteristics

- It involves two or more teachers to teach a class.
- It is an instructional strategy rather than training strategy.
- In this type of teaching, a group of teachers is responsible rather than an individual teacher.
- A team or group teachers of the same subject work together to deal a significant content to same group of students jointly.
- It can be termed as co-operative teaching, in which individual teachers plan to pool resources, interests and their expertise for teaching a content for the same group or class of students.
- A group of teachers has the shared responsibility of planning, organizing, teaching and controlling and evaluating the teaching of the same class of student.

In team teaching, the group teachers has to consider the needs of their pupils and their teacher jointly to satisfy their needs and remove the difficulties of their students.

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### 2.4.1 TYPES OF TEAM TEACHING

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**There are various ways to classify the team teaching but a better way is to classify it on the basis of its organization. Team teaching may be organized mainly in three types;**

- (a) A team of teachers from the same department.
- (b) A team of teachers from inter-departments.
- (c) A team of teachers from inter-institutions

**First type** teaching is organized in secondary schools and higher secondary where there are more than two teachers in the same department. This type of teaching can be organized at each level of education if there are more than two teachers of the same subject.

**Second type** of team teaching can be organized effectively in education of training departments. The experts from different departments can be invited to teach students along with department personal who are interested and teaching the course to their students. This approach can be best utilized to encourage and introduce the inter-disciplinary teaching

**Third type** of team teaching can be organized at every level of education. The experts of the subject from other institutions can be invited to deal the special content of the subject. It can be organized at college level, if there are more than to colleges in the same locality.

Usually team teaching has two phases: lead lecture and follow-up group work. A lead lecture is one given at the beginning of the lesson. The lead lecture is followed by group-work which is immensely valuable to the students. The group work is helpful for the comprehension of the information which has been presented in lead lecture.

### **Objectives:**

The team teaching has been evolved to realize the following objectives:

1. To make the best use of expertise of teachers under team teaching.
2. To improve the quality of teaching.
3. To develop the feelings of co-operation or group work in teaching learning situation.
4. To help the students, to satisfy the needs and difficulties relating to the special content.
5. To develop the sense of shared responsibility in teaching and evaluation of students learning outcomes.
6. To minimize the scope of teaching wrong things to the students.

### **2.4.2 PROCEDURE OF CONDUCTING TEAM TEACHING**

1. Planning (2) Organizing (3) Evaluating.

**Planning.** involves (a) formulating the objectives of team teaching (b) Writing these objectives in behaviour terms, (c) Identify the entering or initial behaviour of the learners of the group (d) deciding the topic to be taught (e) Preparing a tentative schedule of teaching (f) Assigning duties to teachers, considering their interest and competence: (i) lead lecture, (ii) follow-up work (iii) Supervision. (g) Fixing up the level of restriction. (h) Selecting appropriate teaching aids and teaching equipment for generating learning environment (i) deciding ways and means for evaluating the student's performance.

**Organizingteam teaching** involves(a) determining the level of instruction: some questions are asked to explore the background of the learners. (b)selection of appropriate communication strategy by considering the level of language comprehension (c) Presentation of lead lecture by the competent teacher of the team: other teachers listen the lecture and note down the elements of topic which are not easily understandable to the learners group. (d)

Follow-up work; the other teachers have to supplement the lead lecture by explaining the elements of the topic in a more simple way, so that learners can understand easily. (e) providing motivation or reinforcement by teachers to the learners in both the situations; lead lecture and follow up work. (f) Supervision of students activities which are assigned to lead lecture or group work or follow-up work. This stage is considered to be important for assimilation.

Every member of the team should be conscious about time schedule and about the duty assigned to him. He must be well prepared and ready for that.

**Evaluating team teaching:-** The evaluation is an important aspect of any type of teaching and instruction. It is helpful to measure the performance of learners. It also provides the reinforcement to team of the teachers and the learners. It involves the following activities: (a) asking oral questions, writing questions and practical work. Each question should measure a particular objectives of team teaching. (b) Taking decisions about the level of performance and realization of objectives (c) Diagnosing the difficulties of the learners and provide the remediation. (d) Revising the planning and organizing phases of team teaching on the basis of evaluation of the students.

### **Advantages**

- a) The team- teaching utilizes the competencies of the teachers. It has been devised to make best use of the expertise of the subject-matter.
- b) It creates the learning environment to the comprehension or mastery of the subject among the learners.
- C) It provides the opportunity for free discussion in the class-room teaching.
- d) The learners and teachers develop the social relation in school environment.
- e) It provides an opportunity to the teachers to develop the professional status and competency in teaching by observing teaching of content expert.
- f) It exposes the learners to more specialists of the subject and they are benefitted by the special knowledge of various teachers.
- g) It considers the needs and difficulties of the students. The specialists of the subject content are involved in team spirit to work jointly in solving the teaching difficulties of the students and catering their needs of learning situation.

- h) The team of teachers make the best use of multi-media advices which are very helpful in reinforcing the learners.
- i) It is highly flexible method of teaching while traditional methods of teaching are rigid.
- j) This method fosters mutual trust and co-operation among teachers and students.
- k) It enables the students to become more aware of their own approach, knowledge of content and simultaneously to the other experts of the same area. It brings excellence of teaching in them.

**Self assessment**

List out two experiences you have had with teams which illustrate at least two of the above characteristics.

.....

.....

**Limitations of team teaching**

- a) It is very difficult to seek co-operation among teachers and enable them to work jointly in teaching-learning situation. They hesitate to work together because nobody wants to expose oneself.
- b) It is not feasible in practice to assign powers and responsibility to group of teachers. The responsibility of a group of teachers virtually is the responsibility of none.
- c) There is no mutual regard and respect among the teachers. Every teacher considers himself an expert of the subject.
- d) The teachers do not like to deviate from the routine methods of teaching and they do not prefer any change in the system of education.

**Suggestions for the Use of team teaching**

The team teaching can be used effectively by incorporating the following suggestions:

- a) The meaning and understanding of team teaching should be given to the school teachers and favourable attitude would be developed among them towards team teaching.



b) The success of team teaching rests on the co-operation and devotion of the teachers. Only those teachers must be invited in this method who are willing to participate.

c) The teachers should not be assigned the duties but they themselves should prefer the activities of teaching. They should be given full freedom to work at various stages of team teaching.

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### **2.4.3 CHECK YOUR PROGRESS 2**

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Note (a) Write your answer in the space given below:-

(b) Compare your answers with those given at the end of the lesson/ above sub-section.

1. Which of the following statements are true ?

(a) Team teaching improves the quality of teaching. \_\_\_\_\_

(b) Team teaching can also be termed as co-operative teaching. \_\_\_\_\_.

(c) Reciprocal peer teaching I performed in groups in games. \_\_\_\_\_

(d) Peer teaching hinders the active interaction between teacher and the learner. \_\_\_\_\_.

2. Give five advantages of Team teaching.

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3. Name various types of Team teaching.

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### **2.5 LET US SUM UP**

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From the above discussion we conclude that the present system of education demands too much from a teacher by curtailing his freedom. He has to teach same subject matter every year and he is forced to teach the same content to two or three sections of the same class. It is

very boring to him and ceases his interest in the subject. Sometimes he is assigned to teach the subject in which he has no interest to teach but he is forced to do so. In these circumstances, when teachers and students have to work under so many constraints, we feel an urge to use innovative methods like 'Team teaching' and 'peer teaching'. In Team teaching a group of teachers has the shared responsibility of planning, organizing, leading and controlling and evaluating the teaching of the same class. The teachers teach jointly to satisfy the needs of the learners and remove their difficulties. Peer teaching is a teaching and learning strategy where students teach other students. It is a process between two or more students in a group where one of the students acts as a tutor for the other group mates.

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## **2.6 KEYWORDS / GLOSSARY**

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Peer -Peers are individuals who are usually in the same age group or share common characteristics, or experiences.

Surrogate- Surrogate is one appointed to act in place of another

Confidentiality- the fact of private information being kept secret; protecting personal information

Proctoring- to invigilate; monitoring

Team- A group of people who work together towards a common goal or objective

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## **2.7 LESSON END EXERCISE**

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1. Define the term Peer teaching.
  2. Why is Peer teaching important in present class room learning?
  3. Explain the procedure of Team teaching.
  4. What are the characteristics of Team teaching?
  5. Give advantages of Team teaching. Also suggest the proper ways of using this strategy.
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## 2.8 SUGGESTED READINGS

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1. Allen, Dwight and Kevin Ryan (1969): Micro teaching, Addison Wesley publishing company, London.
2. Taba, Hilda and Freeman F, Elvey (1964): 'Teaching strategies and thought process'
3. Singh L.C and Sharma R.D : Micro Teaching Theory and Practice
4. Paintal Iris ; Micro Teaching , a hand book for teachers.
5. National Council for Educational Research and Training : Department of Teacher Education (1975-79) Micro Teaching series 1-8 New Delhi, NCERT.
6. Govt. of India Ministry of Education : Report of Secondary Education Commission

**Differentiation of the Skills, Strategies & Instructional Practices****Use & their respective implications in the classrooms**

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**STRUCTURE**

- 3.1 Introduction
  - 3.2 Learning Objectives
  - 3.3 Differentiation of skills
    - 3.3.1 Principles of Differentiation
    - 3.3.2 Check your Progress 1
  - 3.4 Aspects of differentiation of instructions
  - 3.5 Differentiation strategies used in class-rooms
    - 3.5.1 Check your progress 2
  - 3.6 Let us sum up
  - 3.7 Keywords/Glossary
  - 3.8 Lesson End Exercise
  - 3.9 Suggested Readings
- 

**3.1 INTRODUCTION**

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The diversity of skills, talents and interests of students that we serve in our schools requires a remarkable range of teacher's skills, time and resources. This lesson focuses on differentiation and the ways that teachers can adapt and differentiate the regular curriculum to meet the academic needs of all their students – challenges and solutions about how differentiation can be implemented will be discussed, as will a variety of strategies that can be used to differentiate, challenge, and engage all students. Defined simply, differentiation is matching a required curriculum with the learning styles, expression styles interest and abilities of the students. It is predicated on the simple belief that engaged and motivated

students score higher, are easier to manage, and enjoy learning more. Both research and current practice illustrate the importance of differentiated instruction for meeting every child's needs as well as raising achievement.

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### **3.2 LEARNING OBJECTIVES**

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After reading this lesson, you shall be able to :

- Explain the meaning of Differentiation of skills
  - Describe the aspects of Differentiation of skills
  - Explain the effective differentiation strategies used in classroom
  - Explicit suggestions for teachers to differentiate class instruction
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### **3.3 DIFFERENTIATION OF SKILLS**

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#### **Defining Differentiation**

In order to accommodate the needs of students across many different levels of academic achievement, teachers across the country have implemented within class room strategies referred to as differentiated instruction. Differentiation is an attempt to address the variation of learners in the class room through multiple approaches that modify instruction and curriculum to match the individual needs of students. (Renzulli,1977 , Tomlinson, 2000). Students vary in their abilities, interests, and prior knowledge. Differentiation serves to address this variation by matching the content, instruction and assessment to student's needs and interests. Differentiation of instruction and curriculum suggests that students can be provided with materials and work of varied level of difficulty, different levels of assistance, various types of grouping as well as different environments in the classroom. In other words, differentiation is the opposite of a "one size fits all curriculum".

Further elaborating it we can say that Differentiation of skills means matching the given content area with a student's interests, abilities, and learning styles through various instructional strategies, enrichment activities related to student's curriculum or interest area that involve higher level thinking skills and guided problem solving. It is a way to modify

instruction to meet student's individual needs. Teachers may differentiate process, content, resources or the learning environment. A flexible grouping and ongoing assessment can make differentiation one of the most successful instructional strategies.

Differentiation refers to “ learning experiences in which the approach or method of learning is adjusted to meet the needs of individual students, focusing on the ‘how’ of personalized learning”

Differentiation is all about creating a personalized learning experience for each student. By adapting instruction to meet individual needs, teachers can create a more engaging and effective learning experience for their students. This can include activities that cater to different learning styles such as visual aids for visual learners or hands on activities for kinaesthetic learners. Differentiation can also involve adjusting the level of difficulty of assignments or providing extra support for struggling students. Ultimately, the goal of differentiation is to create a positive and inclusive learning experience that helps each student reach their full potential. It motivates teachers to understand their pupils so they can help each student to enhance learning.

Differentiation is an instructional strategy to help educators teach while keeping students as well as content in mind. Differentiation ensures that learning and teaching work for every student, which really should be a teacher's main purpose of teaching. Differentiating teaching means that the teacher would observe and identify the similarities and differences among students and use this knowledge to teach students.

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### **3.3.1 PRINCIPLES OF DIFFERENTIATION**

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There are five dimensions of differentiation which are –

- Teaching arrangements
  - Learning environment
  - Teaching methods
  - Support materials and
  - Assessment
-

### 3.3.2 CHECK YOUR PROGRESS 1

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Note ; Write your answer in the space given below:

Q1. Define Differentiation of skills in your own words.

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Q2. Enlist the principles of Differentiation.

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### 3.4 ASPECTS OF DIFFERENTIATION

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Teachers may differentiate instructions on the basis of following aspects :

**Content** :- There are six levels of Bloom's Taxonomy ( a classification of degrees of intellectual behaviour ranging from lower order thinking skills to higher-order thinking skills of advanced learners)i.e remembering , conceptual understanding, applying, analysing, evaluating and creating. Therefore the teachers must differentiate the content by creating activities for each group of students covering different levels of Bloom's Taxonomy.

