

B.Ed 1½ YEAR

**GENERAL METHODS OF
TEACHING**

UNIT: 1–9

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FOREWORD

The education system is aimed at the development of individuals who are identified by level of current knowledge and skills in ever changing world. It can only happen if education system creates a spirit of enquiry i.e. teaching our children to challenge the status quo or old knowledge with new facts. Teachers well equipped with subject knowledge and pedagogical skills play a key role in raising the creative individuals. In functional schools the professional, physical, curricular and technological facilities are available. Emphasis on professional development of teachers can support and lighten the future of our nation. Associate Degree in Education is one step forward in the direction of quality teachers training.

This course has been designed to meet the need of the time, so will certainly provide student teachers with a broad foundation of knowledge, skills and attitudes necessary to promote quality education at primary and secondary level. The contents of the course have been presented in such a way that it would enhance the analytical skills of the teachers about the latest teaching methodology and techniques. Moreover the development of understanding of diversity of pedagogy and how this diversity impacts the teaching and learning process have been emphasized in this course.

In this development process, efforts of Dr. Shaista Majid, Assistant Professor, Department of Special Education are being acknowledged. Professional input of all writers and reviewers for preparing this book is highly appreciated.

Vice Chancellor

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Dr. Shaista Majid

Course Coordinator

August, 2016

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INTRODUCTION OF THE COURSE

Teaching is giving information. It is often defined as imparting new information to pupils. There are a number of concepts in the field of teaching which cannot be understood by the students unless they are explained through different means and methods. The ways teachers impart knowledge directly affect the learning process. Students learn those things easily which are presented properly. A number of teaching techniques have been identified uptill now which relate particularly to the material and to the comprehension level of the learners. Knowledge of teaching methods equipped the teachers with skills that made the teachers professional and successful in their field. This course describes the concepts of effective teaching methods and professional qualities of good teachers in an interactive way. The main focus is to enhance the knowledge on teaching skills.

The course consists of nine units. The unit concepts are divided into sub topics that are explicit in nature. The students are required to read the concepts thoroughly, do activities and exercises for self evaluation and direction. They may seek guidance from tutors of the course in case of queries. At the end of each unit self assessment questions are provided which covers the evaluation of whole unit concept understanding.

Assignments

Assignments are the compulsory component of the course. Each 3 credit hours course comprised of two assignments. The students are required to write down the assignments and submit according to the schedule in the given time period. The tutors check the assignments and communicate the feed back to the student individually in a course of time. The assignments are the part of continuous assessment of the course, therefore the students have to be careful in attempting them.

Workshops

Workshops are the compulsory component. Workshop for each course is held by the regional offices of AIOU. In the workshop the course concepts are taught by the experts. You may find this opportunity the best to learn and exchange your ideas with others in the discussion sessions. Attendance in workshops is compulsory. A student failing to attend the scheduled workshop for the particular course will be declared as reappear in workshop on the examination result card.

Tutorial support

Tutorials are necessary to complete the course. These are held at the proposed centers and the students are got informed about these meeting by the tutors of the course. The

students can avail this is opportunity to discuss the academic issues related to the course concepts and the program. This support is the back bone of the distance learning system.

Activities

Each unit concept/sub concept comprised of activities. These are designed to apply the learned concepts. Doing activities involves the student's understanding and thoughts. This is an opportunity to satisfy the creativity of the students. These will keep the students actives throughout the semester and help in completing the course within the required study time limits.

Suggested readings

The suggested readings mentioned in the unit will enable the student to read and locate the sources for further study. A look on the suggested books and web sites will enhance the knowledge on teaching methods.

Assessment

The students will be assessed on the following pattern:

- i) Assignments: whole course comprised two assignments for continuous assessment of the students. 40 percent marks in each assignment are the least criteria to pass the course.
- ii) Final examination: final examination at the end of the semester will be held as annual assessment of the students. Again 40 percent marks are the least criteria to go through the course.

The ratio of these two assessment variables is 30:70 respectively in final grading of the student.

COURSE OBJECTIVES

The broad aims and objectives of this course are as follows:

- To explain the basic concepts of teaching.
- To demonstrate the essential attributes of the effective teacher.
- To describe the importance and types of teacher planning.
- To practice different teaching methods in classroom.
- To organize classroom discussion and demonstrate its appropriate use.
- To apply various techniques to motivate students.
- To select appropriate audio visual aids in classroom teaching.
- To prepare lesson plans according to Individual Needs.
- To apply teaching skills on identifying learning difficulties in the classroom
- To select, prepare and use appropriate teaching materials

Unit No. 1

INTRODUCTION TO TEACHING

Written by: Dr. Shaista Majid
Reviewed by: Prof. Dr. Rehana Masrur

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INTRODUCTION

The students have their own way of understanding and demonstrating the acquired knowledge. Students comprehend the presented information at their own pace. The teaching adds the distinctive process of acquiring the knowledge. The teachers teach a course of study or a practical skill to the pupils. Teachers use different techniques in order to enhance the students' learning. Students respond differently to different methods of teaching. There are many teaching methods for children like questioning, modeling, demonstrating, collaborating and explaining. Apart from these defined methods, nowadays many other teaching methods in education are being applied for quality learning. The methods like role-play, story or games, seminars, presentations, workshops, conferences, brainstorming, case study, educational trips and modern audio-visual aids like documentary films, computers, internet, etc have been introduced in education. These new technologies have increased the pace of learning and understanding. The new technologies have also enhanced the capabilities of the students to research and logically think for a given problem.

There are many different ways to teach and help students to learn. A teacher considers students' background knowledge, environment, and their learning goals when going to decide what teaching method should be used. Beside this the knowledge of teaching methodologies is also important for the teachers in planning to involve students in new concepts of content. Knowledge of teaching methodologies helps teachers in facilitating learning and retention of the content. Therefore teachers must understand the basic concepts of teaching as well as the effective teaching.

This unit describes both personal and professional qualities and competencies of a teacher. The concept of teaching methods, teaching strategies and techniques has been explained clearly.

OBJECTIVES

After the successful completion of this unit the prospective teachers will be able to:

1. Have a clear understanding of the concept of teaching.
2. Define teaching in more effective terms.
3. Debate on aspects of effective teaching.
4. Specify the personal and professional characteristics for making the teaching more effective.
5. Discuss various ways of effective teaching.
6. Analyse your own teaching against factors of effective teaching.
7. Describe the role of teacher in making the learning environment more conducive.
8. Analyse your own role as a classroom manager.
9. Compare your teaching methods, strategies and techniques with model teachers' methodologies.

1. DEFINITIONS OF TEACHING

A child's learning depends on the talent and skills of the person leading his or her classroom, the teacher. Teachers are the persons who work in an applied discipline and face the reality of nature in the form of growing minds before them, their students.

Teaching is an art and an academic process. In this process students are made motivated by a number of ways to learn. A teacher begins with the student's view about different things, what do they know and think about the topic. The teacher keeps in mind the prior knowledge of the students. Teaching positively influences the way students think, act and feel.

Teaching is defined as a process in which students are prepared for learning by providing initial structure to clarify planned outcomes and indicate derived learning strategies. The teachers provide sufficient opportunities in the classroom for students to practice and apply what they are learning and give improvement-oriented feed-back (Good, T.; Brophy, J. 2000).

The teachers provide assistance to enable the students to engage in learning activities productively (Meichenbaum, D.; Biemiller, A. 1998).

In the process of teaching the teachers take their students from a level of unknown to a level of understanding the new concepts. Therefore an effective teacher is one who contributes to the learning environment by increasing keen interest of the students. For the purpose of teaching the teacher has to play five major roles. These roles are:

As a Subject matter expert

Teachers possess thorough knowledge of subject matter and go beyond the standard textbook materials. Teachers develop important and original thoughts on the subject matter. They tackle issues related to the discipline on the basis of their knowledge.

As a Pedagogical expert

Teachers set appropriate learning goals and objectives and communicates them clearly. They show a positive attitude towards the subject, work to overcome difficulties that might hindrance in learning. They evaluate and mark students' work fairly. They guide students through critical thinking, and problem solving processes and help them to develop their own understanding. Teachers provide feedback to students about their progress in learning.

As an Excellent communicator

A Teacher demonstrates effective oral and written communication, good organizational abilities and planning skills. He/she helps students learn to use effective communication skills; utilizes teaching tools appropriately and effectively.

As a Student-centred mentor

A Teacher tries to encourage each student to learn through a variety of methods and encourages student participation. Take his/her students to higher intellectual levels.

As a Systematic and continual assessor

A Teacher makes an appropriate procedure for student outcome assessments in order to improve student learning experiences. He/she systematically assess his/her own teaching, keeps the class material fresh and new. He/she uses new teaching style to achieve the objectives of successful student learning by identifying his/her own weaknesses and shortcomings in the teaching process.

Learning is very easy and natural process for the small children but it becomes hard and difficult for the children as they grow older. Learning can be made easy and natural at schools only if education and teaching is based on experiences in life of the children.

Alton-Lee (2003) has listed ten characteristics of quality teaching. Alton-Lee's ten point model covers the following areas:

1. A focus on student achievement.
2. Pedagogical practices that create caring, inclusive and cohesive learning communities.
3. Effective links between school and the cultural context of the school.
4. Quality teaching is responsive to student learning processes.
5. Learning opportunities are effective and sufficient.
6. Multiple tasks and contexts support learning cycles.
7. Curriculum goals are effectively aligned.
8. Pedagogy scaffolds feedback on students' task engagement.
9. Pedagogy promotes learning orientations, student self regulation, meta cognitive strategies and thoughtful student discourse.
10. Teachers and students engage constructively in goal oriented assessment (Alton-Lee, 2003: vi-x)

Long ago a Russian psychologist, L. S. Vygotsky's (1956) ideas affected the world's understanding of teaching, learning, and cognitive development. Many researchers of different nations have now elaborated, corrected, and developed the concept of teaching differently. Much of this work was focused on the "natural teaching" of home and community. It is now accepted that before the children enter school, they could be "taught" cognitive and linguistic skills. teaching of these skills is done in everyday interactions of domestic life by setting goaldirected activities of daily life. The new concept of teaching consists of more capable family and friends assisting children to do things which the children cannot do alone.

According to Vygotsky's theory, the developmental level of a child is identified by the ability of the child to do work alone. On the other hand the child's ability to do work with the assistance of anyone was called by Vygotsky the "zone of proximal development".

Teaching may be defined in the proximal zone.

In Vygotskian terms, teaching is good only when it "awakens and rouses to life those functions which are in a stage of maturing, which lie in the zone of proximal development" (Vygotsky, 1956, p. 278; quoted in Wertsch & Stone, 1985).

Therefore a general definition of teaching was derived from this as: Teaching consists of assisting performance through a child's zone of proximal development (ZPD). But teaching must be redefined as assisted performance; teaching occurs when performance is achieved with assisting the students (teaching):

Students' performance can be assisted by a number of ways. Behavioral and cognitive science have given following seven means of assistance:

1. Modeling: teacher offers behavior for imitation. Modeling assists learning and gives the learner information and a remembered image that can serve as a performance standard.
2. Feeding back: teacher provides information on the performance of the students. This enables the learners to compare their performance to the standard, and also allows self-correction.
3. Contingency managing: teacher applies the principles of reinforcement and punishment. In this rewards and punishment are arranged to opt desirable behaviour and to avoid the negative behavior.
4. Directing: teacher requests for specific actions. Directing assists by specifying the correct response. It provides clarification information, and promotes decision-making.
5. Questioning: teacher produces a mental operation that the learner cannot or would not produce alone. This interaction assists by giving the teacher information about the learner's developing understanding.
6. Explaining: the teacher provides explanation of the concepts in the content. This assists learners in organizing and justifying new learning and perceptions.
7. Task structuring: The teacher organizes a task into different components in a sequence. The students work on the task. the task structuring involve the chunking, segregating, and sequencing.

Properly organized classroom activities in teaching also provide assistance to students' learning. Many teaching methodologies like lectures, demonstrations, cooperative learning exercises/activities, and textbook reading can all assist learning. Other necessary elements contributing to classroom learning are recitation and assessment.

In past teachers emphasized rote learning and immediate responses. there were no opportunities for give-and-take between a teacher and learning students. The student role was passive. Very few teachers make efforts to adapt instruction to individual differences. The other modern way/mean for effective teaching is "scripts" (scripted teaching). It involves the traditional student-teacher interaction set up. It uses predesigned teacher talk and predicts student responses. It offers more than the recitation script for learning. The

scripted teaching emphasizes: i) rote learning, ii) student passivity, iii) facts and low-level questions, and iv) low-level cognitive functions (Tharp & Gallimore, 1991).

Activity:

Collect information from teachers working at different levels about the concept of teaching and redefine the concept of teaching on the basis of their opinions.

Let us do an exercise to check the knowledge.

Exercise

- Q 1 Define teaching and elaborate this concept in the light of theoretical perspectives.
- Q2 Debate on old and new aspects of teaching.

2. THE CONCEPT OF EFFECTIVE TEACHING

It is universally recognized that the teacher is the key person in an education system and whole system of education revolves around him/her.

Educational practice and researches are continuously working in the area of “improvement of learning”. The concept of effective teaching has emerged out as one of the component that contributes a large in improving learning.

Interaction in classroom is often dominated by the teacher. According to Ilukena, A. (1998) teachers are the persons who can bring a difference in educational practices. Quality of their teaching is an important factor in promoting effective learning in schools. Effective teaching involves talking to the learners about their learning and listening to them. St. Augustine quoted in Fisher, (1992) says *I learned not from those who taught me but from those who talked with me.*

Being important persons of the teaching and learning process, the effective teachers must be highly competent in planning and organizing instruction as well as in managing in classroom environment, if they want their students to be academically successful (Dilworth, 1991).

Cruickshank, Jenkins & Metcalf (2003) define effective teaching:

Most people would agree that good teachers are caring, supportive, concerned about the welfare of students, knowledgeable about their subject matter, able to get along with parents...and genuinely excited about the work that they do....Effective teachers are able to help students learn (p. 329).

2.1 The Definition

The concept of “Effective Teaching” is considered as a range of factors that collectively work together and result in effective learning. Most of the people agree that the basic purpose of teaching is to enable learning. An elaboration to this concept is required to fulfill the needs of today’s youth in a knowledge-driven society where information rapidly increases at great scale. Therefore the concept of teaching should move beyond the lower order skills of acquisition and reproduction of knowledge and facts.

The students require equipping them with more recent and advanced body of knowledge, and enabling them to apply, upgrade and create knowledge.

There are various aspects of effective teaching, such as;

1. Effectively managing a classroom,
2. Starting each class with a clear objective,
3. Engaging students with questioning strategies,

4. Consolidating the lesson at the end of a period, and
5. Diagnosing common student errors and correcting them that can be systematically measured by observing classrooms and by asking students.

These aspects would be useful for both developing teachers and staffing schools more effectively.

Bulger, S. M. and Mohr D. J. (2002) describe that teaching effectiveness is dependent upon the interaction between the instructor's subject-matter knowledge and teaching (pedagogical) ability. There are two forms such interaction:

1. An individual may possess a substantial amount of subject-matter knowledge, yet be unable to design and implement instructional methods to enhance student learning due to a lack of pedagogical ability. On the other hand,
2. An individual may possess some generic pedagogical skills, yet have limited subject-matter knowledge and again be prone to ineffective teaching.

The above forms indicate that it is impossible to be an effective teacher without being competent in both subject-matter knowledge and pedagogical ability.

2.2 Effective Teaching Measures

Effective teaching involves effectively managing a classroom, starting each class with a clear objective, engaging students with questioning strategies, strengthening the lesson at the end of a period, and diagnosing common student errors and correcting them. MET project (2010) enlisted the following seven measures:

- 1 multiple measures of effectiveness
- 2 accurate teacher evaluation
- 3 more meaningful tenure
- 4 differentiated pay based on effectiveness
- 5 strategic placement of teachers
- 6 more effective teachers
- 7 better student outcomes

The aims and desired learning outcomes of effective teaching bring positive changes in the following areas:

i) Knowledge

- Discipline/profession-specific knowledge.
- General knowledge: fundamental concepts that an educated person/university graduate should have, regardless of area of specialisation.
- Awareness/familiarity across knowledge domains (i.e. 'rounded' education).

ii) Abilities

- Ability to identify what information is needed and where to find it.
- Evaluation of information and discrimination of what is valid and useful from what is not.
- Application/adaptation of knowledge to problem solving and making of

- informed judgements.
- Self-directedness in learning and the ability to sustain lifelong learning.
- Capacity for independent research and knowledge.
- Ability to communicate ideas clearly and structure arguments convincingly.

iii) **Mindset**

- Questioning habit of mind with readiness to seek evidence/support for ideas/concepts presented, and to investigate/challenge established and controversial views including those which are generally taken as ‘knowledge’.
- Awareness of the complexity and dynamic nature of human knowledge and the need for evaluation and re-evaluation of knowledge.
- Enjoyment of learning.
- Learning as a lifelong habit.

Let us read the principles of effective teaching.

2.3 Principles of Effective Teaching

Richard T. Walls (1999) makes links between "process" of teaching and the "student learning" (the product) in "Four Aces of Effective Teaching". The Four Aces of Effective Teaching are summarized in the following figure:

<u>Ace 1 Outcomes</u>	
1	let students know where they are going and why
2	drive hard toward clear goals
<u>Ace 2 Clarity</u>	
1	make the contact as clear and simple as possible
2	build on what students already know
<u>Ace 3 Engagement</u>	
1	Don't lecture for more than 30 minutes before running an activity that involves all students
2	People learn what they DO, so have students DO everything that you want them to learn
<u>Ace 4 Enthusiasm</u>	
1	If you hate to teach it, your students will hate to learn it
2	The only key to motivation is success

The Four Aces of Effective Teaching

According to Walls (1999) student learning is better, faster, and/or more long-lasting when teachers play the following four principles:

I: Outcomes

The outcomes enable students to focus their attention on clear learning goals. These outcomes inform students of where they are going and how they will get there. Outcomes also provide the teacher a framework for designing and delivering the course content. Outcomes enable teachers to assess student

learning as a measure of their own instructional effectiveness.

2: *Clarity*

The effective teachers provide explanations and give details of the course concepts and content. If students DO NOT LEARN, it means the methods of delivery may lack the required degree of clarity.

So the teacher should make the message clear from alternate perspectives to alternate senses, the effective instructional practice of the teacher should afford students the opportunity to make connections between the new material and the concepts that they have already been learned.

3: *Engagement*

This principle suggests that students learn by doing. Teachers must create an educational environment that offers students the opportunity to practice every concept that they are learning. The effective teachers use those instructional strategies that engage students throughout the lesson.

4: *Enthusiasm*

The principle of high level of enthusiasm reflects teacher's professional competence and confidence, teacher's subject matter knowledge and instructional experience. Teachers establish a positive learning environment and show their enthusiasm for the subject matter. They use student's names, reinforce student participation during class, and keep moving among the students.

With the knowledge of the stated principles, the perspectives teachers must have to apply different approaches to make their teaching more effective. below are the approaches to effective teaching:

2.4 Approaches to teaching effectiveness

Tharp, and Gallimore, (1991) viewed teaching effectiveness from three perspectives; the 'style' view (how teachers teach), The 'outcomes' approach (student result), and The 'inquiry' approach (style and outcomes within a framework).

i) The 'style' view

"Teaching effectiveness is determined by what the teacher does." The following statements illustrate this view of teaching effectiveness:

1. Effective teachers display warmth.
2. Effective teachers are enthusiastic.
3. Effective teachers provide an overview at the start of teaching something new.
4. Effective teachers minimize the amount of time they are teaching the whole class from the front (direct instruction).
5. Effective teachers facilitate the joint construction of knowledge through

- teacher-student and student-student conversations.
6. Effective teachers use teaching techniques and approaches that research has shown to be effective.

ii) ***The ‘outcomes’ approach***

“Teaching effectiveness is determined by student results.” The following statements illustrate this view of teaching effectiveness:

1. Teaching effectiveness is determined by what students achieve.
2. The comparative effectiveness of teachers is best determined by comparing the achievements of the students they teach.
3. The comparative effectiveness of teachers is best determined by comparing the *added value* they contribute to the achievements of the students they teach.

iii) ***The ‘inquiry’ approach***

“Teaching effectiveness is determined by the quality of inquiry into the relationship between teacher actions and student learning.”

This alternative view conceptualizes teaching effectiveness in a way that addresses the problems raised in the discussion of style and outcomes. Put simply, this approach argues that:

Effective teachers inquire into the relationship between what they do (style) and what happens for students (outcomes). But effective teachers do more than simply inquire (or reflect) – they take action (in relation to what they are doing in the classroom) to improve the outcomes for students and continue to inquire into the value of these interventions.

The inquiry model depicts two phases of inquiry:

Inquiry 1 This inquiry focuses on the impact of teaching actions on student outcomes. This inquiry involves the collection and analysis of information about a key question: “What is happening for students in my classroom?” and sub-questions that explore the relationship between teaching actions and student learning.

Inquiry 2 This inquiry focuses on identifying possibilities for improvement through the experiences of other teachers and from research.

The cycle of inquiry established by the processes of Inquiry 1 and Inquiry 2 enhances the opportunity to learn for the teacher (in the sense that they are learning about the impact of their own practice) and for the students (in the sense that changed teacher practices are aimed at increasing student engagement and success).

Thus effective teaching is more than style and it is more than outcomes – it is the continuous examination of the relationship between these two dimensions in order to enhance student achievement.

Let us read how certain factors influence the effectiveness of teaching:

2.5 Factors of Effective Teaching

Gurney, (2007) suggests five key factors that could contribute to an effective learning and teaching environment.

KEY FACTOR 1: *Teacher Knowledge, Enthusiasm and Responsibility for Learning*

Good classroom is one in which knowledge is shared among teacher and students. Teacher not only gives instructions but takes ideas of students during the teaching-learning process and carry out discussions. In such an environment the knowledge is shared; students and teachers all become learners and discover the world of the subject. In such an environment, a teacher takes responsibility for the sharing and enjoyment of the knowledge.

KEY FACTOR 2: *Classroom Activities That Encourage Learning*

In a classroom of opportunity and experience, the learners explore and do experiment. In such a climate the process of learning become a measure of success and the students feel that they are the masters of their own learning.

Attitudes of the teacher in such a classroom can influence the outcome. A teacher needs to be prepared to test what is going on in the class.

The class activities used to engage the students must be reviewed, revisited and refocused in order to draw students into an effective interaction with the subject.

KEY FACTOR 3: *Assessment Activities That Encourage Learning Through Experience*

The assessment contributes towards the creation of an effective learning process.

If the students know the value of assessment in the ongoing learning process, not at the end, then they can work well and take part in the process and use it to gain better results. The effective learning environment involves the processes of peer tutoring, co-operative learning, questioning, clarifying and summarising. All of these processes are used to empower the learners. For example if teacher asks the question: ‘What do you do in the classroom?’ If assessment activities are part of the ‘doing’ then they become a central part of the learning process.

KEY FACTOR 4: *Effective Feedback That Establishes the Learning Processes In the Classroom*

Appropriate learning related feedback is one of the important factors in effective teaching.

Different methods of feedback enable the teacher to engage the students with learning. All explanations, questioning methods, instructions are part of feedback and student input (Hattie, 1999, p.9). In an effective classroom the students actively seek the feedback of their performance. Alton Lee (2003) highlights the value of feedback but warns that too much can be harmful as too little. The feedback that a teacher gets from the students is also essential to the creation of a learning environment. The more feedback that a teacher can obtain from students, and the more the teacher can act on that feedback, the better the learning environment will be that is created.

KEY FACTOR 5: *Effective Interaction between the Teacher and the Students, Creating an Environment That Respects, Encourages and Stimulates Learning through Experience*

Learning is an emotional exercise. Students like those things or actions that appeals to them emotionally. The teacher who brings a sense of personal involvement to the classroom, and who wants to share the knowledge with the class, who shows that he/she is also a part of the learning cycle, is setting up a relationship with the learners. The working environment generated by the interaction can remove the stigma of 'working' and turn the learning process into rewarding.

Activity:

Draw out some ideas of effective teaching and discuss them with the class mates and tutors.

Let us do an exercise to evaluate your learning of effective teaching:

Exercise:

- Q. 1 Define and explain the concept of effective teaching.
- Q. 2 How can you make your teaching more effective?
- Q. 3 Highlight the principles of effective teaching.

3. ROLE OF TEACHER FOR CONDUCTIVE LEARNING ENVIRONMENT

Teaching is a multifaceted profession. The teachers have to perform many roles other than the process of teaching and imparting information to the students. They take up vital places in the lives of the students in their classrooms. Mainly they set the tone of their classrooms, build a warm environment, and take care of students by looking for any sign of trouble. They become role models for the students.

The role of a teacher in the classroom as a leader is to lead students, and families. The classroom teacher is responsible for creating a positive and disciplined learning environment:

- in the classroom
- in co-curricular activities
- in interacting informally with students

In this way, each student is challenged to grow in knowledge and maturity, according to his potential, in all aspects of his life.

3.1 Areas of Responsibility

The classroom teacher is responsible for:

- Promoting the mission and philosophy of the School/College through structured classroom prayer, participation in the educational life of the College, and modelling of appropriate standards of behaviour.
- Maintaining a positive and effective learning environment through well prepared lessons, which cater a wide range of student abilities and interests.
- Setting of realistic and challenging academic standards of student performance.
- A challenging and realistic program of student homework.
- A comprehensive attention to students work submitted for marking and supervision.
- Demonstrating knowledge, competence and confidence in the relevant subject discipline.
- Demonstrating high levels of professionalism in all activities.

Let us have a detailed look on teacher's roles as teachers serve many other roles in the classroom:

1. Teaching Knowledge

The most common role of the teacher in the classroom is to teach knowledge to children. Teachers are given a curriculum they must follow that meets state guidelines. This curriculum is followed by the teacher so that complete knowledge is conveyed to the students in the given time (academic year). Teachers teach in

many ways, such as lectures, small group activities and hands-on learning activities.

2. Creating Classroom Environment

Teachers play an important role in making the classroom environment either positive or negative. Students often imitate a teacher's actions. If the teacher prepares a warm, happy environment, then students will also be happy. The teachers are responsible for the social behavior in their classrooms. This behavior is primarily a reflection of the teacher's actions and the environment she/he sets.

3. Role Modeling

Students spend a great deal of time with their teacher and their teacher becomes a role model to them. This can be a positive or negative effect depending on the teacher. Teachers not only teach the children, but also love and take care for them. Therefore teachers are respected by the community and become a role model to students and parents.

4. Mentoring

Mentoring is a natural role played by the teachers. Mentoring is a way by which a teacher encourages students to do the best they can. This also includes encouraging students to enjoy learning. Listening to students carefully is the part of mentoring. By taking time to listen to what students say, teachers impart to students a sense of ownership in the classroom. This helps build their confidence and helps them want to be successful.

5. Signs of Trouble

As a protector, teacher looks for signs of trouble in the students. When students' behaviors change and any sign of physical abuse are noticed, teachers are required to look into the problem and solve it as per rules.

3.2 Conducive Classroom Environment

The best classroom environment is one that results in efficient learning (Callahan 1996). The classroom atmosphere becomes conducive (favorable) to learning when teacher before planning teaching analyzes the behavior of each student of the class. In such environment students become self directive when encouraged through proper guidance and teaching techniques of the teacher.

According to Arif (2003) in order to create conducive classroom environment, the teachers must establish and maintain it through following teaching principles and managing practices. They must utilize time in a productive manner in order to reduce the disruptive behaviour. The students should remain involved in learning oriented actions and activities. Following are the means to make the class room more effective:

- (i) Keep students motivated by keeping the students motivated in learning. The teachers set the stage for creating positive class environment. Motivating students

is the first step toward preventing discipline problems in classrooms because a student involved in learning has no time to be involved in clash with others.

- (ii) Meet basic needs. Teachers must try to meet students' basic as well as age related needs. Make students feel physically comfortable, safe, welcome, socially accepted and valued. Otherwise, they more likely to face learning difficulties and involved in disruptive actions.
- (iii) Exercise moderate degree of control. The degree of class control must be moderate. Student learning is great in classroom where teachers exercise neither too much nor too less control. Too much control may be effective on memory tasks but it is harmful for learning involving critical and creative thinking.
- (iv) Empower the students. Make them responsible for their own learning through group and individual learning activities so that they ultimately become independent learners. This is one of the purposes of good classroom management.
- (v) Keep instruction at the student level. Keep instruction at the students' development level so that they neither experience discouragement nor boredom. Otherwise, they might behave disruptively.
- (vi) Develop healthy and professionally sound relationship with all the students by being friendly with them. Learn their names and some positive information about each to greet them.
- (vii) Communicate interest in all the students and show concern for each of them. The interest and concern is communicated through brief eye contact with all and through supporting gestures and facial expressions while teaching.
- (viii) While instructing, ensure physical closeness with all the students by roaming around the class.
- (ix) Avoid labeling the students with negative adjectives, which are likely to lower their self-esteem. Labeling influences teachers' quality of interaction with the students, which further influences students' expectations and actions negatively.
- (x) Describe the behaviour of the misbehaving student, not characterize the student. Instead of saying, "you are rude" say "your comment was rude". By criticizing the personality of the students, he is less likely to change his behaviour.
- (xi) Increase the "engaged time" by keeping the students involved in the learning tasks through, wittiness, overlapping, smooth transitions and group focus.
- (xii) Teach role and routines to the younger students in academic fashion with a lot of explanation, examples and practices during initial classes.
- (xiii) Develop a set of few general classroom rules applicable to variety of situations. These rules should be displayed in the class.
- (xiv) Be assertive, rather than passive or aggressive, in enforcing discipline. Apply the rule forcefully fairly, consistently and calmly.

- (xv) Create business like climate in the classroom, where students understand that they and the teacher have a commonly shared goal of accomplishing such activities that promote learning, (Arif, 2003).

In order to handle misbehaving student, the following suggestions may prove helpful:

- (i) Deal with the present, current problem immediately, not with the past instances of the student misbehaviour.
- (ii) Talk to the student directly, instead of talking about him with others.
- (iii) Don't be harsh and provoked. Stay calm and address firmly. Anger, empty threats and physical handling must be avoided.
- (iv) If the student is hostile, the teacher can diffuse his hostility by responding with softly, calm, and soothing tone. The feeling of the students must be acknowledged in order to calm him down.

The teachers' role has been redefined as follows:

3.3 Redefining the Role of the Teacher

Teaching has become different from the old concept of "show-and-tell" practices. So as the role of teachers in a child's education has also been fundamentally changed.

From the modern perspectives of the technical world, instruction not only consists of primarily lecturing to students, but offers every child a rich, rewarding, and unique learning experience. Students are no more required to sit in rows at desks and dutifully listen and record whatever they hear. Now they are more active and need to participate in the teaching and learning process by sharing knowledge with their peers and teachers.

The educational environment has now been extended from the classroom to the home and the community and even around the whole world. Information is also not only bound to the specific text books but it is available everywhere.

Schools are the centers of lifelong learning. In this changing era the teaching has been taken as one of the most challenging and respected career because whole of our nation's social, cultural, and economic health depends on it.

Hence every part of the teaching process and the role of the teachers should be reconsidered such as teacher students' relationship, teaching tools and techniques, rights and responsibilities of teachers, the form and content of curriculum, standards of assessment, preparation and professional development of teachers and structure of the schools as a working environment. So that teachers themselves and their occupation better serve schools and students.

3.4 New Relationships and Practices

Traditionally teaching was considered as knowledge-dispensing, custodial child care and identifying/helping the academically less able students. Schools –the education factories pay to teachers and keep children still for taking lessons and tests. Teachers educate the students in the same way, simply stood in front of the class and delivered the same lessons year after year.

However, today, the teachers are encouraged to adopt new practices for teaching and learning in the areas of art and science. Now the redefined nature of education involves the close relationship between a caring adult and a secure, motivated child. So the redefined role of the teachers is to get to know each student as an individual in order to comprehend his or her unique needs, learning style, social and cultural background, interests, and abilities.