**Process**:- Every student has a preferred style of learning, and successful differentiation allows the delivery of instruction to different mediums of learning like auditory learners, visual, verbal and kinaesthetic learners. This fact that each student demands a different amount of support from the instructor, and they may choose to work individually in groups or pairs. Teachers may improve learning by providing support based on the individual needs of each student. Teachers can move pupils from an introductory level to a more advanced

understanding of the content using learning actions. Advanced learners can be stretched and challenged using learning the red icons that indicate higher order thinking.

**Product:** - After completing a lesson, the students create a product to show content mastery. It may be in the form of reports, projects, tests or any other activity.e.g. the teachers may ask students to complete activities to show mastery of a specific subject depending upon their preferred learning style.

**Learning environment:-** The optimal learning conditions include both psychological and physical elements. A differentiated classroom layout is crucial, including a wide range of arrangements and classroom furniture to support both personal and group work. Teachers must use that classroom management and teaching strategies that promote a supportive and safe learning environment.

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### 3.5 STRATEGIES USED IN DIFFERENTIATION CLASS-ROOMS

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Following are some of the most effective differentiation strategies used in a differentiation class room.

**Ongoing formative assessment:-** It is important for the teacher to continuously assess and identify students areas of need and strengths, so they can modify their teaching and help students to move forward.

**Response to intervention:-** This is a very effective focused differentiation strategy, which is normally implemented as a whole, school implementation technique. This multi-layered approach to classroom learning allows teachers to identify individual learner abilities and help to provide additional instruction to the students who may take advantage of teaching in more targeted settings.

**Recognition of diverse students :-** Each student has a diverse level of expertise and experience with reading, writing, speaking, thinking and problem-solving. Ongoing assessments are the most common strategies that allow teachers to adjusting content and plan differentiated instruction strategies to fulfil every student's needs.

**Explicit teaching:-** In explicit teaching, the differentiation focus remains on offering students a strong conceptual understanding of new ideas and knowledge and opportunities for individual and group practice. The phases of this strategy, frequently simplified to “I do, we



do, you do”, offer numerous opportunities to differentiation. In the phase of “we do”, teachers model the new knowledge application. They can evaluate the conceptual understanding level, give feedback to the students, design targeted interventions and offer further support to the entire class. In the phase of “you do”, teachers may walk in the classroom and offer individual feedback, invite individual auditory learners for conferencing and create small groups for differentiated instruction.

**Group work:-** This is a student focused differentiation strategy in which learners collaborate in small groups and pairs and the members of the group may change as needed. Learning in groups is a focused strategy that allows learners to learn and observe from each other and to engage in meaningful conversations.

**Feedback:-** Feedback has a major role in differentiation. Timely feedback allows learners to identify the next stages needed to enhance their basic learning. Individualized feedback, alongside the clear success criteria and learning intentions may promote self-regulation. Here the differentiation focus remains on the advanced learners feedback, which may also help regular students to show a deep understanding of the success criteria and what advanced learners may do to improve their essential understandings, level of competency and learning process.

**Problem solving:-** The main focus of the lesson plan with differentiated instruction remains on the concepts and issues, rather than the chapter as a whole. This motivates learners to explore big ideas and improve their knowledge of key concepts.

**Flipped classroom:** - The learning phase of direct instruction occurs online or at students home, e.g. students may access their content (mostly in the form of videos composed by their teacher in a specific subject) anywhere and at any time. A flipped classroom experience offer great opportunities for differentiation as it allows teachers to spend more of their free time in the classroom with their students either by addressing to a group or providing feedback to the students. Students may also spend time to improve their level of competency and revise the level of complexity of content that needs revision.

**Scaffolding instruction:** - Teachers may guide students in learning new concepts and bridge student learning gaps through scaffolding. Teachers may use modelling and fishbowl activities to demonstrate tasks or expectations. Teachers should also implement activities like think-pair-share and think aloud to help students process and reflect on their thinking.

**Choice:** - Teachers may use ‘choice’ as a focus strategy and leave it to the students to decide what do they wish to read or write in the projects and tasks they compete. This may help the teachers to create motivating assignment according to students varied interests, level of competency and diverse needs.

#### **Self assessment**

List out two experiences you have had with teams which illustrate at least two of the above characteristics.

.....

.....

#### **Advantages**

- Students learn best when their teachers accommodate the differences in their readiness levels, interests and learning profiles.
- It helps students to process knowledge.
- It has been observed that differentiated instructions are more than twice as effective as instruction without it. Research clearly shows, there is no other approach that can have the impact of differentiation.

#### **Suggestions** for teachers to differentiate class instruction:-

- Teachers should use technology to help students learn in an engaging manner. This helps students to learn faster and retain information better.
- Create lesson plans according to individual needs of the students.
- Provide feedback throughout the class to discuss progress and answer queries of the learners. Teachers have to schedule meeting with the students so that they can address issues quickly and efficiently.
- Encourage student collaboration to solve problems by working together on them, improve their understanding and share knowledge and resources. To encourage collaboration teachers can hold group discussions, host guest speakers and organize field trips.
- Making learning fun :- Teachers should strive to make learning fun. They can do this by incorporating games into lessons, encouraging students to participate in debates, and offering rewards for academic achievements. By creating positive environment, teachers can motivate students to achieve higher grades.

To help teachers differentiate effectively the lesson plans should be created on the following three principles:- (a) Focus on skills rather than on content, students should master special skills instead of memorizing facts and figures. (b) Use multiple strategies to teach the same skill. One strategy may work better for some students while another works better for others. (c) Create a variety of activities to engage different types of learners.

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### **3.5.1 CHECK YOUR PROGRESS 2**

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Note: (a) Write your answers in the space given below:

(b) Compare your answers with those given at the end of lesson/ above sub-section.

1. Fill in the blanks :

(i) Teachers should use \_\_\_\_\_ to help students learn faster.

(ii) Teachers should create lesson Plans according to \_\_\_\_\_ needs of the students.

(iii) Students should get regular \_\_\_\_\_ to discuss their progress.

(iv) Teachers should encourage students \_\_\_\_\_ to solve \_\_\_\_\_ by working together on them.

(v) To help teachers differentiatly lesson plans should focus on \_\_\_\_\_rather than on \_\_\_\_\_.

(vi) Teachers should use \_\_\_\_\_ strategies to teach the same skill.

2. What are Flipped classrooms ?

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3. Explain Group work as a differentiation strategy.

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### **3.6 LET US SUM UP**

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From the above discussion we conclude that Differentiated instruction is a process that exists in the planning, execution and assessment levels of being a teacher. It is a complex instructional strategy that requires a lot of considerations and is meant to accommodate all types of learners in the classroom so that students are highly successful in their class. It is inclusive to all students and gives each individual a chance to learn and actually succeed. Differentiated instruction is the process of tailoring lessons to meet each student's individual interests, needs, and strengths. Teaching this way gives students choice and flexibility in how they learn, and help teachers personalize learning. Since pupils of this generation do not just want to sit the entire day listening to their teachers doing most of the talks in class. That is why, it is a must for teachers to modify the content, process, or products by differentiating their instruction. In short, differentiation offers a variety of benefits for educators and learners, such as increased engagement and achievement. It can promote the equity and diversity of learners, as it takes into account their individual differences and needs.

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### **3.7 KEY WORDS/ GLOSSARY**

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Differentiation of skills ; Matching the given content area with a students interests, abilities and learning styles through various instructional strategies.

Flipped classroom ; The students learn the core content independently before class often through online resources and then use active learning activities like discussion etc in the classroom.

Scaffolding ; It is a supportive framework that lets students feel comfortable taking the next step in their learning.

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### **3.8 LESSON END EXERCISE**

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1. What do you mean by Differentiation of skills?

2. Explain the aspects on the basis of which teachers may differentiate instructions in the class.
  3. Describe some of the most effective strategies used in a differentiation class room.
  4. Explain Scaffolding as differentiation instruction in your own words.
- 

### **3.9 SUGGESTED FURTHER READINGS**

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1. Paintal Iris : Micro teaching, a handbook for teachers
  2. Singh L.C & Sharma R.D: Micro Teaching Theory and Practice
  3. National Council for Educational Research and Training; Department of Teacher Education, (1975-79) Micro Teaching Series 1-8, New Delhi : NCERT.
  4. Perrott. E (1977) Micro Teaching in Higher Education ; Research Development and Practice.
  5. Borg, W.R.,M.T.Kelly, P.Langer and M.Gall (1970) The Mini course: a Micro Teaching approach to Teacher Education.
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**STRUCTURE**

4.1 Introduction

4.2 Learning Objectives

4.3 Meaning and Components of the skill

4.3.1 Suggestions for using the skill of Reinforcement effectively

4.3.2 Check your progress 1

4.4 Observation schedule

4.4.1 Check your Progress 2

4.5 Let us sum up

4.6 Keywords/Glossary

4.7 Lesson End Exercise

4.8 Suggested Readings

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**4.1 INTRODUCTION**

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Reflecting on your experience as a student which teacher did you like, the one who would appreciate your right conduct and behavior or the one who would be indifferent to whichever behavior you demonstrated. Your answer would be that the teacher who showed approval to your appropriate behaviour.

It has been demonstrated that showing approval for appropriate behavior is probably the key to effective classroom management, and we can modify or change pupil behavior in a number of positive ways. By signs of approval the teacher reinforces the desirable behavior of the pupil which then leads to a repetition of the activity. This skill is used when the teacher

reinforces good behavior with a smile, when she praises a good answer, encourages a slow learner, or writes 'Well done' on a piece of work. This reinforcement can increase pupil attention, maintain motivation, modify disruptive behavior in the classroom, and thus encourage and improve pupil learning. It has also been shown that the use of reinforcement can give pupils a better self-concept and consequently help to give them confidence.

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## **4.2 LEARNING OBJECTIVES**

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After reading this lesson, you shall be able to:

- Understand the meaning of Reinforcement
  - Explain the components of the skill
  - Prepare the observation schedule of the skill
- 

## **4.3 MEANING AND COMPONENTS OF THE SKILL**

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### **Meaning of the skill**

Reinforcement skill is known as 'Feedback skill'. Reinforcement is a specific type of conditioning which increases the probability of producing a given response of behavior on subsequent occasion. It is needed to fix facts in the mind. Reinforcement is needed not only to promote learning, but also to secure attention, to motivate pupils, to increase pupil participation, to facilitate learning, to maintain the level of motivation, to modify undesirable behavior and to develop desirable behavior. There are two types of reinforcement—positive reinforcement and negative reinforcement. The former strengthens the desirable response or behavior, the later is used to weaken or eliminate the undesirable responses or behaviours. For the better results the use of the positive reinforcement be increased and negative reinforcement be eliminated. Thus, the skill of reinforcement is the art of judicious and effective use of reinforcers by a teacher for influencing the pupil's behavior in the desired direction towards maximum participation of the pupil for realizing the better results in the teaching-learning process.

### **Self Assessment**

Reflecting on your experiences how will you encourage an individual to elicit the appropriate behaviour.

## **Components of the Skill of Reinforcement**

The skill of reinforcement can be analysed into the following components:-

### **Desirable behaviour**

1. Positive Verbal Reinforcement- with the use of such words as 'Good', 'Yes', 'Correct', 'That's right', 'Neat work', 'Interesting idea', 'Sensible approach'.
2. Extra-verbal cues- like 'Um', 'Aha', and prompts like 'Carry on', 'Think again'.
3. Non-verbal cues- like nodding, smiling, clapping, looking attentively.
4. Proximity reinforcement.- Here she displays interest in the pupil's performance by moving nearer to, standing next to, sitting near the pupil, etc.
5. Contact reinforcement-. Here she shows approval by patting the pupil's head, shoulder or back, shaking hands with the pupil or putting her arm round the pupil, etc.
6. Writing the pupil's answer on the blackboard- gives encouragement to the pupils to respond.
7. Token reinforcement.- Here she writes comments on the assignments, test papers, gives marks, uses progress charts for individual pupils or the whole class.

### **Undesirable behaviour**

8. Negative verbal reinforcement-. Here she uses such words as 'No', 'Wrong', 'Incorrect', 'Stop it', 'Nonsense', 'Rubbish' or makes a sarcastic remark.
9. Negative non-verbal reinforcement-. Here she shakes her head, frowns, stares angrily, taps her foot, bangs her book, moves away from the pupil, or keeps him standing as a punishment.
10. No reinforcement-. She does not give any reinforcement when it should have been given.

#### **4.3.1 Suggestions for using the Skill of Reinforcement effectively**

1. Too frequent use of reinforcement should be avoided.



2. Only few correct and novel responses should be reinforced.
3. A variety of reinforcers should be used to avoid monotony and to increase the effectiveness of reinforcers.
4. Token reinforcement like giving medals and prizes, writing comments, etc. should be very rarely used.
5. Reinforcement may be given to the whole class from time to time as well as to the individual pupils.
6. Reinforcement should be immediately after pupil's responses. However, reinforcement may be given in cases where a long answer was to be given in parts by the pupils but delayed reinforcement should be normally avoided.
7. Reinforcement may be personalized by calling pupil's name to increase its effectiveness.
8. Meaningful reinforcement has more effect on pupil's learning. The reinforcement should be given in view the pupil's level of maturity and the context of classroom discourse, so that the pupils have an understanding of the relationship of the reinforcement to their behavior.

The excessive use of reinforcement be avoided. As far as possible negative reinforcement be avoided and reinforcement should be given immediately after the answer. It should be personalized i.e using pupils name.