Teachers have to;

- Help the students integrate their social, emotional, and intellectual growth.
- Enable the students to seek, understand, and use knowledge; to make better decisions in their personal lives; and to value contributing to society.
- See themselves as masters of subject matter such as history, math, or science.

This new relationship between teachers and students will take the form of a different concept of instruction.

It has been discovered that new teaching methodologies such as project-based, participatory techniques, educational adventures, etc. can make the students participants in the instructional process. Furthermore;

- the curriculum must relate to the students' daily lives,
- the provided learning activities in the classroom must engage the students' abilities at their best, and
- the assessment must measure real achievements and be an integral part of learning.

The day-to-day job of a teacher has become;

- designing and guiding students through engaging learning opportunities,,
- to search out and construct meaningful educational experiences that allow students to solve real-world problems,
- to learn big ideas, powerful skills, and habits of mind and heart that meet agreed-on educational standards,

As a result the students used to memorize from routine lectures and textbooks, become alive as they participate in the creation and extension of new knowledge.

3.5 New Tools and Environments

New technology is the most powerful force that is changing the role of teachers and students in education. The teachers are no more the primary information providers. The fundamental job of teaching has been shifted from distributing facts to helping children learn how to use the knowledge of facts by developing their abilities to think critically, solve problems, make informed judgments, and create knowledge that benefits both the students and society. Teachers have more time to spend working one-on-one or with small groups of students. The change in delivery of instruction demands a change in structure of school as well. This may involve extended periods of instruction and school to make learning free of time limits and mixed-aged classes in which students spend two or more years with the same teachers.

The concept of team teaching is becoming popular in which two or more educators share responsibility for a group of students. This means that an individual teacher will no longer be responsible for all things to all students because there will be someone with a different set of abilities to teach them. So our schools should have a number of teachers who have appropriate levels of responsibility based on their abilities and experience levels.

3.6 New Professional Responsibilities

Aside from rethinking their primary responsibility as directors of student learning, teachers are also taking on other roles in schools and in their profession. They are working with colleagues, family members, politicians, academics, community members, employers, and others to set clear and obtainable standards for the knowledge, skills, and values we should expect America's children to acquire. They are participating in day-to-day decision making in schools, working side-by-side to set priorities, and dealing with organizational problems that affect their students' learning.

Many teachers also spend time researching various questions of educational effectiveness that expand the understanding of the dynamics of learning. And more teachers are spending time mentoring new members of their profession, making sure that education school graduates are truly ready for the complex challenges of today's classrooms. Let us do an activity to apply the learned concept.

Activity:

Play the role of a teacher of class III for a day. Try to make the classroom environment conducive for learning by managing all misdisciplines or misbehavior in the class. Prepare a report of your role at the end of the day.

You can also check your concept by attempting the questions of the following exercise.

Exercise:

- Q. 1 Enlist the role of a primary teacher.
- Q. 2 Why do we need to redefine the role of the teacher? Does school need a change in its structure to cope with the changing role of the teacher?

4. Characteristics of an Effective Teacher

Knowledge and skills are taught and learned at school. School is a little community in itself where teachers and students interact with each other. During this interaction teachers influence their learner's behavior and learners influence their teacher's behavior. The nature of this interaction is an important factor in determining the learner's perceptions of school and his/her attitudes toward school-related persons and activities. This factor involves the relationship between the personality of the teacher and that of the learner.

A teacher's personality traits are important as Callahan, (1966) says that the teacher whose personality helps create and maintain a classroom or learning environment in which students feel comfortable and in which they are motivated to learn is said to have a desirable teaching personality.

Research says that teachers are cognitively oriented toward pupils while pupils are affectively oriented toward teachers. Teacher's personality is, therefore, directly and indirectly related to learning and teaching in the affective domain as well as to that in cognitive and psychomotor domains, (LEW, 1977).

Teachers have rights and responsibilities to develop a climate in the classroom which supports effective learning. Aristotle quoted in Stephen Covey, "The Seven Habits of Highly Effective People", says we are what we repeatedly do.

Climate in their classroom is based on the teachers' personality and style of teaching, the tone of their voice, and the little things they continually say and do on a daily basis. In the classroom, the learners' behavior could be determined from the way their teachers behave with them.

Best, (1991, p. 275) says the teaching is "primarily concerned with developing qualities such as curiosity, originality, initiative, cooperation, perseverance, open-mindedness, self-criticism, responsibility, self confidence and independence".

Marchbanks, (2000) in a study, examined the personalities of sixty students at the University of North Carolina at Chapel Hill through a 110-question questionnaire. The traits of passion, patience, cooperation, authoritativeness, and creativity were studied in particular because these are the essential personality traits of an effective elementary school teacher. He says teachers in the twenty- first century are responsible for the overall well-being of their students, as well as educating, disciplining, and stimulating their developing minds. Because teachers have these additional duties, many more requirements are needed to be an effective teacher. Let us read the personality traits, necessary to be able to accomplish all of the above stated tasks and duties.

4.1 Personal qualities

Elementary school teachers need the following characteristics:

- strong interpersonal and communication skills
- a genuine interest in children and respect for their individuality
- the ability to sense children's individual needs
- the ability to be creative, imaginative, patient, energetic, organized and resourceful
- the ability to establish rapport children and parents
- strong leadership and teamwork skills and a good sense of humour
- a high level of dedication to work which often impacts personal lifestyle choices
- a clear, pleasant speaking voice and the ability to convey confidence
- positive conflict resolution skills and the ability to handle stress well.

They can enjoy finding different ways to solve problems and present information, and organizing and coordinating the work of others.

One must be passionate, patient, cooperative, authoritative, and creative in order to be an effective teacher beside the basic and extended knowledge of the subject he/she is teaching. A true passion for both the profession and the children is indispensable; a teacher must look forward to his/her job every single day, having the desire to instill in the students all the knowledge and skills needed to lead a happy, healthy life in today's world. Patience is needed to maintain that passion and desire for teaching. In order to interact with the children and other teachers most effectively, an overall cooperative personality is needed. A degree of authoritativeness is necessary to preserve order and discipline in the classroom. Finally, teachers have to be creative in their approaches to instruction to earn the most successful results in educating their students (Marchbanks, 2000).

Thompson, Greer, and Greer (n.d) says that "every teacher should possess twelve characteristics such as displaying fairness, having a positive outlook, being prepared, using a personal touch, possessing a sense of humor, possessing creativity, admitting mistakes, being forgiving, respecting students, maintaining high expectations, showing compassion, and developing a sense of belonging for students". Let us read these characteristics as given bellow:

1) Fairness

Fairness is one of the characteristics of the students' favorite teachers. All humans possess an inbuilt sense of fair play. Whenever a person violates, the other person in this situation is prone to react negatively.

Any impression of favoritism, or lack of fairness, leaves scars on the life of persons that lasts forever. The students report in great detail, the unfair actions of their teachers when they had negative experience of competition between classmates, even after many years have passed.

2) Positive Attitude

Another characteristic that students' like most is the positive attitude and approach of their teachers they use into the classroom. Scholars suggest that effective teachers are those who use meaningful verbal praise to get and keep students actively participating in the learning process. The effective teachers are generally positive minded individuals who believe in the success of their students as well as their own ability to help students achievements.

If the teachers have positive attitude they "catch students doing things right" rather than "catching them doing something wrong." The students often recall praise and recognition that was given by their teachers at schools, and they point to the confidence and direction that often resulted in their lives.

3) Preparedness

Competence and knowledge of the content area being taught is something that our college students have always mentioned about their favorite teachers. In a research the students pointed out that in classrooms where teachers were well prepared, behavior problems were less prevalent. The well-prepared teacher is more likely to be able to take time during lessons to notice and attend to behavioral matters, and is less likely to miss the beginnings of potentially disruptive activity. If, on the other hand, teachers have not spent sufficient time in planning and preparation, they tend to be so focused on what they are doing that they miss the early signs of misbehavior. This ultimately results in frequent disruption, waste of valuable instructional time, and student's frustration.

4) Personal Touch

Teachers who are connected personally with their students; call them by name, smile often, ask about students' feelings and opinions, and accept students for who they are. As well as the teachers who tell stories of their own lives events which relate to subject matter currently being taught, motivate student's interest and endorse bonding with the students. Teachers who show interest in their students have interested students.

5) Sense of Humor

If a teacher has the ability to break the ice in difficult situations with the use of humor, this is an extremely valuable asset for teaching. According to McDermott & Rothenberg (2000) students enjoy teachers with a sense of humor and remember those teachers who made learning a fun. Good teachers enjoy a laugh with the class occasionally.

6) Creativity

Students always like the unusual things that their teachers do in creative ways. Construction of models or things from wastage like plastic bottles provides a field

into which children could go and work by themselves quietly on academics activities like puzzles and word-finds.

Fun activities arranged by teachers into the classroom encourage the students towards learning. Teachers can use unique ways of motivating their class. Teacher can set a reward for the class on reaching a particular academic goal. For example a teacher can give extra marks of work done by the students in a creative way.

7) Willingness to Admit Mistakes

Like everybody, teachers may make mistakes. Sometimes students may know when their teachers make mistakes. Unfortunately, some teachers try to let the mistakes go unnoticed or cover over them quickly. Teachers who recognize their mistakes in a very humble and pleasant way and apologize them. This act of teacher provides an excellent model for the students, and they may be remembered as a good teacher.

8) Forgiving

The effective teachers reflect a willingness to forgive students for misbehavior. For example if a student repeatedly asks irrelevant questions and detracts others from the lesson. The teacher can simply say the question is irrelevant and direct the student for further study.

9) Respect

The teachers desire be respected by their students. The teachers who give respect to their students are always respected by them. Effective teachers can train their students be respectful by many ways such as, he can keep individual grades on papers confidentially, or can speak to students privately after misbehavior not in front of others. Good teachers show sensitivity for feelings and consistently avoid situations that unnecessarily make students uncomfortable.

10) High expectations

Teachers with positive attitudes also possess high expectations for success. Teachers' expectation levels affect the ways in which teachers teach and interact with students. Generally, students either rise to their teachers' expectations or do not perform well when expectations are low or non-existent. The best teachers have the highest standards. They consistently challenge their students to do their best.

11) Compassion

Hopefully, school is a place where children can learn and be nurtured in an emotionally safe environment. Sometimes in youngsters classrooms there may happens a significant amount of cruelty and hurt feelings. In these situations a caring teacher tries to reduce the impact of hurt feelings on learning

12) Sense of Belonging

Teachers developed a sense of family in their classrooms. A variety of strategies, such as random act of kindness awards, class picture albums, and cooperative class goals build a sense of unity and belongings and maintain an emotionally safe classroom. Good teachers also took strong measures to prevent mean and hurtful behavior like teasing and bullying. Effective teachers know well that when children feel emotionally and physically safe, they learn far better.

The teacher quality is the most important factor in determining school quality. But what factors determine the teacher quality? There are fifteen key characteristics that the administrators look for in their teachers, given in an article from *Teaching for Excellence*. Let us read the teacher's characteristics from the administrator's point of view:

- **Exhibit enthusiasm:** The enthusiastic teacher can make learning fun for the students. If the teacher has willingness to teach he can make a difference in the motivation of students. This quality also helps in building a sense of teamwork even beyond the classroom.
- **Know your content:** Teachers must keep up with their field of expertise. The teacher must have mastery of the knowledge and new developments in the field. For example if you teach kindergarten, subscribe to an early childhood journal. If you teach chemistry, attend the seminar at the local college. Only the knowledge of changing trends can make the teachers expertise of the field.
- **Be organized:** In order to be organized, the teacher must learn how to handle the routine for example collecting student work, handing out materials, posting assignments, what to do when finished with an assignment, communicating class news, etc. Organized planning of teaching lessons spare teacher's time and let him/her spend more time on student' learning. Time with students. Established routines keep the class on track and give you more time for teaching and engaging students.
- **Teach actively:** Hard working teachers are always appreciated. Good teachers are actively involved in teaching. They continuously move around, and notice the students' behaviour and their learning activity.
- **Show a good attitude:** A philosopher, Voltaire, said, "the most courageous decision one makes each day is the decision to be in a good mood". The students need models with positive attitudes. Notice what you say to others and your tone of voice. The teacher must show care, concern, and respect.
- **Establish successful classroom management:** Teacher must establish the classroom management system from the first day of class. Because the discipline and management structure are essential for students to be on work. Teachers enforce management rules for an orderly class environment by using their qualities of consistent and fair. The inconsistent rules should not be enforced.

- **Pace instruction:** learning is directly related to the opportunity to learn. Students learn the most by doing, not by watching, not by standing in line, and not by listening. Teachers must plan an instructional time line for courses to be taught.
- **Maintain good people skills:** On a primary report card, this trait is referred to as "works well with others". the teachers must have quality of work well with other people. the teacher's behavior is judged by others. Education is a people business. Good human relations skills are necessary for successful teachers.
- **Communicative:** Good teachers give information clearly. They are concise, demonstrate and explain in detail. Teachers must give accurate directions when presenting new information. This process includes explaining, outlining, summarizing, and reviewing. Too often children have no idea what they are learning or why they are learning it.
- **Question effectively:** Questioning is a powerful teaching tool. The productive thinking occurs only through questioning. Ask questions directed to the whole class as well as to individuals. The questions are asked directly to the students by calling them by their names. Give time for students to think through their responses. This wait time keeps everyone involved and gives students a chance to think.
- **Differentiate instruction:** One of the biggest challenges to teaching is working with students having a great range of learning styles, personalities, and rates of learning. Teachers need to mix different teaching techniques such as auditory, visual, and hands-on techniques. For specific lessons, make subgroup of the students with similar weaknesses or skills.
- **Build success into your class:** Success rate is important. If a student continuously makes mistakes, he/she can become frustrated which may result in behavior problems and loss of effort. Researches indicate that eighty percent success rate is acceptable. When students are not successful, provide them, i) further instruction and/or ii) simplify the task until they can master the task.
- **Hold high expectations:** High expectations need to be communicated for good performance. Successful teachers don't just accept participation but they require it. In fact, students respect teachers who expect them to do their best.
- **Create a pleasant atmosphere:** Don't allow your classroom to send out the aura of the haunted house on the hill. Miserable, dull, and boring environment will decrease the percentage of learning. Cheerful and happy classrooms will stimulate learning. Teachers have to create a pleasant situation where students feel comfortable is a must for turning up the academic burner.
- **Be flexible:** teaching requires flexibility. Teachers must be able to adjust and their teaching according to the available time and resources. During teaching it usually happens when teacher is sensitive enough to student needs. He/she can vary from the routines and rules to help a child? As a recent saying goes, "The flexible shall not be bent out of shape."

Let us have a knowledge of the teachers' professional qualities.

4.2 Professional Qualities

The teacher's professional characteristics are following:

Collaboration

The teacher works with others to achieve a common goal.

- i) Interacts constructively with peers/colleagues, administrators, supervisors, staff, mentor teachers, and parents
 - Shows consideration and respect for thoughts and feelings of others
 - Demonstrates effective verbal and non-verbal communication skills
 - Demonstrates flexibility with others
 - Solicits suggestions and feedback from others
 - Maintains communication with colleagues, supervisors, and mentor teachers when questions or concerns arise
 - Recognizes a range of valid viewpoints
- ii) Functions as a contributing member of an instructional team to achieve long-term curriculum goals, state content standards, and district standards (term 4)
 - Communicates effectively both verbally and non-verbally
 - Shares ideas and materials
 - Offers ideas and observations at IEP meetings

Honesty and Integrity

The teacher demonstrates truthfulness, professional behavior, and trustworthiness.

- i) Displays honesty and integrity
 - Maintains confidentiality
 - Elicits trust and respect from both peers and supervisors
 - In completing course and field experience assignments, produces original work and credits sources when appropriate

Respect

The teacher honors, values, and demonstrates consideration and regard for oneself and others.

- i) Is respectful of cultural patterns and expectations within a community context
 - Presents self in a professional manner (e.g., dress, communication)
 - Speaks and behaves in a manner that is sensitive to linguistic and cultural differences and respects the dignity and worth of others
 - Establishes good rapport with students and colleagues
 - Seeks to address the varied learning needs of students in his/her classroom, including lower-performing children and those with disabilities
 - Recognizes and respects identities informed by a group's historical context

Commitment to Learning

The teacher values learning for self and students.

- i) Exhibits energy, drive, and determination to make one's school and classroom the best possible environment for teaching and learning

- Plans and delivers instruction that engages all students in his/her classroom and addresses their learning needs
 - Values ongoing assessment as essential to the instructional process
- ii) Demonstrates a commitment to students' learning
- Implements research-based strategies
 - Proposes ideas and solutions that address curriculum, instruction, and classroom management
 - Locates and/or creates materials that bring about student learning
 - Assumes responsibilities, locates materials and resources, and improves teaching
 - Reflects upon and evaluates effectiveness as a teacher, and seeks to improve skills
 - Reflects on and offers ideas to address curricular, instructional and classroom management matters
 - Engages students in discovering how knowledge is constructed
 - Actively and consciously looks for stories, wisdom, action, and creations of knowledge from diverse perspectives
- iii) Reflects on performance and attitudes as a teacher
- Reflects upon and evaluates effectiveness as a teacher, and seeks to improve skills
 - Receives feedback in a positive manner and makes necessary adjustments
 - Regularly re-assesses his/her commitment to the profession
 - Evaluates instruction and student interactions and modifies as needed

Emotional Maturity

The teacher demonstrates situation appropriate behavior.

- i) Is self-confident and enthusiastic
- Displays enthusiasm for teaching and the subject matter
 - Demonstrates self-confidence through body language, voice tone, eye contact, preparedness
 - Exhibits energy, drive, and determination to become a professional educator
- ii) Is dependable, conscientious, and punctual
- Arrives early or on-time
 - Completes assigned tasks in a timely manner
 - Follows through with assignments and expectations
- iii) Models social skills, character traits and dispositions desired in students.
- Establishes caring and mutually respectful relationships with students
 - Explicitly teaches and models desired behaviors and attitudes

Leadership and Responsibility

The teacher acts independently and demonstrates accountability, reliability, and sound judgment.

- i) Is aware of and acts according to school policies and practices

- Has obtained and read school policy manual
- Adheres to class, school, and district rules and policies.

- ii) Advises students in formal and informal settings
 - Shows concern for all aspects of a student’s well-being, is alert to signs of academic and behavioral difficulty, and responds appropriately
 - Actively listens to and advises students, making referrals as appropriate
- iii) Meets work schedule demands
 - Is prepared for lessons and other responsibilities
 - Meets and consults with mentor teacher each week to plan lessons
- iv) Is aware of the importance of professional appearance and demeanor
 - Dresses professionally
 - Displays a positive attitude
 - Communicates in a professional manner
- v) Demonstrates initiative, in an acceptable manner, for introducing programs or practices in a school or classroom
 - Make suggestions at faculty meetings
 - Offers ideas to mentor teacher and other instructional team members around instructional, curricular, and behavioral needs of students (College of Education, Division of Teacher Education, Revised May 10, 2010)

Four general predictors of professional teaching indicated in initial results reports of Bill & Melinda Gates’ MET project (2009) were as follows:

1. A teacher’s past success in raising student achievement on state tests (that is, his or her *value-added*) is one of the strongest predictors of his or her ability to do so again.
2. A teacher’s history of positive (or negative) value-added is among the strongest predictors of his or her students’ achievement growth in other classes and academic years.
3. The teachers with the highest value-added scores on state tests *also* tend to help students understand math concepts or demonstrate reading comprehension through writing.
4. The average student knows effective teaching when he or she experiences it.

Doing an activity related to the above stated characteristics will enhance the learning of the concept.

Activity:

Survey the nearby primary or secondary school and ask the students to tell about the personal and professional qualities, they like most of their teachers and discuss with your classmates after enlisting them. You can also compare them with the qualities given above.

Let us do an exercise.

Exercise:

- Q.1 Reflect some common qualities of primary teachers. Why are these qualities required for effective classroom learning?
- Q.2 Explain the personal and professional qualities of teachers.

5. THE CONCEPT OF TEACHING METHODOLOGIES, STRATEGIES & TECHNIQUES

According to Lemlech (1988) classroom management makes teaching and learning achievable. The classroom management is defined by using the key components that affect success in the classroom. The components are planning curriculum, organizing procedures and resources, arranging the environment to maximize efficiency, monitoring student progress, fore looking potential problems.

5.1 Classroom management

Successful classroom management is defined as producing a high rate of work involvement with a low rate of deviancy in academic settings.

To some extent teachers control their instructional effectiveness in the classroom. A passive teacher simply relies on the same old teaching techniques. As compare to him an active teacher plans different teaching strategic and techniques in order to motivate the students and to achieve more success in teaching.

Different teaching techniques provide change for the teachers and minimize disturbances and make sure that instruction can proceed efficiently; they set up their rooms according to the following principles:

- 1) Teachers should be able to see all students at all times.
- 2) Teaching materials and supplies are readily available.
- 3) High – traffic areas should be free of congestion.
- 4) Students should be able to see instructional presentations.
- 5) Procedures and routines should be actively taught in the same way that academic content is taught.

Time Management Skill

Academic learning time in the classroom is an important factor in keeping the classroom discipline.

A teacher's quick and efficient calls/instructions can vary the time allotted to all classroom activities. The time spent on taking start, handle digressions, off-task behaviour, discipline have an ultimate effect on student learning.

Student who spends more time on academic content learns more and receives higher achievement scores. It is important to allocate adequate time to academic content. Making time schedules is not enough, but the proper use of this allocated time leads towards student achievement. In order to study the use of classroom times, researchers have developed the following terms to allocated time, engaged time, and academic learning time.

- Allocated time is the amount of time a teacher scheduled for a subject for example, 30 minutes a day for mathematics. The more time allocated for a subject, the higher student achievement in that subject is likely to be.
- Engaged time is that part of allocated time in which students are actively involved with academic subject matter (really listening to a lecture, participating in the class discussion, writing a composition, and working on mathematics problems).
- Academic learning time is engaged time with a high success rate. Many researchers suggest that students should get 70 to 80 percent of the answers right when working with a teacher. Teachers who effectively provide and manage academic learning time in their classrooms can determine student achievement.

Effective classroom managers are nearly always good planners. They do not become late; handle the situation after noise and disruption. They teach the rules about appropriate student behaviour.

Seating arrangement

Arrangements of space and furniture that cluster students together or hinder the teacher's view make teaching more difficult. Seating arrangement must depend on type of lesson to be taught, and the type of classroom furniture.

Each teacher needs to know the appropriate seats of all students. A seating plan helps the teacher to learn names easily.

Proper arrangement of furniture also contributes to the smooth running of classrooms functions. According to Anderson (1991) desks, chairs and tables can be arranged in a variety of ways; light and temperature can be increased or decreased. Paint wall coverings, art work and plants can be used to enhance or detract from the attractiveness of the physical classroom environment.

Discipline in the classroom

Discipline in the classroom involves using guidance and teaching techniques. Discipline creates an atmosphere conducive to learning and encourages students to become self directive.

The teacher must fairly examine the reasons of individual student behavior, and then he can plan intelligently how to prevent disciplinary violations before they occur. If violations occurs, appropriate steps can be taken so that as little injury as possible is done to the learning process. Discipline rules should be posted in the classroom for all to see in order to create a classroom environment with maximum productive time utilization.

5.2 Teaching Methods & Strategies

Educational institutions across the nation are responding to political, economic, social and technological pressures. They are more responsive to students' needs for their well preparation to assume future societal roles. In order to accomplish the desired roles the teachers have to make learning environments more interactive, to integrate technology

into the learning experience, and to use collaborative learning strategies when appropriate. Some of the more prominent strategies are outlined below.

The use of a variety of instructional strategies can positively enhance student learning. Obviously, teaching strategies should be carefully matched to the teaching objectives of a particular lesson.

Lecture

The lecture method is one of the most widely used instructional strategies in the classrooms. Although the usefulness of other teaching strategies is being widely examined, this method still remains an important way to communicate information. The traditional lecture can be made effective to achieve instructional goals by using it in combination with active learning teaching strategies.

The advantages of the lecture approach are that it provides a way to communicate a large amount of information to many listeners, maximizes instructor control and is non-threatening to students. The disadvantages are that lecturing minimizes feedback from students, assumes an unrealistic level of student understanding and comprehension, and often disengages students from the learning process causing information to be quickly forgotten.

The following recommendations can help in making the lecture approach more effective:

1. Fit the lecture to the audience
2. Focus your topic - remember you cannot cover everything in one lecture
3. Prepare an outline that includes 5-9 major points you want to cover in one lecture
4. Organize your points for clarity
5. Select appropriate examples or illustrations
6. Present more than one side of an issue and be sensitive to other perspectives
7. Repeat points when necessary
8. Be aware of your audience - notice their feedback
9. Be enthusiastic - you don't have to be an entertainer but you should be excited by your topic. (Cashin, 1990, pp. 60-61)

Case Method

The case method is an instructional strategy that engages students in active discussion about issues and problems inherent in practical application. It can highlight fundamental dilemmas or critical issues and provides a format for role playing ambiguous or controversial scenarios. It enables the students to apply what they learn in the classroom to real-life experiences.

A case is an account of an actual problem or situation which has been experienced by an individual or a group. It includes facts available to those facing the problem, along with a description of perceptions and attitudes of those who are confronted with the problem

Course content cases can come from a variety of sources. Teachers have transformed current events or problems reported through print or broadcast media into critical learning

experiences in order to find out solutions to critical social problems. The case study approach works well in cooperative learning or role playing environments to stimulate critical thinking and awareness.

Advantages

- The case method is realistic.
- By capturing and analyzing real problems , the student is able to bridge the gap between school and real-life experiences.
- Case analysis treats feelings as facts
- By treating human emotion and feelings, the case approach captures the interest and imagination of thr learner.
- Disadvantages
- Although the case method is realistic it is not actual reality
- The case method tends to collapse time and space dimensions
- If used extensively, it will definitely limit the content material which can be covered.
- Use of already prepared , fictional cases may limit the realism of case situation.

Discussion Method

Discussion method engages students in active discussion about issues and problems inherent in practical application. Teacher places an issue in front of the students and starts discussion with the help of a probing question.

There are a variety of ways to stimulate discussion. For example, some teachers begin a lesson with a whole group discussion to refresh students' memories about the assigned reading(s). Others find it helpful to have list of critical points or emerging issues, or generate a set of questions stemming from the assigned reading(s). These strategies can also be used to help focus large and small group discussions.

A successful class discussion involves planning on the part of the instructor and preparation on the part of the students. Instructors communicate the commitment to the students by clearly articulating course expectations. Just as they carefully plans the learning experience, the students must comprehend the assigned reading and ready to learn.

Active Learning

Meyers and Jones (1993) define active learning as learning environments that allow “students to talk and listen, read, write, and reflect as they approach course content through problem-solving exercises, informal small groups, simulations, case studies, role playing, and other activities -- all of which require students to apply what they are learning” (p. xi). Many studies show that learning is enhanced when students become actively involved in the learning process. Instructional strategies that engage students in the learning process stimulate critical thinking and a greater awareness of other perspectives.

Assessing or grading students' contributions in active learning environments is problematic. It is extremely important that the course syllabus clearly outlines the evaluation criteria for each assignment whether individual or group. Students need and want to know what is expected of them.

Cooperative Learning

Cooperative Learning is a systematic pedagogical strategy that encourages small groups of students to work together for the achievement of a common goal. The term 'Collaborative Learning' is often used as a synonym for cooperative learning when, in fact, it is a separate strategy that encompasses a broader range of group interactions such as developing learning communities, stimulating student/faculty discussions, and encouraging electronic exchanges (Bruffee, 1993). Both approaches stress the importance of faculty and student involvement in the learning process.

Careful planning and preparation are essential, when integrating cooperative or collaborative learning strategies into a course. Understanding how to form groups, ensure positive interdependence, maintain individual accountability, resolve group conflict, develop appropriate assignments and grading criteria, and manage active learning environments are critical to the achievement of a successful cooperative learning experience

Integrating Technology

Today, educators realize that computer literacy is an important part of a student's education. Integrating technology into a course curriculum when appropriate is valuable for enhancing and extending the learning experience. Many teachers have found electronic mail to be a useful way to promote student/student or teacher/student communication between class meetings. Others use listserves, or on-line notes to extend topic discussions and explore critical issues with students and colleagues, or discipline-specific software to increase student understanding of difficult concepts.

Currently, our students come to us with varying degrees of computer literacy. Teachers who use technology regularly often find it necessary to provide some basic skill level instruction.

Distance Learning

Distance learning is not a new concept. Students experience learning outside of a structured classroom setting through television, correspondence courses, etc. Distance learning is defined as 'any form of teaching and learning in which the teacher and learner are not in the same place at the same time' (Gilbert, 1995).

Information technology has broadened our concept of the learning environment. It has made it possible for learning experiences to be extended beyond the boundaries of the traditional classroom. Distance learning technologies take many forms such as computer simulations, interactive collaboration/discussion, and the creation of virtual learning environments connecting regions or nations. Components of distance learning such as

email, listserves, and interactive software have also been useful additions to the educational setting.

Here are some of the basic teaching methods for higher education as well as for the middle education.

Questioning

Testing and questioning are always known to be effective teaching methods due to its interactive nature. The questions are asked by the teacher with an intention to know what the student has learnt from earlier discussions and what it helps in deciding what should be taught further.

This can be even vice-verse, students questioning the teachers to clarify the doubts that would enhance their understanding of the subject. The inquisitive instinct of the students evoke them to ask questions and satiate their query.

The teacher should encourage this in a positive way so that the student's critical thinking is developed. Testing differs in one aspect from questioning. Test is done in order to know about the previous knowledge and already taught things to the student.

Explaining

Explaining is one of the very important teaching methods in education. It has taken a form of lectures in teaching methods for higher education where the teacher presents the factual information in a direct and a logical way.

Sometimes the experiences can also be shared as a part of knowledge that would work as a source of inspiration for the students. While adopting this method the teacher should give an introduction and a proper summary. Make sure that the information is specific to the audience.

The explanation should be accompanied with suitable examples for the better understanding of the students. It is like a discourse on a particular subject or topic that is for the entire class or public. Explaining can be clubbed with the modeling process to be more effective and to have a long-lasting effect on the pupils.

Modeling

Modeling is a type of visual aid for teaching as well as learning. It is a known fact that human brain absorbs more and understands better when visual aid facilitates explanation. This method works on three criteria - observing, retaining and replicating. The students learn more by observing the things and acquire it by imitating it again and again.

This is also known as reinforced behaviour. This type of learning has very important role to play in the learning process especially during the childhood, though it can happen in any stage of life. This helps the students to visualize the things and, then hypothesize the solution.

Demonstrating

With the help of demonstrative teaching methods in education students get an opportunity to explore the various aspects and understand the theory from a different perspective. Demonstration is a step-by-step explanation along with their reasons and significance for the better understanding of the student. It enhances the student's understanding by practically applying the knowledge and sharpen their skills and hence, they become capable of identifying and organizing the subject matter in a more efficient way. Practical experimentation is a very good method used for demonstrating the subject.

Collaborating

Teamwork is a contemporary form of collaboration. The students are taught to work in a group that makes the instructing easier for the teacher. This method of teaching promotes a sense of mutual responsibility among the students. They learn to put in more effort to research for the topic and apply effective techniques to get the result.

This inculcates patience and develops an ability to critically analyze a subject. It gives an opportunity to the students to solve the problem by a healthy discussion and co-operation. This is what we call 'group discussions' which motivates the students to perform in a team, shows leadership skills and enhances the presentation capabilities as well. This is one of the best direct instructional methods.

The teaching methods for special education is a little different from the teaching methods for others. The education is imparted to these students based on their strengths and weaknesses. The teachers cater to the special needs of the students like modification in the regular teaching program, use of supplementary aids that allows students to participate in the learning process. Different teaching strategies are adopted on the basis of the disabilities.