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#### 4.3.2 CHECK YOUR PROGRESS 1

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Note : Write your answers in the space given below :

Q1. What do you mean by Positive Verbal Reinforcement ?

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Q2. Explain Negative Non verbal Reinforcement.

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#### 4.4 OBSERVATION SCHEDULE OF THE SKILL

##### Observation Schedule for the Skill of Reinforcement

Name of the teacher

Date

Subject

Class

Time duration

Teach / Re-teach

S. NO	COMPONENTS
1.	<b>A. Desirable behaviours</b>  Positive verbal reinforcement  a). Praise words   b) Repeating and rephrasing pupil's responses
2.	Positive non-verbal reinforcement  a). Nodding/Smiling/Pleasant Gestures  b). Writing pupil's answer on black-board

3.	Positive extra verbal cues
4.	Positive proximity reinforcement
5.	Contact reinforcement
6.	<b>B. Undesirable behaviours</b> Negative verbal reinforcement
7.	Negative non-verbal reinforcement

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#### 4.4.1 CHECK YOUR PROGRESS 2

Note: (a) Write your answers in the space given below:

(b) Compare your answers with those given at the end of the lesson/ above sub-section.

1. Fill in the blanks:-

(i) Extra –verbal cues include \_\_\_\_ & \_\_\_\_.

(ii) ‘No’, ‘wrong’, ‘incorrect’ are the \_\_\_\_\_.

(iii) Contact reinforcement includes \_\_\_\_\_.

(iv) No reinforcement means \_\_\_\_\_.

2. What do you mean by ‘Reinforcement’?

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3. Write any five components of the skill of Reinforcement.

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## **4.5 LET US SUM UP**

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Reinforcement is a type of conditioning in which reward or punishment reinforces the behavior. Research has shown that positive reinforcement such as praise for correct answers is much more effective than negative reinforcement such as ridicule or criticism for a wrong answer. Hence the teacher should avoid giving negative verbal or non-verbal reinforcement if she wants more pupil participation in her class. The teacher has to use reinforcement positive or negative judiciously. Too frequent use of the same reinforcement should be avoided. It is important to use variety of reinforcers to avoid monotony. Meaningful reinforcement has more effect on pupil's learning. Only the proper and right use of the reinforcers bring the encouraging results. The teacher should avoid using reinforcers when not needed. The teacher should avoid reinforcing or encouraging only a few responding students.

---

## **4.6 KEY WORDS/GLOSSARY**

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**Reinforcement;** The act of making something stronger.

**Desirable behaviour;** the actions or responses that are considered positive, beneficial, or acceptable in a given context, often aligning with societal expectations or individual goals.

**Undesirable behaviour;** the behaviour that exceeds the boundaries of acceptable behaviour and is harmful to others.

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## **4.7 LESSON END EXERCISE**

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1. Explain the term Reinforcement.
  2. Describe the desirable and undesirable behavior of the pupils.
  3. What precautions should a teacher take while using this skill of reinforcement?
- 

#### **4.8 SUGGESTED READINGS**

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1. Paintal Iris ; Skills of Micro teaching , a hand book for teachers
2. Singh L.C and Sharma R.D : Micro teaching Theory and Practice
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**STRUCTURE**

5.1 Introduction

5.2 Learning Objectives

5.3 Purpose of Questioning

5.3.1 Check your progress 1

5.4 Aspects of Questioning

5.4.1 Structure

5.4.2 Process

5.4.3 Product

5.5 Categories or levels of classroom questioning

5.6 Components of the skill

5.7 Check your progress 2

5.8 Let us sum up

5.9 Keywords/Glossary

5.10 Lesson End Exercise

5.11 Suggested Readings

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**5.1 INTRODUCTION**

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Reflecting on the role of teacher, enlist the steps that you will take to introduce a lesson. Most of the teachers make use of skill of questioning, because the art of questioning is very important so far as the process of teaching and learning is concerned. “Good questions, have a very prominent place in all kinds of learning. “Questioning plays an indispensable part in ‘learning-teaching’ and testing. Questions lead to new realms of understanding, if used properly. In the words of Ryburn, “It is not exaggeration to say that the success of a teacher

in any particular lesson, and in teaching in general depends upon his ability to question well.” According to Raymont, “ The acquisition of a good style of questioning may be laid down definitely as one of the essential ambitions of a young teacher.”It has been well said:

“I keep six honest serving men,

They taught me all I know,

There names are ‘what’ and ‘why’ and ‘when’,

And ‘how’ and ‘where’ and ‘who’

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## **5.2 LEARNING OBJECTIVES**

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- After reading this lesson, you shall be able to :
  - Describe the significance of questioning
  - Explain the three aspects of questioning
  - Explain the components of the skill
  - Identify different levels of questioning
  - Differentiate between lower order and higher order questions
- 

## **5.3 PURPOSE OF QUESTIONING**

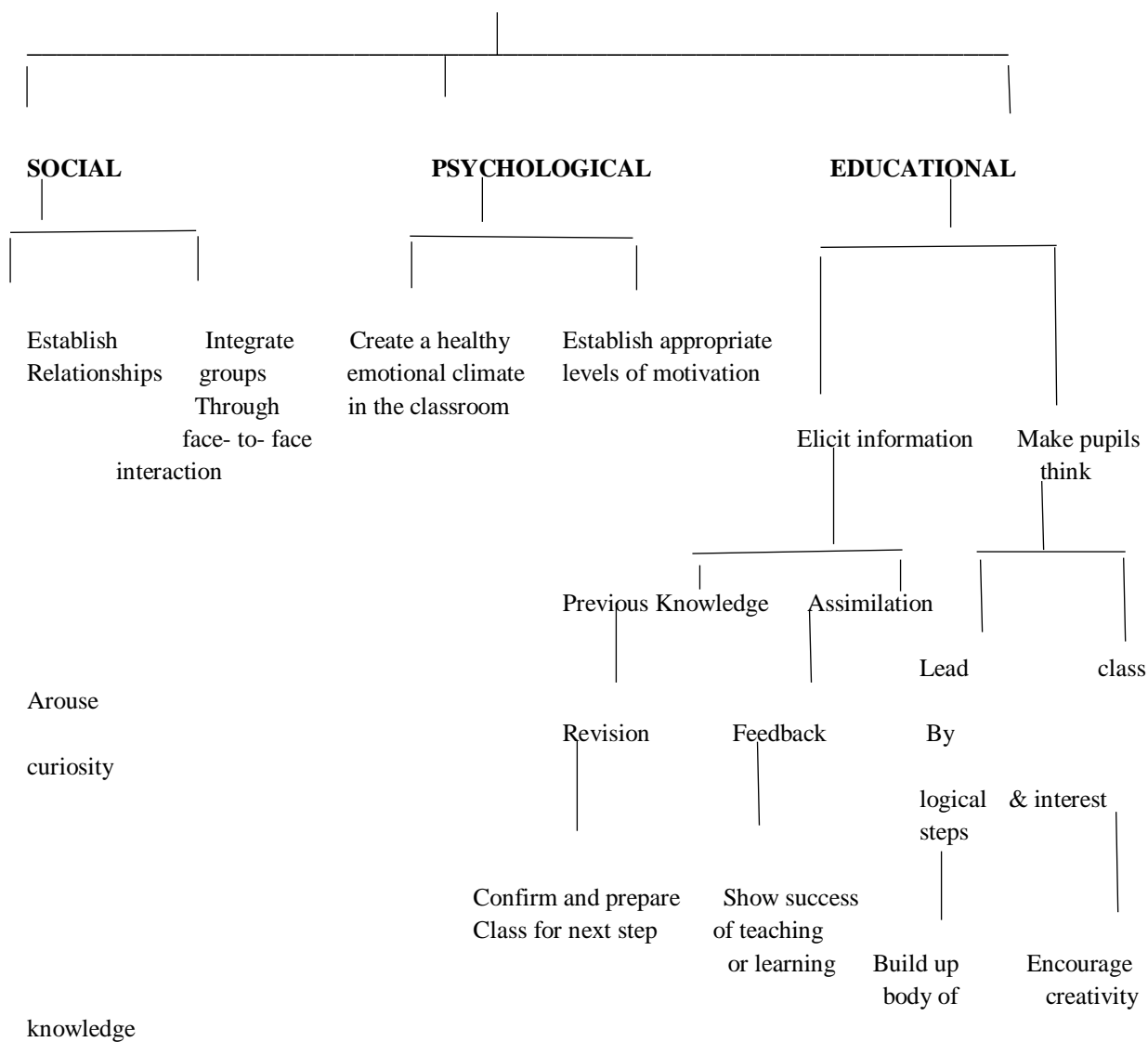
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Skill of questioning refers to the formulation of relevant, precise, concise, clear, specific and grammatically correct questions. This is a skill in asking questions. This skill is used by the teacher for a large part of her oral work with children. Questions stimulate thinking and therefore questions have a significant contribution in classroom teaching. Skill of questioning is very important because of the following reasons:

- It is very important to establish rapport with the student.
- It helps to test the previous knowledge of the students. .
- It helps to maintain the interest & attention of the students in the class.

- It helps in clearing their difficulties.
- Skill of questioning is helpful in testing pupil's understanding level and assimilation of the knowledge.

### **FUNCTIONS OF QUESTIONING**



### **PURPOSES OF QUESTIONS IN RELATION TO STAGES IN THE LESSON PLAN**

STAGE	QUESTIONING
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Introduction	1. To establish rapport. 2. To assist in establishing set induction devices. 3. To discover what the class knows 4. To revise previous work. 5. To pose problems which lead to the topic of the lesson.
Presentation	6. To maintain interest and attention. 7. To encourage reasoning and logical thinking 8. To discover if pupils understand what is going on.
Application	9. To focus and clarify. 10. To clear up difficulties and assist individual pupils 11. To lead the pupils to make observations and draw inferences for themselves.
Conclusion	12. To revise the main points of the lesson. 13. To test the extent of the pupil's understanding and assimilation. 14. To suggest further problems and related issues.

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### 5.3.1 CHECK YOUR PROGRESS 1

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Note : Write your answers in the space given below :

Q1. Explain the purpose of asking questions in the class .

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Q2. Discuss the Educational functions of Questioning in the teaching learning process.

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## 5.4ASPECTSOF QUESTIONING

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In the skill of questioning, the questions are considered under the following three aspects:

- Structure

- Process
- Product

### 5.4.1 STRUCTURE

Structure includes the grammatical and the content part of the questions. A well structured question is grammatically correct, relevant, specific, Concise and has clarity.

**Grammatically Correct:** It is desirable for the teacher to use grammatically correct language. While framing questions, the teacher should pay attention to this component. For example instead of asking 'Where is Pratap born', it is advisable to ask 'Where was Pratap born?'. Similarly instead of asking 'Do Ram go to market?', we should ask 'Does Ram go to market?'.

While structuring the classroom questions the teacher should keep the following points in mind:

**a) Avoid** the Questions with Yes or No answers

**b) Avoid** the use of echoed or leading questions

For example instead of asking 'Newton invented law of cooling, didn't he?', it is advisable to ask 'Who invented the law of cooling?'.

**c) Avoid double paralleled questions.** For Example instead of asking 'what do you understand by Density? And how it differs from relative density?' it is advisable to ask it separately like 'What is density?'.

'How does it differ from relative density?'.

**d) Avoid ambiguous questions.** For example instead of asking 'What about newtons laws of motion?' which fails to communicate the idea, we can ask 'What are the three laws of motion?'.

Similarly instead of asking 'What about banks?' which is incorrect, we may ask 'What are the different functions of the bank?' which is the correct form of asking questions.

**e) Specific:** A specific question calls for a single answer. It increases the fluency of questioning and generates pupil's confidence and proper thought process. For example instead of asking

'Can anyone in the class tell me the different sources of water?' which is incorrect, we may ask 'What are the different sources of water?' which is the correct form of questioning.

**f) Concise:** Conciseness refers to the length of the question. It means that the question must be to the point and devoid of extra words. For example 'Can any one tell me which is the most

important duty that a teacher performs?’ This can be framed briefly like “Which is the most important duty of a teacher ?”

**g)Clarity:** By clarity we mean that the language used in framing the questions is within the comprehension level of the students. For example ‘What problems accompany industrialization in a country?’ which lacks clarity. The correct form is ‘What problems arise when industries are developed in a country?’

#### **5.4.2 PROCESS**

The second aspect of questioning is process. Process implies way of asking questions. Under this we include:-

**Speed of asking questions:** It implies that the teacher should ask the questions neither too hurriedly nor too slowly. If the questions uttered are too slow, they will decrease the fluency of questions. The factors that affect speed are:-

**a)Delivery Pace:** The teacher should not ask the questions very slowly because this adversely affects the speed of the lesson. The teacher should adjust the speed in such a way that the students get sufficient time to understand the question and to think about the answer.

**b) Level of Question:** Questions are broadly divided into three levels as under:

- Lower order Questions
- Middle order questions
- Higher order questions

The level of questions affects the speed of questions. For example, in memory level or lower order questions, the speed of the teacher is more, since such questions do not require a lot of time to think. When asking higher order questions the teacher should lower down his speed of asking questions because this level of questions requires relatively more thinking than lower level. The frequency in case of middle level is in between the higher and the lower level questions.

**c) Notion behind the question:** Notion behind the question also affects the speed or fluency of questioning. If the teacher is interested in checking the previous knowledge of the students or intends to drill and practice, then speed can be faster.