Apart from these defined methods, nowadays many other teaching methods in education are being adopted to give quality education. The methods like role-play, story or games, seminars, presentations, workshops, conferences, educational trips and modern audio-visual aids like documentary films, computers, internet, etc. have been introduced in education. These new methods have increased the pace of learning and understanding. The capability of the students to research and logically think for a given problem, has been enhanced through modern methods. Some techniques have been added below for you.

5.3 Teaching techniques

5.3.1 Brainstorming

Brainstorming is a group creativity technique that was designed to generate a large number of ideas for the solution of a problem.

It is particularly helpful there is a need to break out of established patterns of thinking, so that new ways of looking at things would be developed. The teachers should develop new opportunities to bring improvement in their services or when existing approaches aren't giving the desired results.

There are four basic rules in brainstorming. These are intended to reduce the social inhibitions that occur in groups and therefore stimulate the generation of new ideas.

Rules of Brainstorming

Focus on quantity: This rule is a means of enhancing divergent production, aiming to facilitate problem solving through the maxim, *quantity breeds quality*. The assumption is that the greater the number of ideas generated, the greater the chance of producing a radical and effective solution.

No criticism: It is often emphasized that in group brainstorming, criticism should be put 'on hold'. Instead of immediately stating what might be wrong with an idea, the participants focus on extending or adding to it, reserving criticism for a later 'critical stage' of the process. By suspending judgment, a supportive atmosphere could be created where participants feel free to generate unusual ideas.

Unusual ideas are welcome: To get a good and long list of ideas, unusual ideas are welcomed. They may open new ways of thinking and provide better solutions than regular ideas. They can be generated by looking from another perspective or setting aside assumptions.

Combine and improve ideas: Good ideas can be combined to form a single very good idea, as suggested by the slogan "1+1=3". This approach is assumed to lead to better and more complete ideas than merely generating new ideas alone. It is believed to stimulate the building of ideas by a process of association.

Outline of the Method

Set the problem

One of the most important things to do before a session is to define the problem. The problem must be clear, not too big, and captured in a definite question such as "*What service for mobile phones is not available now, but needed?*". If the problem is too big, the chairman should divide it into smaller components, each with its own question.

Create a background memo

The background memo is the invitation and informational letter for the participants, containing the session name, problem, time, date, and place. The problem is described in the form of a question, and some example ideas are given. The ideas are solutions to the problem, and used when the session slows down or goes off-track.

Select participants

The chairman composes the brainstorming panel, consisting of the participants and an idea collector. Ten or fewer group members are generally more productive than larger groups. Many variations are possible but the following composition is suggested.

- Several core members of the project who have proved themselves.
- Several guests from outside the project, with affinity to the problem.
- One idea collector who records the suggested ideas.

Create a list of lead questions

During the brainstorm session the creativity may decrease. At this moment, the chairman should stimulate creativity by suggesting a lead question to answer, such as *Can we combine these ideas?* or *How about a look from another perspective?*. It is advised to prepare a list of such leads before the session begins.

Session conduct

The chairman leads the brainstorming session and ensures that the basic rules are followed. The activities of a typical session are:

A warm-up session, to expose novice participants to the criticism-free environment. A simple problem is brainstormed, for example *What can be improved in Microsoft Windows?*.

- The chairman presents the problem and gives a further explanation if needed.
- The chairman asks the brainstorming panel for their ideas.
- If no ideas are coming out, the chairman suggests a lead to encourage creativity.
- Every participant presents his or her idea, and the idea collector records them.
- If more than one participant has ideas, the chairman lets the most associated idea be presented first. This selection can be done by looking at the body language of the participants, or just by asking for the most associated idea.
- The participants try to elaborate on the idea, to improve the quality.
- When time is up, the chairman organizes the ideas based on the topic goal and encourages discussion. Additional ideas may be generated.
- Ideas are categorized.
- The whole list is reviewed to ensure that everyone understands the ideas. Duplicate ideas and obviously infeasible solutions are removed.
- The chairman thanks all participants and gives each a token of appreciation

The Process

- Participants who have an idea but no possibility to present it are encouraged to write down their idea and present it later.
- The idea collector should number the ideas, so that the chairman can use the number to encourage quantitative idea generation, for example: *We have 44 ideas now, let's get it to 50!*.
- The idea collector should repeat the idea in the words he or she has written it, to confirm that it expresses the meaning intended by the originator.
- When more participants are having ideas, the one with the most associated idea should have priority. This is to encourage elaboration on previous ideas.
- During the brainstorming session the attendance of managers and superiors is strongly discouraged, as it may inhibit and reduce the effect of the four basic rules, especially the generation of unusual ideas

5.3.2 Problem-Solving Method

- Problem solving is a process to choose and use the effective and beneficial tool and behaviours among the different potentialities to reach the target.

- It contains scientific method, critical thinking, taking decision, examining and reflective thinking.
- This method is used in the process of solving a problem to generalize or to make synthesis.

Steps of Problem Solving Process

- 1- Choosing the topic and emergence of problem.
- 2- Delimitation of the problem.
- 3- Planning the application.
- 4- Preparing the working guide.
- 5- Providing the sources.
- 6- Examining the problem.
- 7- Getting a conclusion.
- 8- Disputating the topics, views and findings.

Advantages of Problem Solving Method

- It provides the active participation of the students in teaching-learning activity.
- It habituates student to study regularly and organized.
- It provides students to gain scientific view and thinking.
- It makes students to be interested in learning.
- It helps to improve the sense of responsibility of students.
- It provides students to face the problems boldly and to deal with it in a scientific approach.
- It helps students to adopt the view of benefit from others ideas and to help each other.
- It predicates the learning to a more logical and doughty foundation.
- It improves the ability of making proposes and putting forward the hypothesis.
- It helps students to adopt the idea of not to be hurry to make a decision.

Disadvantages

- It takes too much time.
- It is not possible to apply this method to all disciplines.
- It can load some worldly burdensomes to students.
- It can be diffucult for students to provide the materials and sources which is required for solving the problem.
- Evaluating the learning can be difficult.

Techniques used in Problem Solving Method

a) Induction

It is like teaching with discovering method. Cases are observed carefully. The similarities and dissimilarities are found. Then you can reach the general rule or law with the techniques "generalization" or "making abstract" from the similarities.

b) Deduction

It is reverse of induction technique. Some general laws and rules which are reached before are given to the students and want them to apply this method to different singular case. The convenience of it to the one of the case is controlled mentally.

5.3.3 Cooperative Learning Technique

- Cooperative learning is a successful teaching strategy in which small teams, each with students of different levels of ability, use variety of learning activities to improve their understanding of a subject. Each member of a team is responsible not only for learning what is taught but also for helping teammates learning, thus creating an atmosphere of achievement. Student work through the assignment until all the members successfully understand and complete it. Cooperative efforts result in participants striving for mutual benefit so that all group members ;
 1. gain confidence from each other's effort (your success benefits me and my success benefits you.)
 2. recognize that all group members share a common fate
 3. know that one's performance is mutually caused by oneself and one's team members (we can not do it without you.)
 4. feel proud and jointly celebrate when a group member is recognized for achievement. (we all congratulate you on your accomplishment.)
- Research has shown that cooperative learning techniques;
 1. promote students learning and academic achievement
 2. increase students retention
 3. enhance students satisfaction with learning experience
 4. help students develop skills in oral communication
 5. develop students social skills
 6. promote students self-esteem
 7. help to promote positive race relations.

Elements of Cooperative Learning

1. Positive interdependence
2. Face to face interaction
3. Individual and group accountability
4. Interpersonal and small-group skills
5. Group processing

Classroom Activities That Use Cooperative Learning

1. Jigsaw
2. Three-step interview
3. Think-pair-share
4. Round robin brainstorming
5. Three-minute review
6. Numbered heads
7. Team pair solo
8. Circle the sage

9. Partners

Advantages

1. The group provides each member with an opportunity to participate and thereby influences decision making.
2. Face to face learning situations promote an atmosphere of cooperation and empathy seldom achieved in other learning situations.
3. Personal relationships are usually less problematic. There is also a greater chance of different opinions and varied contributions.
4. It encourages broader skills of cooperation and negotiation.
5. It promotes learner autonomy by allowing sts to make their own decisions in the group without being told what to do by the teacher.
6. Although we do not wish any individuals in groups to be completely passive nevertheless some sts can choose their level of participation more readily than in a whole-class or pairwork situation.

Disadvantages

1. It is likely to be noisy. Some teachers feel that they lose control., and the whole-class feeling which has been painstakingly built up may dissipate when the class is split into smaller entities.
2. Not all the students enjoy it, since they would prefer to be the focus of the teacher's attention rather than working with their peers. Sometimes sts find themselves in uncongenial groups and wish they could be somewhere else.

5.3.4 Drama Technique

Dramatization: This technique contains many sub techniques as follows:

Sub Techniques

- **Informal drama:** no preparation, no written material for ex-traffic accident
- **Role playing:** students may get preparation for their role before acting
- **Formal drama:** completely under the teacher control. Everybody uses written material
- **Puppets:** students use puppets and say what they want behind the puppets
- **Pantomime:** students use only mime and gestures, no oral acts, such as washing his face, eating something
- **Finger game:** especially for younger students. A story is given and want students to complete it by making their fingers talk

Advantages

- It is fun
- Provides direct involvement in learning on the part of all students
- Improves language using
- Communicating/speaking and listening skills are improved
- Allows for exploration on solutions

Disadvantages

- Needs too much time
- Costumes, decors and preparation of physical environment may create difficulties
- If students are limited, it may be boring
- Students may be too self-conscious
- Not appropriate for large groups
- Students may feel threatened

5.4 New themes in teaching

Thinkers in the field of education have identified, understood, and critically evaluated the effects of particular methods, modes, and environments of teaching and learning in formal teaching and schooling. Thinkers of 20th century have highlighted the negative contribution of many formal educational strategies and practices. Some thinkers of education are of the views that schooling should be reformed, others argue that it should be transformed and others suggest for de-schooling.

These implications have been bridged in developed countries by applying more “learner-centered”, “knowledge centered” and “community centered” approaches.

Latest findings in the field of psychology devalue the mechanistic treatment of Reward and punishment in schools and replaced it with a newer “cognitive perspective” which emphasizes cognitive feedback and natural motivation of students- children are naturally motivated to know in the same way as they feel hunger and thirst, but they feel tired when they don’t find materials and practices according to their interests and relevance.

Teachers of modern world may opt the following themes in their teaching: “pedagogical content knowledge”

Teacher must know “what” they are teaching to “whom” and how that material can be made easily understandable. Actually the teachers who punish students physically or psychologically show that they don’t possess skills to satisfy and motivate students. “Competition vs. cooperation”

This is another new theme. Most of the teachers give importance to competition and think it the only way to motivate students. The teachers should distinguish between the healthy and unhealthy competition. Students don't share knowledge with each other due to competition among them and it affects their personality development and they develop feelings of jealousy in their lives forever. The teacher should play a role in diverting these feeling towards healthy competition.

Individual Learning Needs

Our schools have fix and specific syllabus, time tables for different classes throughout the year. Teachers also opt specific and routine teaching methodologies that suit to majority of the children in their class; they never try to incorporate the individual learning needs in teaching. However current researches suggest that there are particular learning styles; some students learn easily through abstract ideas, some require more visually stimulated environment to learn, some students learn easily by doing, and some can only understand through association and body languages, all these styles of learning look for particular teaching styles. So the teacher must know the individual learning needs of students and should mix the methods accordingly.

Knowledge of Result

Practices and procedures in the field of assessment in the schools are debatable. The methods of assessment give direction to the students' emphasis in learning. Assessment of factual information only will lead the students to give attention to facts and figures in the material and he/she will not emphasis on conceptual understanding of the teaching material. Most of the teachers give rewards and punishment on the basis of exams but they do not provide cognitive feedback to students.

The Textbooks

Our educators and course developers provide surface knowledge in the text books. They neither arrange concepts and facts around a core concept nor make material conceptually understandable and appropriate to the age and development level of students. Our students forget lessons within one or two years due to lake of in depth knowledge.

Level of Intelligence and Prior knowledge

Research has identified that each child has its own natural tendency towards intelligence. Some Children have good logical and linguistic intelligence, while other have intellectual tendency towards art and games. Teachers should use individual intelligence during their lecture and should arrange classroom practices that help students to develop in their

particular intelligences. Similarly students also have their own levels of prior knowledge about the topics of the subject. There may be misconceptions/wrong belief. A teacher cannot transfer new knowledge to students until the prior knowledge is not known. The role of teacher should be to probe and reconstruct that prior knowledge during lesson teaching.

Career Counseling

Our educational system lacks in providing information and skills regarding to world of work. The school curricula, educational philosophy and teaching practices do not prepare a work force for industrial and organizational settings.

Activity:

Spend a day at school. Teach topics of your own choice to five classes by using different method in each class.

6. EXERCISE

- Q. 1 How is classroom management helpful in achieving the learning and teaching goals?
- Q. 2 What is a case method?
- Q. 3 Differentiate and compare active learning and Cooperative Learning.
- Q. 4 Explain the teaching technique.

7. SELF ASSESSMENT QUESTIONS

- Q. 1 Define “Conducive Classroom Environment”. Describe the teacher’s responsibilities in making the Environment Conducive to learning.
- Q. 2 Define effective teaching. Discuss the factors contributing towards effective teaching.
- Q. 3 Explain the approaches to effective teaching. What pathway of teaching would you like to adopt to make your teaching more effective in the classroom?
- Q. 4 A teacher’s personality traits are important to create and maintain a classroom/ learning environment. Why?

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Unit No. 2

LESSON PLANNING

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INTRODUCTION

A lesson plan is a detailed plan of the objectives and activities for a particular class. It is an important part of the teaching and learning process. A lesson plan reflects what a teacher wants to achieve in each class and how it will be achieved? Planning a lesson helps a teacher to control class time and its effective use. A teacher's effectiveness is usually judged by the ability to design and implement instruction that promotes learning.

Teaching goals, objectives, teaching methods and assessment forms all come together in a lesson plan, which ideally facilitates student learning. A good lesson plan contains the description and application of the instructional methods being used in a particular class to meet the needs of different learners. At the end of the lesson the teacher evaluates how effective the plan was and makes any additions or revisions for future use.

The lesson plans vary in degree of detail. Some teachers write only few notes of the plan, while others carefully write the details of each step of the plan. The teachers discover the system that works best with them.

This unit deals with the elements of lesson planning. It highlights the stages involved in lesson planning. Different approaches to lesson planning have been discussed in this unit. The format of daily/ weekly plans and course/unit plans has been included. In the end steps involved in planning a lesson have been discussed.

OBJECTIVES

After the successful completion of this unit you will be able to:

1. Understand the concept of lesson planning.
2. Realize the need of planning a lesson.
3. Understand the stages involved in lesson planning.
4. Describe different approaches of lesson planning.
5. Plan a course and a unit.
6. Plan weekly and daily lessons.
7. Follow steps involved in lesson planning.

1. NEED OF LESSON PLANNING

A lesson plan is a road map of the instructions. It shows what will be taught and how it will be done effectively during the class time. Teachers require a lesson plan to describe their course of instruction for one class. The lesson plan is necessary to guide the instruction. A lesson plan is required to describe the preferences of the, subject being covered, activities being held in the class, and to ensure the progress of the students about the lesson being taught to them.

A well-developed lesson plan reflects the interests and needs of students. It contains the objectives of the lesson formulated in behavioral terms (indicate the change in behavior). The best and appropriate practices of teaching methodology and techniques to achieve the objectives are included in the lesson plan. The content to be covered in a class is indicated in a lesson plan. The evaluation procedures are also included in the lesson plan.

Lesson planning is beneficial for the teacher in many ways; such as:

- It helps in achieving goals and objectives, and same can be said on the part of the students.
- It helps to get rid of problems or avoid them.
- It gives a reality check of everyday performance.
- It improves the habit and attitude of the students.
- It improves the teaching skills.
- It makes teaching ordinary and easy.
- It makes the teacher organized during teaching.
- Lesson planning determines when to include the interesting facts to attract the students' attention.
- It enables the teacher to impart the things the students can do at the best of their abilities.