**Voice:** This aspect of the skill refers to two functions namely (i) audibility and (ii) modulation.

**(a) Audibility aspect:** It means that the teacher should speak the question in such a way that it is audible even to the student sitting at the back of the class. Only then we can involve the students in the teaching learning process.

**(b) Modulation aspect:** Like the audibility of the question to the whole class, its modulation is also very important. Modulation depends upon intonation and stress on specific words or phrases. Improper intonation may not convey what all the teacher has to say.

### 5.4.3 PRODUCT

The third aspect in skill of questioning is the product. The term product refers to the pupil's response. Many a times it happens that students are unable to give the response even though there is nothing wrong in the structure and the process aspect of questioning. Some of the reasons why students do not respond could be due to:-

- Students are not intelligent to understand the question put to them.
- They are inattentive and thus not interested in the lesson.
- They may not be able to correlate the present with the previous knowledge.
- There may not be proper rapport established between the pupil and the teacher.

In all such situations the teacher should re-examine and trace the underlying cause.

## **5.5 CATEGORIES/LEVELS OF CLASSROOM QUESTIONING**

As has already been discussed above there are three levels of classroom questioning and we shall be discussing them elaborately:

**Lower Order Questions:-** Stimulates lower level of thinking which form the basis for higher level learning. It includes the questions emphasizing on Recall and Retention abilities.

**(a) Recall** involves reproduction of the learnt facts. For example-

When was Mahatma Gandhi born?

What is the definition of velocity?

What are the stages of a river?

**(b) Recognition-** In which student identifies facts, information, concepts etc. For example –

What word in the sentence written on the black board are adjectives?

Identify on the Map of India ,rice producing states.

**Middle Order Questions:-** Questions that stimulates some higher level of thinking than the previous level.

**(a) Transition-** Representing a concept fact, generalization etc. by changing the medium is known as transition.

### **Example**

Feeling of sorrow can be represented through different media.

A poet may present it through his poetry.

A painter through his paintings

Singer through his songs

We can include such questions at this stage –

What does this model represent? (Getting the transition of an idea contained in the model into verbal form)

How can we represent ‘happiness’ of the child in a picture? (Getting the transition of an idea into a pictorial form)

**(b) Comparison-** representing the questions like-

Compare the foreign policy of India under NDA and UPA governments.

### **Explaining Relationships**

How is price rise related to demand and supply?

### **(c)Application**

Which Industrial unit can be set up at this place keeping in view the available resources?

#### **Activity 1**

Using the above examples take a topic of your choice and frame five questions (lower order and middle order ).

## Higher Order Questions

This level of questions stimulates highest level of thinking among the students and helps in developing creative and reasoning abilities among the students. It includes-

(a) **Analysis** which implies breaking the given idea, situation, material, generalization etc. into components in order to study their mutual relationship.

(b) **Synthesis** means representation of different facts, ideas, concepts etc.

(c) **Evaluation** means to measure a particular situation according to pre-decided standards or values is termed as 'evaluation'. We can ask the questions like -

Is science boon to mankind or a curse?

Why do you think democracy is better than autocracy?

### Activity 2

Using the above examples frame any three higher order questions from a topic of your choice.

**The teacher should bear in mind the following guidelines while using the skill of Questioning .**

The teacher should :

- Plan the questions carefully.
- Pause after asking the question and then call upon a pupil to answer it.
- Repeat or rephrase the question only if students have not been able to understand the question.
- Listen attentively to the student's response in order to evaluate it.
- Use probing questions to help students to arrive at a satisfactory answer.
- Use redirection technique (passing on the question to other pupils)
- Accept only complete responses.

## **5.6 COMPONENTS OF THE SKILL**

### **1. Structure**

- Grammatically correct
- Relevant
- Specific
- Clear

### **2. Process**

- Audible
- Put at right delivery pace

### **3. Well grade questions**

### **4. Not repeated unnecessarily**

### **5. Evenly distributed**

### **6. Fluency**

### **7. Sufficient in number**

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## **5.7 CHECK YOUR PROGRESS 2**

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Note- (a) Write your answer in the space given below:

(b) Compare your answers with those given at the end of the lesson/above sub-section.

### **1.Fill in the blanks:**

i) Recall and Recognition are \_\_\_\_\_order questions.

ii) The language of questions should be \_\_\_\_\_ .

iii) Questions should be \_\_\_\_\_distributed to the class.

### **2. Name the three aspects of the skill of questioning.**

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3. Tick the well structured questions given below:

- a) Does the sun rise in the east?
  - b) What is the time by your watch?
  - c) What about Newton's laws of Motion?
  - d) What are the different functions of forests?
  - e) What are different uses of forests?
- 

## **5.8 LET US SUM UP**

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From the above discussion, we conclude that questioning is the most potent weapon in the educational armory of the teacher. It stimulates thinking and have a significant contribution in class-room teaching. This skill if used properly in the class ascertains whether the learners are following the lesson or not. Questioning is important so far as the revision of the lesson is concerned. Questions are used by the teacher at the introductory stage of the lesson, during the developing stage of the lesson and also at the recapitulatory stage. During the developing stage the teacher with the help of questioning tests the previous knowledge of the learners and links the new knowledge with the previous knowledge that the student has. During developing stage questions are used to formulate new generalizations and to develop knowledge step by step. During Reaptulatory stage questions enables the teacher to know if the children have understood the ideas he wanted them to learn. It is important that questions are well structured and their delivery pace is appropriate.

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## **5.9 KEYWORDS/GLOSSARY**

Double paralled questions -It is also known as double barreled question, is a question that asks about more than one topic while only allowing the recipient to share one answer

Ambiguous- words or sentences that are open to multiple interpretations

Modulation- Rise and fall of the voice pitch



Analysis – Breaking the given idea, situation, or material into components to study their mutual relationship.

Synthesis- the representation of different facts, ideas. Concepts etc. \_\_\_\_\_

\_\_\_\_\_

### **5.10 LESSON END EXERCISE**

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1. Explain the significance of skill of questioning for the teacher.
  2. Explain the three levels of questioning.
  3. Describe elaborately the three aspects of questioning.
  4. What are the characteristics of a good questioning?
  5. What precautions should the teacher keep in mind while framing the questions?
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### **5.11 SUGGESTED READINGS**

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1. Paintal Iris ; Skills of Micro teaching , a hand book for teachers
2. Singh L.C and Sharma R.D : Micro teaching Theory and Practice
3. Sharma R.A : Methodology of Teaching
4. Brown, G.A. (1975) Micro teaching.
5. National Council for Educational Research and Training : Department of Teacher Education. (1975-79). Micro teaching Series 1-8. New Delhi: NCERT.

**STRUCTURE**

6.1 Introduction

6.2 Learning Objectives

6.3 Meaning of the skill

6.4 Components of the skill

6.4.1 Desirable behaviour

6.4.2 Undesirable behaviour

6.4.3 Check your progress 1

6.5 Observation schedule

6.5.1 Check your progress 2

6.6 Let us sum up

6.7 Keywords/Glossary

6.8 Lesson End Exercise

6.9 Suggested Readings

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**6.1 INTRODUCTION**

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A problem which a teacher constantly faces is ‘How can I explain this idea or concept to my pupils clearly and accurately?’ A teacher has to make the pupils understand many ideas concepts or principles which need explanation. Explanation is nothing but a few interrelated appropriate statements made by the teacher in order to increase the understanding of his pupils. A good explanation is one which is early understood by the pupils. The ability to explain logically and clearly is one of the most important skills an effective teacher must strive to perfect. In this lesson we shall be discussing about various components which shall help the teacher in acquisition of this skill.

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## 6.2 LEARNING OBJECTIVES

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After reading this lesson, you shall be able to :

- Explain the meaning of the skill
  - Describe the components of the skill
  - Differentiate between desirable behaviour and undesirable behaviour of the teacher while using this skill
  - Prepare an observation schedule of the skill
- 

## 6.3 MEANING OF THE SKILL

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Mrs. Singh is a teacher and in today's class she has to explain an important concept to the students. How will she do it. She will introduce the topic and explain its various components. What is explanation ?Explanation is an intellectual activity in which the teacher makes ideas, concepts, phenomenon understandable through examples and by showing interrelationships. A teacher is said to be explaining when she describes the 'How' 'When' and sometimes 'What' of a concept, event, condition or action. The teacher uses a number of interrelated statements to explain the concept, fact, action etc. The set of interrelated statements that the teacher uses is known as 'Explanation'.

Explanation can be defined as an activity to bring about an understanding in someone about a concept, principle etc. It is an activity to fill up a gap in someone's understanding, by either relating it to his past experience. Explaining depends upon the type of past experience, type of the new phenomenon and the type of relationship between them. Thus the skill of Explanation may be defined as an art of learning the use of interrelated appropriate statements to bring about an understanding, in someone about a concept, a principle or a phenomenon. The skill of explanation is essentially a verbal act and it has following two aspects:

- (i) The selection of appropriate statements relevant to the age, maturity, previous knowledge and content of the concept or phenomenon.
- (ii) The skill of inter-relating and using, the selected statements for the proper understanding of the concept, idea or phenomenon.

The statements are generally of three types:-

- Descriptive explanation where she describes processes, structures and procedures;
- The interpretative type where she specifies the central meaning of a term or statement, or clarifies an issue;

- The reason-giving type where she gives causes for a phenomenon or proceeds by steps to arrive at a particular conclusions or predicts possible consequences of actions or events.

Whichever type of explanation she uses, it is essential that she adopts a friendly approach and establishes rapport with her pupils. She must clearly and concisely state the key factors involved so that the pupils will be mentally ready to receive her explanation.

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## 6.4 COMPONENTS OF THE SKILL

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The skill of explaining a concept or phenomenon consists of two types of behaviour- Desirable and undesirable. While practising the skill, the occurrence of desirable behaviours is to be increased, while that of the undesirable behaviours is to be decreased. The components of the skill are given below:

### 6.4.1 Desirable behaviour

**Use of appropriate introductory statement :-** Beginning statement is an opening statement made by the teacher announcing what is going to be explained by her/him. It creates mental alertness and readiness in the students to listen to what is going to be explained. In other words these statements are used to make learners alert.

**Voice:** She must use variation in her pitch, tone and volume to convey the importance of her ideas. She may pause before a key point or example, repeat for emphasis, or alter her speed of delivery. Certain gestures and movements should be made on purpose to enhance her explanations.

**Language:** The language she uses should be appropriate with short, simple sentences. She must make full use of explaining links and phrases to indicate explicitly the causes, consequences, means or purposes of an event, concept, action or condition.

**Use of concluding Statements:** After the explanation, she must bring together the main points and come to a conclusion. The concluding statements she makes help in consolidating what has been explained and are crucial for effective explanation.

**Use of explaining links :-** This involves using linking words and phrases in the statements of an explanation. Such links make the explanation clearer by bringing continuity in the statements used for explaining a concept, phenomenon or principle. The linking words are generally conjunctions or prepositions which explicitly indicate the causes, consequences, reasons behind, cause, purpose of an event or action or an idea. A teacher should use as many explaining links as possible to make his/her explanation effective. Some of these linking words and phrases generally used for explaining are given below:

Therefore, hence, thus, consequently, since because, so that, inspite of, the cause of , due to, why, while etc.

**Covering essential points :-** In a concept there may be a number of attributes and interrelated concepts. A complete explanation covers all these aspects. The completeness of explanation is determined by the scope of the concept.

**Technical Words Defined:-** Sometimes when a teacher is explaining a particular phenomena, she uses certain technical and difficult words. If these words are not defined and explained properly, it becomes difficult for the students to comprehend the meaning. It is therefore essential that terms are explained.

**Sequencing:** She must pay particular attention to the logical sequencing of ideas. There must also be correct sequence of time, events must be given in the correct chronological order and events which preceded earlier being discussed first, Continuity breaks when there is no proper sequence of place or space in the context of explanation, so she must take note of this as well.

**Testing pupil's understanding :-** The component behaviour involves asking of appropriate questions from the pupils to ascertain whether the purpose of explaining the concept or principle has been achieved or not. The teacher asks questions at the concluding stage to get feedback, to know how far he has been able to explain a phenomenon correctly and to what extent the pupils have understood it. Only a few questions may be asked appropriately for the purpose.

While explaining she must avoid making any irrelevant statement which is not related to the topic under discussion, as this will only distract the attention of her pupils. She must speak fluently and not hesitate or stumble over words or phrases. She must deliver complete sentences, as breaking halfway in the middle of a sentence disrupts the continuity of thought of her pupils. She must be sure to use appropriate vocabulary for the age and experience of her pupils. Difficult technical terms or words which the pupils do not understand should not be used or they should be explained very clearly in the beginning.

#### Activity 1

In your role as a teacher identify the activities that you will incorporate in your teaching to make it effective and how will you do it ?

### 6.4.2 Undesirable Behaviour

**Irrelevant Statements:-** Statements that are not related to the concept being explained and which tend to create confusion and distract the attention of the pupils from the main topic should be avoided/rather not used by the teacher.

**Lack of Continuity:-** Whenever a break occurs in the sequence of ideas, continuity is likely to be disturbed. Continuity is also disturbed when a teacher makes irrelevant statements or she reverts to the previous topic or experience without showing any link with what is being discussed at hand.

**Lack of fluency :-** Fluency related to the flow of uninterrupted statements for explaining a concept or principle of phenomenon. Lack in fluency may hinder pupil's understanding of the subject of explanation. It may also result in pupil's lack of interest. Whenever, a teacher lacks in fluency, she/he may be seen to show such a behaviour as (i) does not speak clearly (ii) utters incomplete or half sentences (iii) tries to reformulate or correct his statements in the midway of a statement (iv) uses fumbling ideas or inappropriate words or statements.