1.1 Process of lesson planning

First of all, a teacher need to identify the learning objectives for the class, then design appropriate learning activities and develop strategies to obtain feedback on student learning. A successful lesson plan addresses and integrates these three key components:

- Objectives for student learning
- Teaching/learning activities
- Strategies to check student understanding

Objectives specified for student learning help in determining the kinds of teaching and learning activities to be used in class. These activities will define the achievements of learning objectives. The following figure outline the planning of a lesson

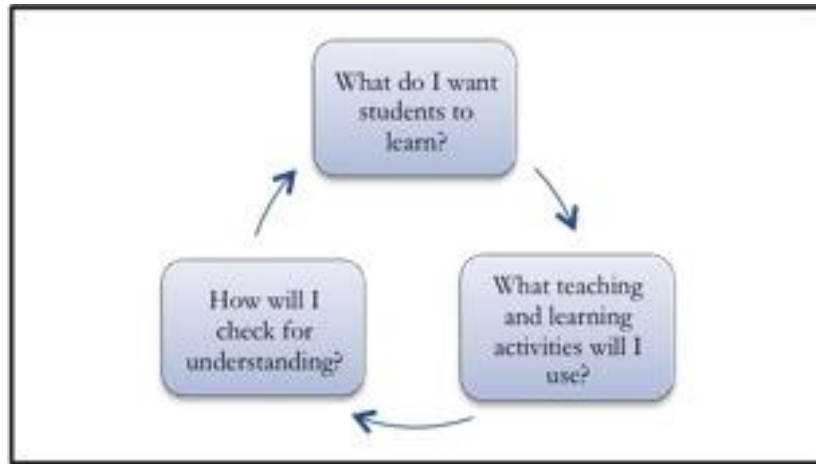


Figure No. 1: Planning of a lesson

A detailed planning of a lesson is emphasized through following stages:

Pre-Planning Stage

Before teaching the teacher has to think about the lesson plan for a particular class. The Center of Excellence in teaching (1999) recommends that the answers to the following questions may help the teachers to proceed for effective planning:

- What are my objectives for this class?
Objectives are the statements of what the teacher wants students to learn. The objectives are most likely to be the same, or close to, the goals outlined during course planning. These are specific for a particular class.
- What are the objectives for this class?
Objectives are the specific goal statements written in behavioral terms. They state exactly what the students should be able to do, in a class/ on a paper/ in an exam, etc. Objectives also specify the conditions under which the students should learn the material.
- Why is this material important?
The teacher thinks about the importance of the skills or knowledge being taught to the students.
- What content will be covered in the particular class?
Statement of the rationale (logical reasoning) will help the teachers to decide
What content needs to be conveyed? Or
What will students need to know to meet the goals and objectives laid down in the course? Or
What content is most essential for them to understand?

- What will the students already know?
Each learner has different knowledge, the teacher must try to assess, what it is the students already understand or are able to do. Having the knowledge of the students' previous learning the teachers are in a better position to decide where to begin the class and how to help students learn.
- What materials will be needed?
These are the equipment to accomplish the goals the teacher decides if he/she needs equipments, overheads. Well planning in advance will allow the teachers to be prepared.

1.2 Designing a Lesson Plan

There are three main elements to a lesson plan that most of the teachers use. There is variation among these components. All of these may not be used in every class, because some plans may spread out over two or more classes. The elements are as following:

i) Introduction

The introduction is a way to warm up students, to ease them into the class and to give them a context for what they are about to learn. Any of the following will be helpfull to take a good start:

- Provide an outline of what will be done in the class. Giving a structure helps the students to organize their thoughts and integrate new ideas.
- Summarize the previous lesson if the ideas are similar to this class. Recall of previous knowledge helps the students to relate new ideas too.
- Present an issue related to the topic and ask students to generate a list of questions. Connecting the lesson with these questions will give a picture of students' experiences, they are familiar with and be able to relates the topic to their lives. This shows that what you are teaching is relevant and draws their attention.

ii) Development

Development is an important part as it describes about teaching, or "instructional methods" such as, lectures, discussions, labs, collaborative learning, etc.

- Try to engage students as much as possible in the learning process. Active learning is one of the ways to engage students. It not only retains students' attention but also helps them to develop higher-level thinking skills.
- Attempt to use a variety of teaching methods in a class. Any single method may not work for all students. A variety of methods keeps their attention and enhances learning.
- Give students the chance to apply the taught skills by using the concepts. This will help them learn and give a chance to the teacher to assess informally. This assessment will provide clarification of learning and need for further practice.

iii) Conclusion

Planning of how to tie it all together for the students is also important. Tell them once again what they would learn and why it is important to them. Consider the following activities in conclusion:

- iv) **Ask for questions:**
The last few minutes of class are an excellent time to have students raise questions and explore the ideas on their own.
- v) **Summarize the main points and explain how they relate to the course:**
Students do not always see how everything fits together. The teacher makes the link between the activities of one class to the larger course. In this way a teacher best helps the students develop a conceptual understanding.
- vi) **Next lesson:**
Again, this shows relevance to the lessons linked to one another and helps students develop a conceptual understanding.
- vii) **Recapitalize or one-minute writing about the taught lesson:**
With one or two minutes remaining in class, ask students to take out a sheet of paper and, without putting their name on it, write what they believe was the main idea of the class and one question they have about the lesson content.

1.3 The Post-Planning Stage

The teacher's lesson planning process should take into consideration the need to assess whether students have learned? How effective the lesson was?

This assessment is not a complicated or difficult task. It is very simple and informal. For instance, using part of the class to let students work on problems you have given them, or discuss issues and apply concepts, can give you a good sense of what and how much they have learned. The one-minute writing about the lesson or homework problems can be similarly helpful.

Let us do an activity to ensure the learning of the read concept.

Activity

Carried out interviews and collect views of 05 – 10 teachers on 'why they plan lessons'? Prepare a list of reasons of lesson plan on the basis of their opinions.

Let us do the following exercise to check the knowledge.

Exercise

- Q. 1 Write down the five merits of lesson planning for the teachers.
- Q. 2 Why a teacher needs to go through the pre-planning stage?

Q. 3 How does a teacher design the instructions?

Q. 4 How can a teacher assess the effectiveness of the taught lesson by him/her?

2. APPROACHES TO LESSON PLANNING

There are different styles of lesson planning. The common style of lesson planning contains the following basic elements:

- 3-5 lesson objectives
- Content to be covered
- Activities (lecture, group work, problem-solving, etc.)
- Resources and materials needed (including technology)
- Timing
- Out of class work and assessment

The following classic lesson planning models are most popular in lesson planning. These are:

- 1) Gagne's frame work for instructional development,
- 2) Hunter's seven steps of lesson planning and
- 3) The 5 E's lesson planning model

1) **Gagne's frame work for instructional development**

A famous educational psychologist, Robert Gagne, identified nine instructional events that support learning and that can be used in lesson planning. These points are often used as a framework for instructional development by the teachers. Gagne's frame work focus on the acquisition of intellectual skills during instruction. The nine events of instruction are:

- i) **Gaining attention:-** Students attention is gained towards the lesson. There are many ways to gain students' attention; such as teacher links the lesson with the students' previous knowledge, start from the daily experiences of the students related to the lesson.
- ii) **Informing learners of the objective:-** state the objectives of the lesson. Make the students aware of what they are going to learn.
- iii) **Stimulating recall of prior learning:-** in order to make link with the previous knowledge, the teacher may asks questions to recall the prior learning.
- iv) **Presenting the content:-** the teachers present the new concepts. Define and describe the details of the concepts before the students.
- v) **Providing learning guidance:-** the teachers use the audio and visual aids in order to create a best learning environment.
- vi) **Providing opportunities to practice:-** the teachers use examples from the daily life and provide opportunities to revise/drill the new lesson. Sometimes the teachers give class work for the improvement in learning.
- vii) **Providing feedback (information about how to improve):-** the work assignments of the students are checked by the teacher and comments are given. The students are asked to correct the work.
- viii) **Assessing performance (exam, tests, papers):-** the evaluation methods are used to check the students' performance on the learned concepts. The

assessment of students' progress can be carried out by daily/monthly tests, examinations, etc.

- ix) Enhancing retention and transfer:- the teacher organize activities to help students remember and retain the learned concepts. The learned behavior of the student is confirmed when he/she applies the knowledge on to different situations to solve other problems (transfer it to other scenarios).

2) **Madeline Hunter's Seven Steps Lesson Plan**

Hunter developed a seven steps model of lesson planning. These steps are associated with the direct instruction method and behavior change practices. The seven steps fall under four categories as follows:

i) **Getting Students Ready to Learn**

1. **Review:-** review of prior learning is necessary to make students ready to learn the new concept.

2. **Protective Set:-** focus attention, gain interest – knowledge and experiences of the students about the new concept are assessed. The teacher connects the previous knowledge and experience of the students to the new topic/concept.

3. **Stating the objective:-** most specifically the objectives of the lesson are stated by the teacher.

ii) **Instruction**

Input and modeling:- the teacher presents instructions to the class. He/she uses different modes keeping in mind the students' interests and abilities. Various examples from the daily life experiences help students to grasp the new concepts.

iii) **Checking for Understanding**

1. **Check for understanding:-** students learn the lesson according to their own style of learning. Teachers check students understanding in the middle and at the end of the lesson and decide whether further clarification is required or not or which areas/points needs more clarification either through teaching material or through different strategies. The teachers use class assignments for this purpose

2. **Guided practice (provide feedback without grading):-** a teacher's remark on students' work is very essential. It provides feed back to the students about their progress, learning and weaknesses, areas where improvement is required.

iv) **Independent Practice**

Independent practice (usually for a graded assignment):- students' learning of new concepts is regularly checked through continues assessment; i.e. monthly tests, quarterly exams. The teachers mark and give grades to their work.

3) **5 E's of Lesson Planning**

Learning theory of Constructivism states that learners construct new ideas or concepts on the basis of their current/past knowledge. This model is based on the ideas of constructive learning. Teachers design their instructions/ lessons around the learning objective, gather resources, and provide students an opportunity to explore, build, and demonstrate their learning. It shifts the learning environment from teacher-centered to learner-centered.

The 5 E's Lesson Planning Model is most often associated with constructivist learning design. It involves following 5 E's:

- **Engage** - students come across the material, define their questions, do the basic work for their class work, make connections between new and known ideas, identify the relevant practices from their daily life.
- **Explore** - students directly involved with material, go through the learning process to solve the problems. They work in a team to share the knowledge.
- **Explain** – the student gets an opportunity to explain the learned concepts such as discoveries, processes, and ideas by written/ verbal assignments or through creative writing/ projects. The teacher supplies material, books/ resources, gives feedback, enhances vocabulary, and clarifies misconceptions/wrong points if any.
- **Elaborate** – the teachers can enhance students' knowledge with the help of other examples and expand their knowledge by explaining similar concepts, and asking them to apply it to other situations. The learning of the new concepts also raises questions relating to other concepts (lead to new inquiry).
- **Evaluate** – evaluation of learning is an on-going (continuous) process. Both teacher and learner check the understanding of the concepts. Different evaluation techniques can be used such as rubrics, checklists, teacher interviews, portfolios, problem-based learning outputs, and assessments results. Results are used to evaluate the students' progress and to modify instructional needs in future.

Activity

Prepare a lesson plan on the topic of “water” from the book of Science for class IV on the design of 5 E's model of lesson planning.

Let us do an exercise to check the knowledge.

Exercise

- Q. 1 What is Gagne s' frame work for instructional development?
- Q. 2 Highlight the Hunter's seven steps of lesson planning.
- Q. 3 How is 5E's model of lesson planning different from the others models?

3. COURSE AND UNIT PLANNING

Once you have determined the needs of learners, it is time to consider designing and planning the course. Following are some suggested steps in this process.

- Decide a topic
- Determine objectives
- Identify learning outcomes- (the desirable results)
- Determine assessment
- Design learning experiences and organize material- the content
- Develop evaluation mechanism-evaluation
- Information marketing-course description

Deciding on a Topic

- Consult with your students
- What topics are of interest to your students?
- What is driving your students' interests?
- What worked/didn't work in the past and why?
- How might existing courses be developed or modified?
- Which exercises/problems/assessment assignments were most appropriate?

Planning Backwards

Begin with the end in mind - Steven Covey

When planning a course, the best place to start is at the end. Determine what students might reasonably be expected to achieve from a course and then plan how material can be organised and delivered to reach this end.

Overarching Goals

Overarching goals describe the most important understandings that students should develop during an entire course. Ask yourself:

When my students leave my class at the end of this course, what are the essential understandings that I want them to take away?

Where possible, students should have a role in determining the goals of a programme. However, in instances where goals are determined by an outside body, e.g. stage agency or funding body, it is important to ensure consultation and collaboration between all the stakeholders.

Learning Outcomes

Once the overarching goal is determined, the next step is to break this into identifiable and manageable units of achievement, i.e. learning outcomes. Statements of what a

learner is expected to know, understand and/or be able to demonstrate after completion of a process of learning.

Students may ask, what will I learn from this course? What will I be able to do when the course is over? Sometimes the course description alone does not provide sufficient detail. Generalised learning outcomes do not supply much additional information to prospective students. More focused outcomes can identify key tasks in the learning process, or observe stages in cognitive development.

Levels of Abstraction

In the 1950's Benjamin Bloom created taxonomy for categorising levels of thinking. The taxonomy provides a useful structure in which to categorise learning outcomes and, subsequently, assessment questions. Introductory courses, and some interest courses, may expect to have outcomes at the initial levels of abstraction, whereas accredited and certified courses would be expected to have more complex outcomes at higher levels of abstraction. The system has been used widely across a variety of educational spheres since its inception.

In the 1990's, Anderson and Krathwohl (2001) revised the taxonomy with a view to making it more relevant to the twenty-first century. The following table is listed in the order of the revised taxonomy with the original categories.

COMPETENCE	SKILLS DEMONSTRATED	QUESTION CUES
<p>Remembering (Knowledge) Can the student RECALL information?</p>	<ul style="list-style-type: none"> • Observation and recall of information • Knowledge of dates, events, places • Knowledge of major ideas • Mastery of subject matter 	<p>List, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc.</p>
<p>Understanding (Comprehension) Can the student EXPLAIN ideas or concepts?</p>	<ul style="list-style-type: none"> • Understanding information • Grasp meaning • Translate knowledge into new context • Interpret facts, compare, contrast • Order, group, infer causes • Predict consequences 	<p>Summarise, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend</p>
<p>Applying (Application) Can the student USE the new knowledge in another familiar situation?</p>	<ul style="list-style-type: none"> • Use methods, concepts, theories in new situations • Solve problems using required skills or knowledge 	<p>Apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover</p>

<p>Analysing (Analysis) Can the student DIFFERENTIATE between constituent parts?</p>	<ul style="list-style-type: none"> • Organisation of parts • Seeing patterns • Recognition of hidden meanings • Identification of components 	<p>Analyse, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer</p>
<p>Evaluating (Evaluation) Can the student JUSTIFY a decision or course of action?</p>	<ul style="list-style-type: none"> • Compare and discriminate between ideas • Assess value of theories, presentations • Make choices based on reasoned argument • Verify value of evidence • Recognise subjectivity 	<p>Assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarise</p>
<p>Creating (Synthesis) Can the student GENERATE new products, ideas or ways of viewing things?</p>	<ul style="list-style-type: none"> • Use old ideas to create new ones • Generalise from given facts • Relate knowledge from several areas • Predict, draw conclusions 	<p>Combine, integrate, modify, rearrange, substitute, plan, create, design, invent, what if?, compose, formulate, prepare, generalise, rewrite</p>

Source:

<http://www.coun.uvic.ca/learn/program/hndouts/bloom.html>

<http://coe.sdsu.edu/eet/Articles/bloomrev/index.htm>

<http://rite.ed.qut.edu.au/oz-teachernet/index.php>

Writing up Outcomes

Outcomes can be written up in the following format:

At the end of this course students should be able to:

Define...

Summarise...