**Use of inappropriate vocabulary, vague words and phrases :-** Some times while explaining, a teacher uses such words and phrases which indicate that she/he is failing to make explicit some concept or idea, like use of vocabulary not known to the pupils or inappropriate to their age, grade and maturity level. Use of vague words and phrases like infact , you see, you know, somewhat, a little etc. such vague words obstruct the

#### Activity 2

Identify the activities of a teacher that you will do differently from now on and how.

### **SUGGESTIONS FOR SUCCESSFUL USE OF THE SKILL**

The teacher should consider following points while using this skill:-

1. Explanation must be brief, relevant and precise.
2. She should make Judicious use of what has to be explained
3. Her explanation should be correct,simple, clear and systematic.
4. She should make use of visuals while explaining links.
5. Explanations must be presented naturally.
6. Explanations should be helpful in clarifying the doubts of the learners.

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#### 6.4.3 CHECK YOUR PROGRESS 1

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Note : Write your answers in the space given below :

Q1. Explain “Desirable Behaviour” as a component of the skill.

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Q2. Give any two suggestions that a teacher should follow in the class for the successful implementation of the skill .

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## 6.5 OBSERVATION SCHEDULE

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### Observation Schedule for Skill of Explanation

**S.NO**

**COMPONENTS**

1.

**Desirable Behaviour**

- (a) Appropriate introductory statements made
- (b) Use of appropriate concluding statements
- (c) Explaining links use
- (d) Technical words defined
- (e) Covering essential points
- (f) Testing pupils understanding

2.

**Undesirable Behaviour**

- (a) Using irrelevant statements

- (b) Using Vague words and phrases
  - (c) Lack of continuity
  - (d) Lack of fluency
- 

### 6.5.1 CHECK YOUR PROGRESS 2

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Note: (a) Write your answers in the space given below:

(b) Compare your answers with those given at the end of the lesson/above sub-section.

1. Fill in the blanks:

- (i) Using irrelevant statements depicts \_\_\_\_\_ behaviour of the teacher.
- (ii) Descriptive explanation means \_\_\_\_\_.
- (iii) The interpretive type of explanation means \_\_\_\_\_.
- (iv) Explanation can be defined as an activity \_\_\_\_\_.
- (v) The language that the teacher uses while explaining a concept should be \_\_\_\_\_ & \_\_\_\_\_.

2. Use of explaining links means \_\_\_\_\_

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3. Name some undesirable teacher behaviours which she/he should avoid.

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### 6.6 LET US SUM UP

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When a teacher tries to clarify an idea or phenomenon or a concept to a class she/he is said to be explaining that concept or idea. The teacher explains ideas and concepts right from the lowest classes to the highest. When the teacher describes 'how', 'when' and sometimes the 'what' of a concept, phenomenon, event, condition or action. The teacher uses a number of interrelated statements to explain the concept, fact, action etc. The set of interrelated statements that the teacher uses to develop understanding among the pupils is known as explanation. Therefore, explaining is the use of interrelated facts with a view to develop understanding among the pupils about the content under study. While explaining the teacher



must keep in mind the age level, ability, previous knowledge, the background characteristics, the family background and the geographical situation of the learners. The teacher should ensure that the explanation is clear, logical and the language used must be simple and appropriate.

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## **6.7 KEYWORDS / GLOSSARY**

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Language - The system of communication in speech and writing that is used by people of a particular country

Sequencing –The process of combining things in a particular order.

Fluency- The ability to read, speak easily, without having to stop and pause a lot.

Inappropriate vocabulary – That which is not suitable for a particular occasion, situation, time, or purpose.

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## **6.8 LESSON END EXERCISE**

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1. What do you mean by skill of Explanation ?
  2. Explain the desirable behaviour of the teacher while using this skill in the class.
  3. What precautions should a teacher take while using this skill in her/his teaching?
  4. Name the components of this skill and elucidate any three components of the skill of explanation.
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## **6.9 SUGGESTED READINGS**

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1. Singh L.C and Sharma R.D : Micro Teaching Theory and Practice
2. Paintal Iris ; Micro Teaching , a hand book for teachers.
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6. Sawhney,k.k and sawhneyMohini: Teaching of social studies in Indian Schools

**STRUCTURE**

7.1 Introduction

7.2 Learning Objectives

7.3 Meaning of the skill of Black Board writing

7.4 Components of the skill

7.4.1 Check your progress 1

7.5 Observation schedule

7.5.1 Check your progress 2

7.6 Let us sum up

7.7 Key words/Glossary

7.8 Lesson End Exercise

7.9 Suggested Readings

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**7.1 INTRODUCTION**

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When it comes to teaching students how to write, one of the best ways to learn and practice is on a Blackboard. Since the first slab of slate was hung on a wall in Scotland in 1801, the Blackboard has been an integral part of the classroom. And while many teachers have gone the modern route and replaced Blackboards with white boards, many choose to keep the old and use it in tandem with the new. In this lesson we shall be discussing about the effective techniques of use of the Black Board.

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**7.2 LEARNING OBJECTIVES**

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After reading this lesson, you shall be able to :

- Explain the meaning of the skill of Blackboard

- Describe the components of the skill of using Blackboard
- Explain the proper techniques of using the Blackboard

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### 7.3 MEANING OF THE SKILL

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The blackboard is the most widely used teaching aid in India. In spite of newer and better devices in vogue, it is indispensable in the classroom, as it is still the cheapest and most economical, for it can be erased and used once again. It is also convenient, as a portable one can be moved around or carried to another classroom or even out of doors. It is valuable as it can be put to wide and varied uses. It can be used to list items, the important parts of a lesson, or to draw charts or illustrations for the class. It can be used for graphs, maps, statistics, sketchers and various types of diagrams and drawings. The teacher can solve problems of mathematics, accountancy and book-keeping on the blackboard along with her pupils who can check the accuracy of their working in their notebooks. It is important that the class grasps technical names, addresses, or a brief list of points to be covered, so she can ensure accuracy by writing the information on the blackboard and having her class copy what they need. Blackboard writing and drawings intensify pupil interest and attention on the main aspects of her lesson, allowing her to proceed at a pace which takes heed of varying rates of understanding of her pupils. The lesson can be phased and summarized in the right manner and with help of the summary her whole lesson can be reviewed for the benefit of the class.

The following list of items for which a blackboard may be used indicates the versatility and effectiveness of this visual device: drawings, sketches, key words, graphs, diagrams, technical words, definitions, key words, outlines, reviews, daily problems, making announcements, giving directions, giving assignments, tests, examinations, and keeping useful class and pupil records.

But blackboard technique needs to be learned and practiced. A daily period should be set aside for blackboard practice so that the teacher makes efficient use of the blackboard. **All** blackboard writing should be purposeful; meaningless scrawls or doodles are confusing and distracting and are evidence of lack of skill in blackboard work.

#### Self Assessment

What do you think a teacher should keep in mind while writing on the blackboard and why?

The teacher should keep following rules in mind while using the blackboard which shall definitely increase its effectiveness as a visual aid:

1. The teacher should collect everything that she requires like chalk, ruler, eraser, compass etc.before going to the class.
2. Check lighting to avoid blackboard glare.
3. Keep the blackboard clean.
4. Erase all unrelated material with an eraser.
5. Plan the layout ahead of time.
6. Prepare complicated illustrations beforehand.
7. Do not crowd the blackboard – a few important points make a vivid impression.
8. Make the phrasing simple—brief, concise statements are more effective.
9. Print and draw on a large scale.
10. Use coloured chalk for emphasis –chrome yellow or pale green chalk.
11. Stand to one side of the blackboard so that the view of the Black Board is not obstructed.
12. Use a pointer for explaining the various points, especially.
13. Avoid making squeaking noises with the chalk while writing.
14. Avoid committing spelling mistakes or errors on the content written on the blackboard.

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## **7.4 COMPONENTS OF THE SKILL**

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### **Legible writing**

It is extremely important that the teacher's own handwriting is legible, and can be read from the back row of the classroom. To ensure this the teacher will need to take care of the following points. Every letter she/he writes should be distinct; there should be adequate spacing between the individual letters and words; the size of the letters should be uniform and large enough to be read from the last row, with the capital letters much larger than the small letters. Handwriting on the Blackboard should be as nearly vertical as possible without slanting forwards or backwards. She can get contrast on the blackboard by using heavy and light chalk strokes.

### **Neatness in Blackboard work**

For neatness in presentation the teacher must make sure that the words and sentences are written in horizontal lines parallel to the base of the blackboard. In the beginning the teacher may use a board ruler to prevent an upward or downward slope of her handwriting. She/he should avoid writing at the base of the blackboard as the back-benchers may not be able to see it without standing up. There should be adequate spacing between any two lines—it should neither be too close or too wide. She should avoid overwriting on the letters as it makes blackboard work untidy. She should retain only relevant material on the blackboard, rubbing off unnecessary words, calculations or figures.

### **Appropriateness of work on the Blackboard**

It is not necessary to write long sentences and paragraphs on the blackboard. Only the salient points should be written one after the other as they are being developed. She may link one point with another using an arrow or an appropriate mathematical symbol. The blackboard summary, particularly, should be so brief that her pupils can recollect the whole lesson at a glance.

### **Drawing attention and focusing**

The teacher should underline only those words or points to which she wishes to draw her pupil's attention. Coloured chalk should be used sparingly and it should be of the right colour to bring about contrast with the other material presented on the board. Illustrations and diagrams should be simple, large and clear enough to convey the ideas presented. Chalks of various colours such as pale green or chrome yellow used for diagrams can help to make the presentation effective. Unnecessary details should be avoided and the important parts should be labelled in large dark letters to be visible from the back row of the classroom. In the

beginning it may be necessary for her to move to the back row of the classroom to check if her handwriting is legible and visible to all her pupils in the classroom.

### **Adequate**

There should be an adequate use of Blackboard. It serves as a handy aid throughout the development of the lesson.

#### **Activity 1**

Select any topic of your choice and plan a black board summary for the same.

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### **7.4.1 CHECK YOUR PROGRESS 1**

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Note : Write your answers in the space given below :

Q1. Explain the meaning of Legible writing on the Black Board .

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Q2. How can a teacher sustain the attention of students in the class for longer duration ?

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### **7.5OBSERVATION SCHEDULE**

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#### **Components of the Skill**

**S.No**

**Components**

1. Legible writing
2. Adequate spacing between two letters
3. Font size of the letters
4. Neatness in Blackboard work
5. Use of concise statements
6. Underlining the important words
7. Use of coloured chalks for making diagrams.
8. Proper labelling of the diagrams.
9. Drawing attention and focusing

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### 7.5.1 CHECK YOUR PROGRESS 2

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Note ; (a) Write your answers in the space given below.

(b) Compare your answers with those given at the end of the lesson/above sub-section.

1. Which of the following statements are true :-

- a) All blackboard writing should be meaningless.
- b) The teacher should make the phrasing simple while writing on the blackboard.
- c) Avoid committing spelling mistakes or errors on the content written on the Black Board.
- d) Do not use coloured chalk for emphasizing the words.
- e) The teacher should stand on one side of the blackboard while using it.

2. What do you mean by 'Neatness in black board work'?

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3. Name any three components of the skill of using Blackboard.

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### 7.6 LET US SUM UP



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Blackboard is the most useful friend. It is a kind of visual aid that can be put to use in wide and varied situations. It can be used for drawing maps, sketches, graphs and outlines. It is indispensable so far as classroom teaching is concerned. It is most economical, portable and valuable teaching aid. It is important to use blackboard appropriately by the teacher. The teacher may use it for solving problems in teaching of mathematics, or for writing key words in a language lesson or for drawing graphs and diagrams etc. It can be used in a systematic way during the progress of the lesson. It is important to learn and practice the important techniques of using Blackboard properly.

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## 7.7 KEY WORDS /GLOSSARY

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Appropriateness of work – the quality of being suitable or right for a particular situation or occasion

Focusing- to give all your attention to something

Labeling – to fix a label or write information on something

Neatness- the quality of being tidy, with everything in its place.

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## 7.8 LESSON END EXERCISE

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1. What are the techniques that a teacher should learn while using Blackboard in the class?
  2. Explain the components of the skill of using Blackboard.
  3. What is the significance of using Blackboard in classroom teaching ?
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## 7.9 SUGGESTED READINGS

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1. Singh L.C and Sharma R.D : Micro Teaching Theory and Practice
2. Paintal Iris ; Micro Teaching , a hand book for teachers.

3. National Council for Educational Research and Training : Department of Teacher Education (1975-79) Micro Teaching series 1-8 New Delhi, NCERT.
4. Brown, G.A. (1975) : Micro Teaching
5. Govt. of India Ministry of Education : Report of Secondary Education Commission
6. Sawhney, k.k and sawhney Mohini: Teaching of social studies in Indian Schools
7. Sharma R.A; Methodology of teaching

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**STRUCTURE**

- 8.1 Introduction
  - 8.2 Learning Objectives
  - 8.3 Meaning of ‘stimulus variation’
  - 8.4 Components of the skill
    - 8.4.1 Check your progress 1
  - 8.5 Observation Schedule
    - 8.5.1 Check your progress 2
  - 8.6 Let us sum up
  - 8.7 Key words/ Glossary
  - 8.8 Lesson End Exercise
  - 8.9 Suggested Readings
- 

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**8.1 INTRODUCTION**

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As you have already studied that Micro teaching is a training procedure which aims at the development of components of teaching skills involved in the complex task of teaching. Each teaching skill involves its own component behaviours and needs special dealing for its practice and development. One of the important skill of teaching is the skill of Stimulus Variation. It has been observed that children especially upto the age of 10-12 years are not able to focus their attention on the same stimuli for a long period of time., which brings dullness in teaching. It is therefore essential for the teacher to secure and sustain pupil’s attention to what he is discussing in the class. This can be possible by providing them

changing levels of sensory inputs by using the skill of stimulus variation. In this lesson we shall be discussing about the components that are required to acquire the skill of bringing variation in teaching by the teacher.