Demonstrate...

Analyse...

Critique...

Integrate...

Discussion of Outcomes

At the beginning of a course, learning outcomes should be discussed with students. This ensures that you are both working towards the same objectives and gives students an idea of what they can reasonably expect to achieve over the course of a module. This also provides an opportunity to amend learning outcomes in line with the wishes of particular student groups. In this way students feel more involved with the programme and feel their input influences the shape of the course. Learning outcomes should be fluid as not

all learning can be prescribed or predicted. Learning opportunities can arise during courses, which were never envisaged at the planning stage, and it is important to accommodate such diversions.

Check of Understanding

Questions that might now be asked include:

- How do I determine if objectives/outcomes have been met?
- How will I be able to distinguish between those who really understand and those who don't?
- What would constitute sufficient and revealing evidence of understanding?
- Against what criteria do I measure achievement?
- If not formally assessing the course, how can I be sure that there is an evidence of learning?

Ongoing and systematic consultation with students goes some way to ensuring outcomes is being met. Student feedback should be sought to ascertain whether content is being understood and to ensure the material is being covered at an appropriate pace for the group. Individual/group exercises and problem based learning exercises can also be used throughout the course to ensure that students are progressing through the material.

Formal evidence of understanding can be verified through a variety of assessment methods.

Assessment

Assessment should be decided upon at the outset as an integral part of design and not merely attached on at the end. For those people setting assessment exercises, assessment should be linked to the projected learning outcomes. Assessment criteria should be understandable so that students can see that the assignment is related to the overall aims of the course. Questions you might address include:

- Are the learning outcomes assessable?
- What form of assignment would best assess the learning outcomes?
- Does the assessment capture the most important elements of my course?

Planning Content

Once outcomes have been established, and assessment methods (either formal or informal) decided upon, the following questions need to be considered:

- How can my material be organised best and presented so as to reach my proposed learning outcomes?
- What do I need to consider about the type of learners with whom I work?
- How do adult learning styles impact on the way I present material?
- What teaching methodologies are most suitable for adult learners?
- How do I involve the learners as much as possible?
- How can I draw on the learner's own experience and knowledge

When planning and organising your course content, it is important to take into consideration the individual nature of adult learners who come to your course. Learners will have varied abilities and require varied levels of support. Prior experiences of learning may differ radically with some students being enthusiastic lifelong learners and others making a tentative move back into education. Motivations for attending may also range from those needing a particular course for work/personal reasons to those who just wish to take a course to get out and meet people. In between will be all degrees of commitment, interest and enthusiasm. All of these learners may have to be accommodated in the one group.

Important Points

Course overview - can you give students a brief overview of what material is to be covered over the duration of the course?

- Blocks of learning - what amount of material can be covered in a class?
- Sequencing of materials - how can the materials be sequenced in an order that is logical /rational?
- Depth of material - what level is the course pitched at? How much detail do you need?
- Methodologies - what is the most appropriate methodology for a particular topic? Is there a mix of methodologies planned?
- Group exercises - when and how often should group work be used?
- Worksheets/ notes -what support materials need to be developed? Would the use of problems or case studies help with the overall understanding of the content?
- Resources - what books, tapes, etc. might be valuable for class use or as a resource for students outside class?
- Field-trips - are there any activities that could be related to the course (visits to museums or organizations) which would set the learning in a practical context?

Evaluation

Evaluation is the collection of feedback on a course to determine how the course content and presentation has been received. Evaluation is essential in ensuring quality control. Feedback received in this way provides information on the:

- Standards of the course
- Materials distributed
- Delivery methodologies used
- Nature of the group dynamics and tutor/learner rapport
- Ability of students to transfer/apply knowledge gained

Tutor self-evaluation and learner evaluation are both necessary to provide effective quality control. Self-evaluation requires you to reflect on your practice throughout a course, to critique your presentation style, to analyse your group and time management skills, and to consider how you might alter your practice in future.

Learner evaluation allows the learner an opportunity to evaluate both the facilitator and course content. The evaluation can provide information on whether the course met participants' needs and supply recommendations as to how a course might be modified in future. Time for course evaluation and review should be allocated at the design and planning stage.

Course Descriptions

Using overarching goal(s) and learning outcomes as a basis, the next step is to write up a course description. Course descriptions may be used by the learning provider for information and/or marketing purposes. Dynamic creative descriptions engage prospective students and encourage further inquiries. It is important to make as much information as possible available to students. The language used in course brochures should be clear and concise and free of jargon or terminology which might confuse or intimidate the learner.

4. DAILY AND WEEKLY PLANNING

Daily and weekly planning are essential for the teachers. These create enough time for meeting multiple responsibilities. The teacher can plan days and weeks carefully to include time for teaching exercises, such as collecting and organizing material, writing questions, preparing class assignments, and managing activities of different nature. This process allows creating a clear path for teacher that maintains a healthy balance between teaching and preparation.

Strategies for daily and weekly planning

The following points demonstrate why planning is so critical to success.

- Planning can greatly reduce your stress quotient. Proper planning gives you the peace of mind of knowing that you have formulated a feasible plan of action and that your goals are attainable.
- Planning also helps you to be prepared for obstacles because part of the planning process is creating an emergency plan for unexpected problems.
- Planning serves as a way to evaluate your progress as you work. Planning your daily and weekly activities will clearly illustrate whether or not you are staying on schedule.

The following tips will provide you with strategies to implement your planning to achieve your objectives.

- The first step to planning is to clearly define your objectives. Taking a few minutes to put your goals into writing will be very beneficial in helping you to plan for your success.
- Once you have defined your objectives, it is time to brainstorm on the tasks that are required to complete your project. Ordering all of the necessary tasks into a logical order and assigning an estimated time for completion to each objective will be beneficial when you begin scheduling these activities.
- Next it is useful to define the roles that you will take in fulfilling your goal as well as the roles of any others who will be assisting you. This is important because you can use this time to determine who will handle certain tasks to avoid redundancy.
- Once you have determined your goal, the tasks required, the key players and the tasks they will complete, it is finally time to start your daily and weekly scheduling. The weekly schedule is important for the overall success of the project but it is the daily planning that will help you to track your progress and determine whether or not you are on schedule. Try using significant project milestones in your weekly planning but for daily planning break each milestone down into the necessary components and plan the completion of those components on a daily basis.
- As the teaching lesson progresses, continually evaluate your performance to determine whether you are on track or need to adjust your schedule. This is where daily planning becomes so important. Take a few minutes at the middle of the day

and at the conclusion of the day to evaluate your progress and make adjustments as necessary.

- Finally once you have successfully completed your project review your planning process to determine how successful it was. This will help you by illustrating whether or not you have achieved an optimal planning system or whether you need to more carefully plan subsequent projects.

An activity on course planning will enhance the learned concept.

Activity

Select a topic/chapter from the book of English for class V and prepare the daily and weekly plan for this topic/chapter.

5. STEPS IN LESSON PLANNING

The plans of class room activities to be happened each day make the teaching effective. The teachers go through many steps for planning a lesson. Six steps are given below to guide the teachers to create their first lesson plans. Each step is comprised by a set of questions:

1. Outline learning objectives

The lesson objectives are usefully stated in terms of what students will achieve at the end of the lesson. The first step is to determine as a teacher what you want students to learn and be able to do at the end of class. To help you specify your objectives for student learning, answer the following questions:

- What is the topic of the lesson?
- What do I want students to learn?
- What do I want them to understand and be able to do at the end of class?
- What do I want them to take away from this particular lesson?

Once you outline the learning objectives for the class meeting, rank them in terms of their importance. This step will prepare you for managing class time and completing the learning objectives. Consider the following questions:

- What are the most important concepts, ideas, or skills I want students to be able to grasp and apply?
- Why are they important?
- If I ran out of time, which ones could not be omitted?
- Which ones could be skipped?

2. Develop the introduction

After determining learning objectives and specifying them in order of their importance, the teacher has to design the specific activities for the students. They may already be familiar with the topic; therefore it is necessary to gather background information from the students prior to lesson. You may start with a question or activity to assess students' knowledge of the topic. For example you can ask a question or take a simple poll: "How many of you have heard about this? Raise your hand if you have" or ask them to write comments on paper. This additional information can help you to shape the introduction and learning activities of the new concept.

Develop a creative introduction to the topic to encourage thinking. You can use a variety of approaches to engage students for example, personal anecdote, historical event, real example, short video clip, practical application, probing question, etc. following questions may help you in planning your introduction:

- How will I check whether students know anything about the topic?

- What are some commonly held ideas (or misconceptions) about this topic that students might be familiar with?
 - What will I do to introduce the topic?
- 3. Plan the specific learning activities (the main body of the lesson)**
- Prepare several and different examples (ways) to explain the topic/concept (real-life examples, similarities, visuals, etc.) to catch the attention of all students. After planning examples and activities for the lesson, estimate how much time you will spend on each. Manage the time for different applications or problems, and for the check of learning and understanding of the students. The following questions would help you design the learning activities you will use in the class:
- What will I do to explain the topic?
 - What will I do to illustrate the topic in a different way?
 - How can I engage students in the topic?
 - What are some relevant real-life examples, similarities, or situations that can help students understand the topic?
 - What will students need to do to help them understand the topic better?

4. Plan to check for understanding

Up till now the topic has been explained with different examples. At this stage you need to check for student understanding. Therefore you are required to plan for how will you know that students are learning? Think about specific questions you can ask students in order to check for understanding, and write them down. Try to predict the answers to your questions. Decide on whether you want students to respond orally or in writing. Ask yourself the following questions:

- What questions will I ask students to check for understanding?
- How will students demonstrate that they are following?
- Going back to the list of learning objectives, what activity students can do to check whether each of those has been completed?

Decide what kinds of questions will be productive for discussion and what questions might sidetrack the class. Think about the balance between achieving learning objectives and ensuring that students understand.

5 Develop a conclusion and a preview

Repeat the material covered in class by summarizing the main points of the lesson. You can do this in a number of ways: you can state the main points yourself (“Today we talked about...”), you can ask a student to help you summarize them, or you can even ask all students to write down on a piece of paper what they think were the main points of the lesson. You can review the students’ answers to estimate their understanding of the topic and then explain anything unclear the following class.

Conclude the lesson not only by summarizing the main points, but also by making its link to the next lesson. How does the topic relate to the one that’s coming up

next? This opportunity will increase students' interest and help them connect the different ideas within a larger context.

6. Create a realistic timeline

A realistic timeline will reflect your flexibility and readiness to adapt to the specific classroom environment. Here are some strategies for creating a realistic timeline:

- Estimate how much time each of the activities will take, then plan some extra time for each
- When you prepare your lesson plan, next to each activity indicate how much time you expect it will take
- Plan a few minutes at the end of class to answer any remaining questions and to sum up the key points
- Plan an extra activity or discussion question in case you have time left
- Be flexible – be ready to adjust your lesson plan to students' needs and focus on what seems to be more productive rather than sticking to your original plan

Activity

Reconsider the topic 'developing instruction' and making a timeline for it. Discuss it with your class fellows/colleagues and give five suggestions to make it realistic.

6. THE LESSON PLAN FORMAT

There are many formats for a lesson plan. Most lesson plans contain some or all of the following elements, in this order:

- **Title** of the lesson
- **Time** required to complete the lesson
- List of required **materials**
- List of **objectives**- the objectives may be behavioral objectives (what the student can do at lesson completion) or knowledge objectives (what the student knows at lesson completion)
- The **set** (bridge-in) that focuses students on the lesson's concept or skills. these include pictures or models and asking leading questions or recalling the previous lessons
- An **instructional component- it** describes the sequence of events included in a lesson. It includes the teacher's instructional input and guided practice. the students try to understand new skills/work with new ideas
- **Independent practice**- this practice allows students to extend knowledge and skills by them selves
- A summary- the teacher wraps up the discussion and answers to the students' questions
- An evaluation component- a test for mastery of the instructed skills or concepts—such as a set of questions to answer or a set of instructions to follow
- **Analysis** component- the teacher reflects on the lesson—such as what has been achieved/learned, or what needs improvement
- A **continuity** component – it reviews and relates to the content from the previous lesson.

Let us do an activity of planning a lesson on the proper format.

Activity

Prepare a lesson plan by following the lesson plan format

7. SELF ASSESSMENT QUESTIONS

- Q. 1 It is necessary to plan the lesson before teaching, comment.
- Q. 2 What is lesson planning? Explain the process of lesson planning?
- Q. 3 Describe the classical models of lesson planning.
- Q. 4 Describe the process of course design and planning.
- Q. 5 Write down the strategies for daily and weekly planning.
- Q. 6 Highlight the steps involved in lesson planning. Discuss the importance of each step. How teachers can take more benefits in teaching through these steps?
- Q. 7 Why is outlining of goals/objectives necessary before planning a lesson? How are objectives stated in behavioral terms?
- Q. 8 Highlight the steps of planning “development of instruction”.
- Q. 9 What is the main body of the lesson, to which a teacher has to focus his/her attention?
- Q. 10 How teachers can plan and check the students’ understanding of the newly taught lesson?
- Q. 11 How does conclusion and a preview help a teacher in closing the instruction?
- Q. 12 Discuss the elements of a lesson plan format. Are these sufficient for planning? How?
- Q. 13 i) Explain the elements of a lesson plan format.
ii) Does the elements covered in a lesson plan format make the teacher fully/completely prepared for teaching? Give suggestions to improve the format.

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Unit No. 3

STUDENT MOTIVATION

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INTRODUCTION

In an ideal classroom, students pay attention, ask questions and want to learn. They do their assignments without complaint and study without being persuaded and flattered. But, teachers often have students who don't seem motivated to work on the classroom tasks set out for them.

“They aren't successful with every student, but with a positive approach to motivation, they can influence many.” (Kauchak & Eggen, 2004) Therefore, teachers contribute a great deal to students' desires to learn and to take responsibility for their learning.

Motivation is a crucial element to the learning process. Many researches clearly show a positive correlation between motivation and achievement. Some students are highly motivated to learn, and this interest continues throughout their years at school. Some other students, particularly adolescents, see what happened at school as having no functional relevance to their lives. They become increasingly bored, particularly with academic task and are generally uninterested in anything that happens in the classroom. Teachers should recognize that there is tremendous variation in the level of energy and interest students bring to the classroom activities.

“Some students are easy to teach because they are excited about learning and responsive to the teacher's idea. While, the others are completely unmotivated by what happens in the classroom and have no interest in schoolwork.” (Krause, et. al, 2003)

Therefore, it is important for a teacher to be truly effective to help their students feel motivated to learn and to achieve. A teacher must go beyond the materials and processes typically used to stimulate and understand the underlying elements involved in the motivation to learn.

Teachers explain the differing motivational level among their students in ways that reflect their own personal philosophy of learning and teaching. Some focus on the place of reward and punishment in motivating students to learn. Other teachers are more concerned with students' expectation of success, or the way in which they attribute failure.

“Factors that can also influence students’ motivation to learn include their observation of peer achieving success or failure, their ability to regulate their own behavior and their need for personal fulfillment.” (Krause, et. al, 2003)

OBJECTIVES

After the completion of the unit you will be able to:

1. Define and clarify the concept of motivation.
2. Identify the types of motivation.
3. Describe difference between intrinsic and extrinsic motivation.
4. Explain different theories of motivation.
5. Explain strategies that can increase motivation

1. DEFINITION OF MOTIVATION

The word motivation is derived from a Latin word 'movers' which means to move. Thus; motivation is an external force which accelerates a response or behavior. Motivation is a cause of an organism's behavior, or the reason that an organism carries out some activity. In a human being, motivation involves both conscious and unconscious drives. Psychological theories must account for a "primary" level of motivation to satisfy basic needs, such as those for food, oxygen, and water, and for a "secondary" level of motivation to fulfill social needs such as companionship and achievement. The primary needs must be satisfied before an organism can attend to secondary drives.