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## **8.2 LEARNING OBJECTIVES**

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After reading this lesson, you shall be able to :

- Explain the meaning of the skill
  - Describe the components of the skill
  - Explain various interaction styles that a teacher can use
  - Prepare an observation schedule of the skill
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## **8.3 MEANING OF STIMULUS VARIATION**

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In your career as a teacher, you experience that students have a very short span of attention and to sustain their attention for a longer period of time teacher has to bring variation in teaching by changing the 'stimulus'. What is stimulus. In behavioural psychology the term 'stimulus' refers to an objectively described situation or event that is the occasion for an organism's response.

'variation' refers to varying degree of combination of physical acts and intellectual processes.

'stimulus variation' can be defined as deliberate change in the attention drawing behavior of the teacher in order to secure and sustain pupil's attention towards the lesson at high level.

Thus the skill of stimulus variation may be defined as a set of behaviours for bringing desirable change or variation in the stimuli used to secure and sustain pupils attention towards classroom activities.

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## **8.4 COMPONENTS OF THE SKILL**

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Having captured the interest of her pupils, the teacher's main problem will be how to sustain the attention of her pupils throughout the lesson. What psychological principles will she need to use to prevent monotony in the class? We know that attention tends to shift after a few minutes only, so it is extremely difficult to hold the attention of the pupils unless she introduces variation in the stimulus. She can do this by varying the presentation methods she uses in her lesson. She should concentrate on three main areas of teaching: 1. Her personal style of teaching—use of eyes, voice, gestures, movements, 2. The materials and media she uses for instruction, and 3. The teacher-pupil relationship during the lesson. Let us consider the first aspect.

### **Eyes**

We all know that an effective teacher realizes the need for monitoring her class so that she is aware of everything that is going on in the classroom. She needs to use her eye constantly to scan her pupils in an expectant, active and alert manner. Her eyes should focus on all sections of the class, both the active and inactive to detect signs of boredom. She should also use her eyes to arrest inattention by pointedly looking at the inattentive pupil. A lively and interested class of pupils usually sit with their heads forward, their eyes wide open, with a few waiting eagerly for a chance to speak. While speaking to the class, she should look at individual children in turn, so that each child should have the impression that she is speaking to her directly as an individual.

### **Voice**

By introducing changes in tone, volume and pace in her speech, she can hold the attention of her pupils. She must be careful to avoid monotony. By modulating her voice, by raising her volume or dropping it, by increasing her pace or by deliberately slowing down, and by sudden changes in pitch, she will force her pupils to pay attention to what she is saying. By deliberate use of pauses, she can secure the attention of all her class. She can pause for

emphasis, or after asking a question, so that pupils think of a long and thoughtful answer. Sometimes, she may use silence to secure the attention of the class. If she stops talking for a while, her pupils will immediately look at her to discover why she has stopped. This will focus their attention on the lesson once again.

### **Gestures.**

By the use of appropriate gestures, she can be more expressive and dynamic in the presentation in class. The head movements she can use are nodding for approval, or shaking her head for a negative response. Certain hand movements can be used to describe shape, size or movement, and certain body movements for emphasis. However, she must be careful not to make any meaningless gestures and take great care to eliminate compulsive physical mannerisms, such as wringing of the hands, waving of the arms, or playing with the chalk, or similar ugly mannerisms which are distracting.

### **Movement:**

Moving a few paces along the front of the classroom, or a short walk along either side of the room can help to keep the pupils alert and interested in the lesson. Standing still at one place only without moving tends to create boredom, as we know that movement attracts attention. She may either move towards the specimen or model being used, or she may move towards her pupils to examine their work. However, she must be careful not to pace back and forth restlessly like a caged lion as this movement is likely to distract her pupils.

### **Focusing:**

Here she can use certain words or perform certain actions to focus the attention of her pupils to a particular point which she wishes to emphasize. 'look at this diagram', 'Listen carefully to what I am saying', 'Now here is something really important', 'Watch what happens now' are instances of verbal focusing. Gestural focusing takes place when the teacher points to something important on a map, picture or to important words on the blackboard. She may also underline the important words on the blackboard. She may use either of these separately, but usually verbal and gestural focusing done simultaneously is more effective than either used alone.

### **Using different Senses:**

She can introduce interest by switching from an oral presentation to a visual mode, so that pupils change from listening only to seeing or examining. Introduction of pictures, models and specimens has a stronger impact on the pupils as they are using their sense of vision as well. By making them handle specimens or models she can introduce the sense of touch. The other senses of taste, smell and movement can also be used judiciously if the occasion warrants it.

### **Change in Interaction Style:**

In the past, classroom teaching tended to be teacher-dominated with a one-way transmission of knowledge. The teacher did most of the talking while the pupils listened passively. Today, a variety of interaction styles sustains interest and promotes active learner-involvement. She may use the following styles of interaction:

**a. Teacher-group interaction:-** This is when she puts a question to the whole class and elicits responses to the same question from many pupils.

**b. Teacher-pupil-teacher interaction:-** This takes place when she asks an individual pupil a question, receives an answer, and follows it up with another question to the same pupil to probe the issue more deeply.

**c. Pupil-pupil interaction:-** This is when she asks a question and without comment redirects the question by pointing to another pupil so that the pupils are engaged in a dialogue with one another instead of with the teacher.

**d. Teacher-Object interaction:-** This occurs when the teacher is handling the object or model for explanation or demonstration.

**e. Pupil-Object interaction:-** This takes place when the pupils are handling the object, model or specimen while learning about it.

### **Pupil Verbal and Physical Activity:**

By encouraging pupil participation in the lesson she can ensure interest and involvement in the lesson. She can do this in several ways. Besides getting their verbal participation by answering questions she can ask them to (a) make notes, drawings or diagrams in their notebooks; (b) come forward to the black board and write or draw on it; (c) examine the model, specimen or use the apparatus for an experiment; (d) act out the role or dramatize the topic to

#### **Activity 1**

Design a lesson plan that can be taught using the skill of stimulus variation. The design should have

make it alive in the classroom. Most pupils love to act and certain lessons in literature and history can leave an indelible impression on the minds of the pupils if acted out by them.

### **Suggestions for using the skill of Stimulus Variation effectively**

- The teacher should avoid too much movement or unnecessary movement in the class as it is distracting.
  - Variation in voice helps in sustaining interest in the students.
  - Teacher should use pointer for gestural focusing and for explaining audio-visual aids.
  - Teacher should involve more and more students for participation in classroom activities.
  - Students who are shy and have problems in speaking can be called to write on the black board.
  - Proper pauses at appropriate places should be a part of the lesson delivery.
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### **8.4.1 CHECK YOUR PROGRESS 1**

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Note: Write your answers in the space given below :

Q1. Why do you think modulation of voice is essential for a teacher in the class ?

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Q2. Explain “change in interaction style” by the teacher in the class?

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## 8.5 Observation Schedule for the Skill of Stimulus Variation

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### Components of the skill

S.No	Components
1.	Use of the eyes
2.	<b>Voice variety in pitch</b> <ul style="list-style-type: none"><li>• Tone</li><li>• Volume</li><li>• Delivery pace</li></ul>
3.	Use of pauses
4.	Use of appropriate gestures
5.	Meaningless gestures or compulsive physical mannerisms
6.	<b>Use of movement</b> <ul style="list-style-type: none"><li>• Purposeful</li><li>• Restless pacing up and down</li><li>• Verbal</li><li>• Gestural</li><li>• Verbal-gestural</li></ul>
7.	<b>Use of different senses</b> <ul style="list-style-type: none"><li>• eye</li><li>• Ear</li><li>• Touch</li><li>• Smell</li><li>• Movement</li></ul>
8.	<b>Change in interaction styles</b> <ul style="list-style-type: none"><li>• Teacher-group</li><li>• Teacher-pupil-teacher</li><li>• Pupil-pupil</li></ul>

- Teacher-object
- Pupil-object

9.

### **Pupil verbal and physical activity**

- Answering questions
- Making notes or diagrams or drawing
- Writing or drawing on the blackboard
- Examining model, specimens, using apparatus
- Role-playing or dramatization

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### **8.5.1 CHECK YOUR PROGRESS 2**

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Note :(a) Write your answers in the space given below.

(b) Compare your answers with those given at the end of the lesson/ above sub section.

1. Fill in the blanks:-

(i) Teacher – pupil interaction refers to the communication of the \_\_\_\_\_ with an \_\_\_\_\_.

(ii) Introducing deliberate silence during talk by the teacher is \_\_\_\_\_.

(iii) Non-verbal cues provided by the teacher with the help of movements of eye, hand, body etc. are \_\_\_\_\_.

(iv) When teacher employs many pupils in a dialogue without doing direct discussion, it is \_\_\_\_\_.

(v) When teacher goes from Aural to visual switching it is called \_\_\_\_\_.

2. How will you as a teacher ensure the physical involvement of students in your class?

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### **8.6 LET US SUM UP**

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One of the major problems that the teachers face in the classroom is that of securing and sustaining attention of the pupils. A teacher's mastery over the subject matter and use of right techniques of teaching fail her/him if she/he is unable to make the pupils interested in the lesson and secure and sustain their attention. So skill of stimulus variation equips the teacher with such techniques which will help in breaking the monotony in the class. The teacher can bring variation in the stimulus by concentrating on her personal style of teaching- use of eyes, voice, gestures, movements, the material and media she uses for instruction and the teacher-pupil relationship during the lesson. With these techniques teacher will be able to break the monotony and bring variation in teaching.

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## **8.7 KEY WORDS / GLOSSARY**

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Stimulus – Anything that comes from the environment and evokes a response .

Variation- A change or difference in the amount or level of something

Gestures – A movement of the hand, head etc. that expresses something

Different senses – A way of perceiving the world through senses; the faculty of perceiving by means of sense organs.

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## **8.8 LESSON END EXERCISE**

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1. Explain the terms 'stimulus' and 'variation'.
2. Describe what changes a teacher should bring in her personal style of teaching to make teaching interesting.
3. Explain any five components of skill of Stimulus Variation.
4. Describe the significance of Skill of stimulus variation in class room teaching.
5. Explain the following in your own words:-
  - a) Teacher group interaction

b) Teacher- pupil interaction

c) Pupil- pupil interaction

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## **8.9 SUGGESTED READINGS**

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1. Paintal Iris : Micro teaching, a handbook for teachers
2. Singh L.C & Sharma R.D: Micro Teaching Theory and Practice
3. National Council for Educational Research and Training; Department of Teacher Education, (1975-79) Micro Teaching Series 1-8, New Delhi : NCERT.
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5. Sharma R.A ; Methodology of teaching
6. Sawhney K.K & Sawhney Mrs. Mohani; Teaching of Social Studies in Indian Schools
7. Gupta Renu; Mastering Teaching skills ;A manual for practicing teacher.

**STRUCTURE**

9.1 Introduction

9.2 Learning Objectives

9.3 Meaning of the skill

9.4 Components of the skill

9.4.1 Check your progress 1

9.5 Observation Schedule

9.5.1 Check your progress 2

9.6 Let us sum up

9.7 Key words/Glossary

9.8 Lesson End Exercise

9.9 Suggested Readings

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**9.1 INTRODUCTION**

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Classrooms are multi-dimensional universes. They are crowded with students, teachers, tasks and pressures. The thought of a classroom brings to our mind two of its predominant components, viz, the learner and the teacher. While the teacher is teaching a concept in a classroom, she is observing whether the students have understood concept, she has to decide whether to stop the two students sitting at the back from whispering or ignore them, she has to determine if she should start the next topic, plan her next teaching strategy and so on. The challenges in the classroom are thus abounding and need to be planned and addressed meaningfully.

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## **9.2 LEARNING OBJECTIVES**

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After reading this lesson , you shall be able to :

- Explain the meaning of class-room Management
  - Describe the components of this skill
  - Prepare an observation schedule of this skill
  - Explain the significance of class room Management in teaching learning process
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## **9.3 MEANING OF THE SKILL**

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While managing the class room which skill do you think you require as a teacher . You as a teacher needs to have the managerial skills that are essential for organizing inputs in the classroom situation, in addition to having a reasonable knowledge of the subject. When we talk of classroom management as a skill we interpret management as the process of optimizing the mobilization and utilization of available resources. The resources are generally recognized in the form of human, physical and financial inputs. Finances do not have a direct bearing but the physical and human resources are the most important inputs. So classroom management is the process of producing a high rate of work involvement and a low rate of deviancy in academic settings.

It becomes essential for potential teacher and practicing teacher to attach more importance to this skill, because learning will be effective if the child actively participates in the classroom activities. The teacher through the classroom performance must try to achieve active participation of the pupils because interaction of the student in the teaching process is essential for learning. Effective classroom management is ensured through pupil participation and this skill can be achieved through practice and training.

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## **9.4 COMPONENTS OF THE SKILL**

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In order to create a conducive environment in the class, teachers need to be well equipped with the knowledge of the various components of classroom Management, some of which are given below:

**Rapport formation:** -As a teacher you should know how to develop rapport with the students. For this the teacher should have knowledge of the characteristics of her/his students. Only then can she/he match his/her expectations to the abilities of the students. The relation between student and the teacher is very important. It is important to create a relationship based on mutual affection and trust. E.g. Pupils are more attentive when they are called by their names. Teacher should apply this component while teaching. This helps managing classroom activities.

**Setting and maintaining realistic norms for classroom behaviour:** - It is essential for the teacher to develop a specific set of reasonable expectations for class-room behavior. These expectations should be based on the developmental level of the students and the personality, teaching philosophy, and tolerance level of the teacher. For example, the teacher may ask students to raise the hands to answer questions and that he would not accept collective answers etc. Infact proper utilization of this component helps in maintaining proper discipline in the class.

**Giving clear directions:** - The third important component of classroom management is giving clear direction to the students. He may gain their physical participation in some of the classroom activities by following clear cut directions. This skill will be helpful in the skill of classroom management.

**Ensuring sufficient work for each pupil:** - The teacher should give work to the students according to their age, capacities, maturity and mental level. This will ensure that the student do not get involved in activities other than what is going on in the classroom at that time. This behavior of teacher adds positively towards classroom management.

**Positive reinforcement and encouragement:** - Positivereinforcement focuses on what the student is doing well and understanding,that positive attention tends to increase the chances of the student learning the behavior better. The goal should be to help students become self-controlled, self- reliant and self- directed.Thepupils attending behaviour is the integral component of the skill of classroom management. In order to ensure pupils attending behavior the teacher must use verbal and non-verbal reinforcers. This behaviour helps in pupil participation in the class.

**Communication:**-Effective communication is the foundation for good classroom management. Communication skills can be divided into two categories: receiving and

sending. In receiving messages, one of the significant activities is active listening. When teachers listen actively, the message sent to the student is that they are important and can have the teachers undivided attention. Many problems can be solved and even prevented when teachers take the time to use active listening.

**Checking inappropriate behaviour immediately:** - Sometimes a child may not behave appropriately or he may not be mentally present in the class. The teacher should check such a behaviour immediately and direct the student to behave according to the need of the situation. This component will ensure more attention on the part of the learners.

**Keeping pupil in eye span:** - It is essential that the teacher has proper eye contact and all students are kept under proper eye span. Teacher should give necessary instruction to the students to carry on a particular activity for example (frame sentences). He can then approach each student to ensure that his directions are followed.

**Shifting from one teaching activity to the other smoothly:** - classroom teaching is a set of activities which includes teaching, writing on the B.B. explaining, giving instructions, questioning, giving directions etc. Change from one activity to the other is known as shifting from one teaching activity to the other and this must be carried on smoothly by the teacher.

#### Activity 1

Prepare a checklist of do's and don'ts for yourself for managing classroom climate and classroom tasks.

Before switching from one activity to the other the teacher must ensure that the content under study has been followed by the students.

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### 9.4.1 CHECK YOUR PROGRESS 1

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Note : Write your answers in the space given below ;

Q1. What do you mean by Rapport Formation ?

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Q2. How do you think a teacher will develop effective communication in the class.Discuss.

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## **9.5 OBSERVATION SCHEDULE**

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### **COMPONENTS OF THE SKILL**

<b>S.No</b>	<b>Components</b>
1.	Rapport formation
2.	Setting and maintaining realistic norms for classroom behavior
3.	Giving clear directions
4.	Positive reinforcement and encouragement
5.	Checking inappropriate behavior
6.	Shifting from one teaching activity to other smooth

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### **9.5.1 CHECK YOUR PROGRESS 2**

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Note : (a) Write your answers in the space given below:

(b) Compare your answers with those given at the end of the lesson/ above sub-section.

1. In your role as a teacher identify the important components required for managing the class.

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2. Why is it essential for a teacher to establish norms for classroom behavior?

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3. List the essential skills that are required by the teacher to achieve the learning objectives in the class.

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4. Why is it important for a teacher to check inappropriate behavior immediately ?

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## **9.6 LET US SUM UP**

From the above discussion we conclude that class room Management is a critical skill which every effective teacher needs to learn. Achieving a successful classroom management is an ongoing process. Without effective classroom management it is not possible to create a learning environment that has positive classroom culture. To achieve this it is important that the teacher builds positive relationships with the students. The teacher should know each individuals strengths and weaknesses, while also working out their interests and ambitions. The teacher has to stay calm and be focused for creating positive impact on the class. In short, class room management skill is the process by which teachers create and maintain appropriate behavior of students in classroom settings. Teachers use a variety of skills and techniques to keep students organized, orderly, focused, attentive on task and academically productive during a class.

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## **9.7 KEY WORDS /GLOSSARY**

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Conducive environment – An environment that is beneficial or helpful, tending to promote or support something desirable.

Rapport –A friendly relationship in which people understand each other very well

Realistic norms- standards of behaviour or expectations that are based on practical and factual understanding of the world, rather than on unrealistic desires or hopes.

Reinforcement- Making something stronger

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## **9.8 LESSON END EXERCISE**

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1. What do you mean by the skill of classroom Management ?
2. Elaborate on various components of class room Management.
3. Why do you think it is important for a teacher to learn the skill of classroom Management?
4. What should a teacher do to create a positive and healthy learning environment in the class?

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## **9.9 SUGGESTED READINGS**

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1. PaintallIris : Micro teaching, a handbook for teachers
2. Singh L.C & Sharma R.D: Micro Teaching Theory and Practice
3. National Council for Educational Research and Training; Department of Teacher Education, (1975-79) Micro Teaching Series 1-8, New Delhi : NCERT.
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**STRUCTURE**

10.1 Introduction

10.2 Learning Objectives

10.3 Blended learning

10.3.1 Check your progress 1

10.4 Blending of power point presentation in conventional classroom

10.4.1 Benefits

10.4.2 Potential drawbacks

10.4.3 Check your Progress 2

10.5 Let us sum up

10.6 Keywords/Glossary

10.7 Lesson End Exercise

10.8 Suggested Readings

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**10.1 INTRODUCTION**

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Dear Students, Now-a-days your best friend and source of knowledge is google besides books and other learning material. Isn't it. This is the intervention of technology in learning. During covid times technology facilitated our education system and teachers and students were in continuous touch with each other due to on line classes. So you see we find that with recent developments and advances, technology in education is virtually a new source of concern for educators, teachers and students. As with the rapid developing area, there are problems- both internal and external ones- to be confronted and resolved. Technology has drastically evolved over the years. The information and widespread dissemination of information technology

thereby gives rise to new learning opportunities for learners. Appropriate use of new devices like computers and internet among students make them comfortable to update their knowledge base quickly and give them significantly a positive effect on their learning.

Besides this, the scientific inventions have influenced every aspect of human life, even our kitchen has been mechanised. This is why our education process could not remain untouched by these inventions. Teaching machine, radio, television, tape-recorder, computer and language laboratory are now being used frequently in our teaching process. These machines are employed in all the phases of human knowledge: preservation, transmission and advancement. A large number of students sitting at a distant places can be benefitted by an effective teacher by using radio and television in the learning process. Thus, use of new devices has introduced a new learning mode that reinforces teacher by computer, networking and other new devices to initiate on line activities in traditional courses. These devices aim at creating a learning atmosphere in support of self- oriented learning, leading to improvement in learning efficiency, satisfaction and learning performance.

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## **10.2 LEARNING OBJECTIVES**

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**After reading this lesson, you shall be able to :**

- Explain the meaning of blended learning
- Explain the meaning of integration
- Understand the meaning of Power Point Presentation
- Describe the significance of blended learning in conventional classroom
- Explain the importance of power point presentation in teaching
- Elucidate the necessary skills required for using power point presentation in the class
- Identify the advantages and drawbacks of using power point presentation by the teacher

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## **10.3 BLENDED LEARNING**

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Technology has drastically evolved over the years. The information and widespread dissemination of information technology thereby gives rise to new learning opportunities for learners. Appropriate use of computer and internet among students make them comfortable to update their knowledge base quickly and give them significantly a positive effect on their learning attitude. This integrated approach to teaching and learning that includes multiple modes of instruction and learners practice is Blended learning. It is a new learning mode that reinforces teacher by computer and network on line activities in traditional courses. Blended learning, as a combination of traditional face-to-face learning and online learning, is aimed at creating a learning atmosphere in support of self-oriented learning, leading to improvement in learning efficiency, satisfaction and learning performance. This learning may also reinforce flexibility while providing more opportunities for students to access higher education and simultaneously allow the school to have more contact with students. In comparison with face-to-face teaching, blended teaching is more likely to further cut operating costs down. By promoting more students to select courses and the use of network facilities, blended learning requests less classroom time, than face-to-face courses, thus reducing the time required for students to complete the degree.

Accompanying the application of information and network technology, blended learning is becoming more popular in colleges and Universities. Apart from the changes in the traditional face to face learning mode, blended learning makes full use of the rich resources of the internet and combines this with the advantages of traditional learning. It allows students to work at their own pace and level.

**Features:**

The important features of Blended learning are:-

- Increased student engagement in learning
- Enhanced teacher and student interaction
- Responsibility for learning
- Time management and flexibility
- Improved student learning outcomes
- Enhanced institutional reputation
- More flexible teaching and learning environment
- Better opportunities for experiential learning
- Change in teacher and student interaction style

Blended learning shifts the teacher's role from knowledge provider to coach and mentor. The shift does not mean that teachers play a passive role in students education. Quite the contrary with Blended learning teachers can have an even more profound influence and effect on students learning. This learning make teaching more student –driven.

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### **10.3.1 CHECK YOUR PROGRESS 1**

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Note: Write your answers in the space given below.

Q1. Explain in your own words the meaning of Blended learning.

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Q2. How do you think Blended learning has enriched teaching learning process ?

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### **10.4 BLENDING OF POWER POINT PRESENTATION IN CONVENTIONAL CLASSROOM**

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The instruction process is a communication process wherein knowledge, information and skills flow from the teacher on the one end to the student on the other and vice versa. The success of any instructional activity, depends on how best communication takes place between the teacher and the student. To facilitate the communication process, we take the help of a number of teaching aids. Power point presentations is one such aid through which transaction of learning and teaching takes place effectively. Power Point presentations are

used in many different fields due to their ability to organize & structure information, create a consistent format, and provide the content with visuals. Power point presentations are often used by Educators in their classrooms in order to guide the class through a lecture. Their main purpose is to help direct the lesson or lecture, while also giving students the opportunities to follow along and give them far better understanding of the learning material.

Power point presentation is a combination of various slides depicting a graphical and visual interpretations of data, to present information in a more creative and interactive manner. It can be an effective tool to present material in the classroom and encourage student learning. With the help of power point presentation a teacher can project visuals that would otherwise be difficult to bring to the class. With the help of power point we can present information in multiple ways which will make better impressions on the minds of the learners .Building visual interpretations of phenomena, facts, events and other things, one creates associations that help memorize the terms better. Power point presentations can help the students to disclose more of their creative potential and turn a regular assignment into the real piece of art. This will increase engagement in the classroom and also teach students valuable technological skills. Power point presentation is perfect for making lessons more interactive if prepared in a proper manner. Presentations can also be a great resource for students to study before an assessment or use as a note-taking aid during class.

While preparing PPT the following points should be considered:-

- It is important to avoid text-dense slides. It is better to have more slides than trying to place too much text on one slide.
- It is important to use brief points instead of long sentences or paragraphs.
- It is important to relate power point material to course objectives to reinforce their purpose for students.
- As a rule it is important to show one slide per minute to account for discussion and time for students to absorb the materials.
- While using power point presentation incorporate active learning throughout the presentation to hold students interest and reinforce learning.
- The presenter should use italics, bold and colour for emphasizing content.
- It is important to use light background (white, beige, yellow) with dark type face or a dark background (blue, purple, brown) with a light type face which makes it easy to read in a large room.



- Avoid using too many colours or sawflies colours too many times within the presentation which can be distracting to students.
- Ensure the typeface is large enough to read from anywhere in the room: titles and headings should be not less than 36-40 point font. The subtext should be not less than 32 points font.
- The presenter should use clip art and graphics sparingly. It is best to use graphics only when they support the content, irrelevant graphics and images should be avoided.
- The presenter should include key words, concepts and images to enhance the presentation.
- Photographs can be used to add learning. It is better to use only photographs that are relevant to the content and for pedagogical purpose. Images for decorative purposes are distracting.
- It is better to use two dimensional pie and bar graphs rather than 3D styles which can interfere with the message.
- The use of correct spelling, correct word usage, flow of material and overall appearance of the presentation is mandatory for good presentation.
- The presenter should take the help of colleagues to check the presentation for accuracy & appeal.
- The presenter should schedule at least one practice session to check for tuning and flow.
- The presenter should also make provision for distributing handouts of the presentation to the learners. These can be provided to learners for their future reference.
- The presenter should avoid reading from the slide. Reading the material from the slide can be perceived as though he/she does not know the material.
- The presenter should stand to one side of the screen & face the audience while presenting.
- Teaching through power point presentation can enhance teaching & learning process. Power point can be used to prepare lectures and presentations by helping instructors refine their material to salient points and content.
- Power point also allow the users to type directly during the slide show, which provides another form of interaction. These 'write on slides' can be used to project students comments and ideas for the entire class to see.

#### **10.4.1 BENEFITS**

Use of Power Point Presentation in the classroom teaching has a number of advantages which are given below:-

- It is easy to add personalized images and videos.
- It allows using appropriate graphics.
- It helps present big projects to the audience.
- It can influence the target audience by different means.
- It helps establish eye contact with the audience.
- It allows highlighting the most significant aspects of the topic.
- Students like creating Power Point presentations as it provide them with room for creativity.
- It serves time and energy-once the presentation has been created, it is easy to update and modify it.
- Power point is portable and can be shared easily with students and colleagues.
- Power point supports multi- media, such as video, audio, images and animation.

#### Self Assessment

Think of a topic being undertaken by you as a teacher and use blended learning to deliver it in the class. How do you think will make a difference if we teach the same topic through traditional method.

#### 10.4.2 POTENTIAL DRAWBACK

- Power point could reduce the opportunity for class room interactions by being the primary method of information .
- Power point could lead to information overload, especially with the inclusion of long sentences and paragraphs or lecture heavy presentations with little opportunity for practical applications or active learning.
- Power point could ‘drive’ the instruction and minimize the opportunity for spontaneity and creative teaching unless the instructor incorporates the potential for ingenuity into the presentation.

As with any technology, the way power point is used will determine its pedagogical effectiveness. By strategically using the points described above, power point can be used to

enhance instruction and engage students. In the end we can conclude that Power Point presentations are powerful tools for sharing ideas and opinions with the audience. The importance of power point presentations is huge. It provides the individual with various tools for influencing people. This software provides its users with considerable advantages. Thus, it is reasonable to admit that this powerful tool will remain the key power broker in e-learning.

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### 10.4.3 CHECK YOUR PROGRESS 2

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**Note:** (a) Write your answers in the space given below:

(b) Compare your answers with those given at the end of the lesson/ above sub-section.

1. Which of the following statements are true?

- a) Use of Power Point Presentation is perfect for making lessons more interactive.
- b) Handouts should not be distributed before Power Point Presentation by the teachers.
- c) Blended learning increase student engagement in the process of learning.
- d) Blended learning reduces the profound influence of teachers on students.
- e) Accompanying the application of information and network technology, blended learning is becoming less popular in colleges and universities.
- f) Power point could reduce the opportunity for classroom interactions by being the primary method of information.

2. Give the advantages of use of Power Point Presentation for the teacher.

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## 10.5 LET US SUM UP

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From the above discussion we conclude that class room is the epicenter for learning on the school campus. It is a major component that helps nurture knowledge in the education system. To make class room activities more vibrant, use of new devices by the teachers are introduced. Use of Power Point Presentation is one such device which help teachers to enhance instruction and engage students. This tool is an aid with the teacher to influence learners and make their learning active. It helps the teachers to add personalized images and videos thereby making teaching more interesting. In short the importance of Power Point Presentation is huge.

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## **10.6 KEY WORDS /GLOSSARY**

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Blending – the action of mixing or combining things together

Conventional classroom- A traditional teaching environment where students learn from a teacher in a physical space, typically with a structured curriculum ; a class where a teacher moderates and regulates the flow of information and knowledge.

Visual interpretations- the process of understanding and making sense of information presented visually, such as images, graphics, or charts.

Pedagogical- The theory and practice of teaching, including the methods and principles educators use to help students learn.

Power point presentation – A visual aid used to communicate information, typically in a slide show format, often accompanied by an oral presentation.

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## **10.7 LESSON END EXERCISE**

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1. What do you mean by Blended learning?
2. Explain the significance of Power Point Presentation in conventional class room.
3. What considerations should teacher keep in mind while using Power Point Presentation in the class room?

4. As a teacher, do you think use of new devices have modified conventional class rooms. Discuss.

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## **10.8 SUGGESTED READINGS**

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1. Paintal Iris ; Micro teaching : a handbook for teachers
2. Sing L.C. and Sharma R.D. : Micro teaching Theory and Practice
3. Allen, Dwight & Kevin Reyan (1969). Microteaching
4. Brown, G.A. (1975) Micro teaching.
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6. Sharma R.A.; Methodology of Teaching

**Use and implications of the smart boards viz-a-viz to the conventional classroom board-  
Difficulties in the integration& its implication**

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**STRUCTURE**

- 11.1 Introduction
  - 11.2 Learning Objectives
  - 11.3 Smart Boards
  - 11.4 Use and implications of Smart Boards vis-à-vis conventional classroom
  - 11.5 Let us sum up
  - 11.6 Lesson End Exercise
  - 11.7 Suggested Readings
- 

**11.1 INTRODUCTION**

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All instructional activities aim at helping the learners to achieve the specific instructional objectives set by the teacher, in the best possible manner. This is why the teacher uses, apart from classroom lecturing and interaction skills, a number of communication aids which range from the blackboard to sophisticated computers. The use of communication aids create readiness in the learner for learning experiences. Communication aids provide clarity, precision and accuracy of information processed. When technology is integrated into school lessons, learners are more likely to be interested in, focused on, and excited about the subjects they are studying. This learning is helpful in sustaining the focus of the learners for a longer period of time. Besides sustaining the interest of the learners it provides autonomy to the learners to set appropriate goals and take charge of their own learning. One of such important communication aid incorporated by numerous schools across the country is the use of smart board in classrooms.

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## 11.2 Objectives

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After reading this lesson, you shall be able to :

- Explain the meaning of Smart Boards
  - Explain the importance of Smart boards in class rooms
  - Identify the difficulties in integrating smart boards in conventional class-rooms
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## 11.3 Smart Boards

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Class-room is the epicentre for learning on the school campus. It is a major component that helps nurture knowledge in the education system. It comes in different sizes and shapes which depend on its audience. Traditional classrooms use conventional Blackboards for chalk, marker board, and OHP equipment in order to deliver lectures and learning materials to students. The markerboard and the OHP are considered to be outdated technology for many reasons. They are insufficient, hard to maintain and not environmentally friendly.

Growing technological expertise and tools have slowly become a way of enhancing the human experience. A similar concept is a technological integration in education. Numerous schools across the country have begun incorporating different types of tools to improve student engagement and performance. A wide spread example of this is the Smart board. Smart boards or digital boards are interactive boards that are used as a replacement for white boards. Smart boards can present videos, charts, diagrams, presentations or other media besides writing on its surface. They are considered as whiteboards with a touch screen and internet connection.

Smart boards work by connecting to a PC via an HDMI Cable. The smart board displays what is on the computer and they also come with special coloured pens to write with. This can save teachers time from buying EXPO markers when it comes to writing on a white Board.

Smart boards in classrooms has revolutionized the classroom setting by putting everything at the fingertips of the teacher so that the teacher can be more productive. This is one of the

biggest leap in the classroom setting tools for learning. It digitizes everything from Power point contents to interactive learning materials.

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#### **11.4 Use and implications of Smart Boards vis-à-vis conventional class-room**

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A smart Board is designed for browsing websites and working on projects. It can be used with the help of one's finger or a mouse. It is convenient for teachers since boards can pull up information and save data. Smart Boards can also open Power Points and Microsoft word, which saves teachers from having to write crucial key points on a regular board. Presentations are a lot easier and run smoother on a smart board. When teachers want to show clips, they can as easily pull one up by searching on You- tube or download it. This gives Smart Boards a huge advantage and may also upgrade student's knowledge on the topic. Teachers can also connect from all over the world. Besides this the use of smart board allows access to a diverse range of educational resources on line. Teachers can use videos, documentaries, PDFs, animations, diagrams and other media while teaching. This makes it easier for students to associate lessons with different concepts and understand the curriculum more effectively.

##### **Smart Boards in class rooms**

Use of Smart Board in the classrooms help the teachers in the following ways:

**Smart boards improve student engagement:** Unlike traditional classroom teaching where a teacher only speaks or writes to explain, smart boards can be used to present a wider variety of additional media. This makes it easier for students to associate lessons with different concepts and understand the curriculum more effectively.

**Smart Boards enhance cooperation and collaboration,** making the class interesting and fun- all the more reason why Smart boards should be installed in every class room.

**Smart boards accommodate different learning styles:** Smart board can show colourful videos, better pictures, diagrams, documentaries etc. which would help auditory and visual learners understand concepts better. Smart board are touch – based, when children are asked to interact with programs on smart boards the tactile stimulation can help kinaesthetic learners learn better. In other words, students with any dominant learning style gain value from the use of smart board in classrooms. **Smart boards can record and share lessons :**



Repetition is known to enhance memory. Smart boards have various additional functions to improve teaching learning processes. One of these is the function to record and share lessons. Students can access previously recorded lessons and use them to revise.

**Smart board breaks monotony of traditional classroom learning:** The colourful and vivid visuals available on smart board are a lot more captivating than a teacher simply speaking or explaining something. Students find it easier to focus on the content shared on smart board in classrooms as they offer diversity.

**Students can be more creative:** The use of smart board in classrooms allows students to be more creative in their presentations and assignments, Instead of making a chart or writing on pages, students can make collaborative short films, Power point presentations, info-graphics etc. Such use can make students more tech-savvy and invested in the curriculum.

**Use of smart boards improves student motivation and engagement:** Students learn best when they are fully engaged, and hands on learning is one of the best ways to do so. Furthermore classrooms with smart boards enhances a students learning experience by allowing them to see diagrams, charts, videos and maps on a large screen in front of them in real time.

**Interactive smart boards are helpful in promoting retention and growth of conceptstought:** Use of Interactive smart boards make learning more enjoyable by incorporating visual components. Students are better able to absorb the concepts being taught because the classes are audio-visual. This is one of the biggest benefits of the smart board for classrooms.

**Smart boards can teach larger group of children with ease:** With a smart board, a teacher can teach a large group of children without worrying about their attention span. Students enjoy visual learning, which will eventually increase their focus on the lesson and its important points. .

**Use of a smart board encourages learner-centered approach to teaching:** Teachers can use a smart board for the classroom to project a video, picture, website game or learning tool on the screen to supplement daily lessons. By utilising a variety of educational databases and tools, smart board make the teaching process easier by providing teachers with access to a variety of digital resources.

**An eco-friendly teaching method:** A digital board for the classroom can be used to reduce the use of chalk and makers, as well as paper.

**Smart Board encourages students participation in learning process:** Smart boards are great for collaborative learning, as students can draw and write on the same board. This encourages creativity. Teachers can also let students work together to create something unique.

**Smart Board promotes Personalised learning:** Smart board can enhance teaching and learning in the classroom. It provides teachers with the ability to create a personalised learning environment that promotes mental and physical growth by allowing students to engage more interestingly and interactively. Furthermore, smart board are equipped with cutting-edge virtual and smart teaching techniques that give teachers the freedom to choose the best possible approach to complement what is learnt in the class-room.

**Activity 1**

Design a lesson plan of your choice that can be taught by using the smart-board. Also enlist the steps that you will follow while delivering the lesson.

**Advantages of using Smart Board**

The smart board comes with many advantages that help push the boundaries of what is possible in the classroom. Some of the advantages that come with smart board are:

- It increases students interaction and team collaboration .
- Smart board promotes real time videos and audio lessons .
- Use of smart board encourages paperless lesson, keeping the environment clean.
- It promotes hybrid learning.
- It emphasizes seamless integration with LMS .
- It saves money .
- Use of smart board in classrooms is eco friendly.

**Disadvantages in the classroom :**

We can agree that the smart board is packed with a lot of advantages, but it also comes with some disadvantages:

- Smart Board are waste of time for those teachers who do not know how to use them or for those who are not ready to use it.

- While using the Smart Board in the class the technical problems may hinder the flow of the course.
  - One of the limitation of the use of Smart Board is that more than one student cannot use the board at the same time.
  - Use of Smart Board in the schools may be expensive.
  - Smart Board incurs costly repairs whenever required.
  - It is fragile to handle.
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### **Check your progress -1**

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**Note:** (a) Write your answers in the space given below:

(b) Compare your answers with those given at the end of the lesson/above sub-section:

1. Which of the following statements are true :

- i) Smart board is receptive to touch.
- ii) Smart Boards do not enhance co-operative learning.
- iii) Smart Boards can open Power Point Presentations which is helpful in teaching.
- iv) Smart Boards can be operated with the help of one's finger and not with a mouse.
- v) Teachers can also show clips on the Smart Board.
- Vi) Smart Boards cannot record and share lessons.

2. Why are Smart Boards important for students?

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### **11.5 Let us Sum Up**

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From the above discussion we conclude that the smart board is one of the biggest leap in the classroom setting tools for learning. Smart Board teaching is better than Black Board. It makes the students more creative, enthusiastic and active learners. It digitizes everything from powerpoint contents to interactive learning materials. It reduces the number of devices

needed in the class room setting for effective lectures and connects the classroom with the web. It engages students with the lesson which further encourages students to take notes and participate in learning actively. While using the Smart Board in the class, students are encouraged to brainstorm more in group activities, resulting in effective problem solving. Smart Boards enhance cooperation and collaboration, making the class interesting and fun- all the more reason why Smart Boards should be installed in every classroom.

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### **11.6 Lesson And Exercise**

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1. What is a Smart Board ?
  2. How do you think Smart Board is advantageous for classroom learning? Discuss.
  3. 'Smart Board help in making learning fun' - Discuss.
  4. Explain how smart Board can be disadvantageous for the class room learning.
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### **11.7 Suggested Readings**

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1. Paintal Iris: Micro teaching, a handbook for teachers
2. Singh L.C & Sharma R.D: Micro Teaching Theory and Practice
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