Motivation is described by different psychologists differently as described below:-

- "The term motivation refers to the arousal of tendency to act to produce one or more effect" Allport (1935)
- "Motivation is constant, never ending, fluctuating and complex and it is an almost universal characteristic of particularly every organismic state of affairs." Maslow(1960)
- "The process of arousing, sustaining and regulating activity" Crow. L. D.(1953)
- "The central factor in the effective management of the process of learning." B.R. Annandi (1981)
- "Motivation in school learning involves arousing, persisting, sustaining and directing desirable behavior." Lepper, Mark R.(1998)

The word motivation refers to getting someone moving. When we motivate ourselves or someone else, we develop incentives or we set up conditions that start or stop behavior.

In education, motivation deals with the problem of setting up conditions so that learners will perform to the best of their abilities in academic settings. We often motivate learners by helping them develop an expectancy that a benefit will occur as a result of their participation in an instructional experience.

Motivation is concerned with the factors that stimulate or inhibit the desire to engage in behavior. It involves the processes that energize, direct and sustain behavior. It can be thought of as an internal process that activates guides and maintains behavior overtime.

According to Krause, K.L, Bochner, S, & Duchesne, S(2003): "The concept of motivation is linked closely to other constructs in education and psychology such as constructs of attention, needs, goals and interests which all contribute to stimulating students' interest in learning and their intention to engage in particular activities and achieve various goals."

Baron, and Schunk, (1992) stated that "The definition of motivation is the force that energizes and directs a behavior towards a goal."

Tan O.S., Parsons, R.D., Hinson, S.L, & Brown, D.S, (2003) stated that "The concept of motivation as applied when a person is energized to satisfy some need or desire. The

person will engage in, or be attracted toward activities that are perceived as having the potential to meet this need or desire.”

2. TYPES OF MOTIVATION

Following are the types of motivation: extrinsic motivation and intrinsic motivation:

Positive Motivation

This brings about positive response to the action that one needs to undertake in order to achieve these goals.

Negative Motivation

It is being reinforced with fear, anxiety and such negative feelings in order to have tasks and goals achieved.

Negative and Positive motivational forces could include coercion, desire, fear, influence is framed, they could be either negative or positive forces that act as actuators. For instance a fear (negative force) of bodily injury could be a motivation to implement the use of safety equipment (positive force).

Extrinsic Motivation

Motivation is concerned with the factors that stimulate or inhibit the desire to engage in behavior. Teachers use extrinsic motivation to stimulate learning or encourage students to perform in a particular way. It is one of the most powerful motivations. It is operative when an individual is motivated by an outcome that is external or somehow related to the activity in which she or he is engaged. In other words, "Extrinsic motivation refers to rewards that are obtained not from the activity, but as a consequence of the activity."(Morris &Maisto, 2002)

This motivation arises from the use of external rewards or bribes such as food, praise, free time, money or points toward an activity. These incentives are all external, in that they are separate from the individual and the task.

Example: a child may does chores not because he enjoys them but because doing so earns an allowance and students who are extrinsically motivated may study hard for a test in order to obtain a good grade in the course.

Extrinsic motivation refers to motivation that comes from outside an individual. The motivating factors are external, or outside, rewards such as money or grades. These rewards provide satisfaction and pleasure that the task itself may not provide.

An extrinsically motivated person will work on a task even they have little interest in it because of the anticipated satisfaction they will get from some reward. The rewards can be something as minor as a smiley face to something major like fame or fortune. For example, an extrinsically motivated person who dislikes math may work hard on a math equation because he wants the reward for completing it. In the case of a student, the reward would be a good grade on an assignment or in the class.

Extrinsic motivation does not mean, however, that a person will not get any pleasure from working on or completing a task. It just means that the pleasure they anticipate from some external reward will continue to be a motivator even when the task to be done holds little or no interest. An extrinsically motivated student, may dislikes an assignment, may finds it boring, or has no interest in the subject, but the possibility of a good grade will be enough to keep the student motivated in order for him or her to put forth the effort to do well on a task.

Intrinsic motivation

The motivation arises from internal factors such as a child's natural feeling of curiosity, exigent, confidence and satisfaction when performing a task. People who are involved in a task because of intrinsic motivation appear to be engaged and even consumed, since they are motivated by the activity itself and not some goal that is achieved at the end or as a result of the activity. Intrinsic motivation is the ultimate goal in education at every level.

Example: Children play game for no other reward than the fun they get from the game itself or students who are intrinsically motivated may study hard for a test because he or she enjoys the content of the course.

Intrinsic motivation refers to motivation that is driven by an interest or enjoyment in the task itself, and exists within the individual rather than relying on any external pressure. Intrinsic motivation has been studied by social and educational psychologists since the early 1970s. Research has found that it is usually associated with high educational achievement and enjoyment by students. Explanations of intrinsic motivation has been given in the context of fritz Hieder's attribution theory, Bandura's work on self-efficiency, and Deci and Ryan's cognitive evaluation theory.

Students are likely to be intrinsically motivated if they:

- Attribute their educational results to internal factors that they can control (e.g. the amount of effort they put in),
- Believe they can be effective agents in reaching desires goals (i.e. the results are not determined by luck),
- Are interested in mastering a topic, rather than just rote-learning to achieve good grades.

3. THEORIES OF MOTIVATION

Different psychological perspectives explain motivation in four different ways. Let us explore four of these perspectives; behavioural, humanistic, cognitive and social.

The Behavioural Perspective

According to the behaviourist view of learning, when children are rewarded with praise and a gold star for doing their job correctly, they will look forward to the next mathematics lesson, anticipating another rewards. At some time in the past, they must have been rewarded for similar achievements and this experience acts as a motivator for future learning of a similar type.

For behaviourists, motivation is simply a product of effective contingent reinforcement. So, they emphasize the use of extrinsic reinforcement to stimulate students' task engagement. The reinforcement can take the form of praise, a smile, an early mark or loss of privileges such as missing out on sport.

“Almost all teachers use extrinsic reinforcement in some form to motivate students, although they may not realize they are doing so and may not always use such reinforcement effectively.” (Brody, 1992 in Krause, et. al, 2003)

The Humanistic Perspective

The humanist theory of motivation is interesting because it is not only linked to achievement and education, but also has implications for students' welfare and well-being through its concern with basic needs. It stresses on students' capacity for personal growth, freedom to choose their destiny and positive qualities.

There are two theories of motivation from humanistic perspective:

(a) Maslow's Hierarchy of Needs

Maslow (1954) perceived motivation in terms of a hierarchy of needs that can also conceivably be 'motives'. According to Maslow's model, once basic physiological needs have been satisfied, efforts are directed toward achieving needs associated with safety, love and belonging, and self-esteem.



Figure No. 2: Maslow's hierarchy of needs

b) Roger's motivation theory

Carl Roger's ideas are also influential in discussing the nature of motivation and its impact to human lives.

Rogers argued that: Behaviour was influenced by the individual's perception of both personal and environmental factors. People should listen to their 'inner voices' or innate capacity to judge what was good for themselves, rather than relying on feedback from external sources.

The Cognitive Perspective

"According to Santrock (2006) the cognitive perspective on motivation focuses on students' thought guide their motivation. It focuses on students' internal motivation to achieve, their attribution (perception about the causes of success or failure) and their beliefs that they can effectively control their environment. It also stresses on the importance of goal setting, planning and monitoring progress toward a goal."

(a) Achievement Motivation

John Atkinson and David McClelland described the need for achievement as: "A stable personality characteristic that drives some individuals to strive for success. Students who have a high need for achievement are motivated to become involved in an activity if they believe that they will be successful. They are moderate risk taker and tend to be attracted to tasks where the chances of success are fifty-fifty; since there is a good chance they will be successful. They like to attempt a task, but not if they know there is substantial risk of failure."

On the other hand, Krause described: "Students who have a need to avoid failure, rather than a need to achieve success, will look for tasks that are either very easy and have little risk of failure, or very difficult so that failure is not their fault."

(b) Weiner Attribution Theory

Attribution theory is concerned with the way in which an individual's explanations of success and failure influence that individual's subsequent motivation and behaviour. Students may attribute success or failure to different causes, depending on their beliefs about who or what controls their success or failure.

There are three important elements to note regarding the way in which students interpret the cause of behavioral outcome. The three important elements are locus of control, controllability and stability.

4. APPLICATIONS OF MOTIVATION IN EDUCATION

Motivation is of particular interest to educational psychologists because of the crucial role it plays in student learning. However, the specific kind of motivation that is studied in the specialized setting of education differs qualitatively from the more general forms of motivation studied by psychologists in other fields.

Motivation in education can have several effects on how students learn and how they behave towards subject matter. It can:

- Direct behavior towards particular goals
- Lead to increased effort and energy
- Increase initiation of, and persistence in, activities
- Enhance cognitive processing
- Determine what consequences are reinforcing
- Lead to improved performance.

Because students are not always internally motivated, they sometimes need situated motivation, which is found in environmental conditions that the teachers create.

Implication for Educators

Based on four perspectives discussed earlier, we can apply the theories of motivation in classrooms to promote students' motivation to learn and to achieve. There are several things that teachers should emphasize in order to apply those approaches:

Behavioral Approaches

- Remember that reinforcement to increase desired behavior motivates further learning of this type.
- Recognize that student motivation is shaped by previous reinforcing experiences.
- Know that students' maladaptive attribution of success and failure, including learned helplessness, can be modified.

Cognitive Approaches

- Understand the underlying factors in students' behavior, studying students' carefully and using a variety of information sources to discover why students behave as they do.
- Accept that students are not always motivated to be successful, and that the risk of attempting to succeed may be overwhelmed by the need to avoid failure.
- Realize that motivating students by focusing on increasing mastery is more effective than emphasizing performance goals.
- Be aware of their own biases and how these might affect the way they attribute success and failure in individual students.

Social Learning Approaches

- Ensure that students experience success, not just failure.
- Remember that self-evaluation is influenced by observing others' achievements, and by encouragement and high arousal in challenging situations.
- Recognize that motivation is affected by learners' judgments about their own efficacy.

Humanist Approaches

- Become more concerned with the wider implication of student welfare, not just with student's education.
- Be aware that some students are more concerned with feelings of safety, belonging and self-esteem than with the demands of the school curriculum.
- Understand that students who feel a strong need for group belonging will experience difficulties and lack motivation to learn if teacher acts in ways that conflict with group mores.
- Acknowledge that teachers' own beliefs and values can have a major impact on students' motivation.

5. STUDENT MOTIVATION

Make it Real

In order to foster intrinsic motivation, try to create learning activities that are based on the topics that are relevant to your student's lives. Strategies include using local examples, teaching with events in the news, using pop culture technology (iPods, cell phones, you tube videos) to teach, or connecting the subject with your students' culture, outside interests or social lives.

Provide Choices

Students can have increased motivation when they feel some sense of autonomy in the learning process, and that motivation declines when students have no voice in the class structure. Giving your students options can be as simple as letting them pick their lab partners or select from alternative assignments, or as complex as "contract teaching" wherein students can determine their own grading scale, due dates and assignments.

Balance the Challenge

Students perform best when the level of difficulty is slightly above their current level. If the task is too easy, it promotes boredom and may communicate a message of low expectations or a sense that the teacher believes the student is not capable of better work. A task that is too difficult may be seen as unattainable, may undermine self-efficacy, and may create anxiety. Scaffolding is one instructional technique where the challenge level is gradually raised as students are capable of more complex tasks.

Seek Role Models

If students can identify with role models they may be more likely to see the relevance in the subject matter. For example, Weins et al (2003) found that female students were more likely to cite a positive influence with a teacher as a factor becoming interested in science. In some cases, you can be a role model but it's unlikely that you will connect on that level with everyone in the class due to differences in gender, age and social circles. However there can be many sources of role models, such as invited guest speakers, fellow students or other peers.

Use Peer Models

Students can learn by watching a peer succeed at a task. In this context, a peer means someone who the student identifies with, not necessarily any other student. Peers may be drawn from groups as defined by gender, ethnicity, social circles, interests, achievement level, clothing, or age.

Establish a Sense of Belonging

People have a fundamental need to feel connected or related to other people. In an academic environment, research shows that students who feel they 'belong' have a higher

degree of intrinsic motivation and academic confidence. According to students, their sense of belonging is fostered by an instructor that demonstrates warmth and openness, encourages student participation, is enthusiastic, friendly and helpful, and is organized and prepared for class.

Adopt a Supportive Style

A supportive teaching style that allows for student autonomy can foster increased student interest, enjoyment, engagement and performance. Supportive teacher behaviors include listening, giving hints and encouragement, being responsive to student questions and showing empathy for students.

Example of supportive-style teacher behaviors

- Listening- carefully and fully attended to the student's speech, as evidenced by verbal or non-verbal signals of active, contingent, and responsive information processing.
- Asking what students want; such as, "which problem do you want to start with?"
- Allowing students to work in their own way
- Allowing students to talk
- Using explanatory statements as to why a particular course of action might be useful, such as "How about we try the cube, because it is the easiest one."
- Using praise as informational feedback, such as "Good Job" and "That's great."
- Offering encouragements to boost or sustain the student's engagement, such as "almost" "you're close," and "you can do it."
- Offering hints, such as "Laying the map on the table seems to work better than holding it in your lap" and "It might be easier to work on the bottom of the map first."
- Being responsive to student-generated questions, such as "yes, you have a good point" and "yes, right, that was the second one."
- Communicating with empathic statements to acknowledge the student's perspective or experience, such as "yes, this one is difficult" and "I know its sort hard to tell."
- Talking
- Holding or monopolizing learning materials
- Giving the solutions or answers before the students had the opportunity to discover the solution themselves.
- Uttering directive or commands, such as "Do it like this," "Start this way," or "Use pencil."
- Making statements that the student should, must, has to, got to, or ought to do something, such as "you should keep doing that" and "you ought to...."
- Asking controlling questions, such as "can you move it like I showed you?" and "Why don't you go ahead and show me?"
- Making statements communicating a shortage of time, such as "We only have a few minutes left."
- Using praise as contingent reward to show approval of the student or the student's compliance with the teacher's directions, such as "you're smart" or "you are really good at playing with blocks."
- Criticizing the students or the student's lack of Compliance with the teacher's directions, such as "No, no, no, you shouldn't do that."

6. FACTORS INFLUENCING THE DEVELOPMENT OF STUDENT'S MOTIVATION

According to JereBrophy (1987), motivation to learn is a competence acquired “through general experience but stimulated most directly through modeling, communication of expectations, and direct instruction or socialization by significant others (especially parents and teachers)”.

Children's home environment shapes the initial constellation of attitudes they develop toward learning. When parents nurture their children's natural curiosity about the world by welcoming their questions, encouraging exploration, and familiarizing them with resources that can enlarge their world, they are giving their children the message that learning is worthwhile and frequently fun and satisfying.

When children are raised in a home that nurtures a sense of self-worth, competence, autonomy, and self-efficacy, they will be more apt to accept the risks inherent in learning. Conversely, when children do not view themselves as basically competent and able, their freedom to engage in academically challenging pursuits and capacity to tolerate and cope with failure are greatly diminished.

Once children start school, they are being forming beliefs about their school-related successes and failures. The sources to which children attribute their successes (commonly effort, ability, luck, or level of task difficulty) and failures (often lack of ability or lack of effort) have important implications for how they approach and cope with learning situations.

The beliefs teachers themselves have about teaching and learning and the nature of the expectations they hold for students also exert a powerful influence (Raffini). As Deborah Stipek (1998) notes, “To a very large degree, students expect to learn if their teachers expect them to learn”.

School's wide goals, policies, and procedures also interact with classroom climate and practices to affirm or alter students' increasingly complex learning-related attitudes and beliefs.

Developmental changes comprise one more strand of the motivational web. For example, although young children tend to maintain high expectations for success even in the face of repeated failure, older students do not. And although younger children tend to see effort as uniformly positive, older children view it as a “double-edged sword” (Ames). To them, failure following high effort appears to carry more negative implication—especially for their self-concept of ability--than failure that results from minimal or no effort.

How to help motivating learners

According to Carol Ames (1990, 1992), there are six areas that can influence students' motivation to learn:

Task students are asked to do.

The strength of our motivation in a particular situation is determined by our expectation that we can get success and the value of that success. To understand how an academic task can affect student's motivation, we need to analyze them. Tasks can be interesting or boring for students. And tasks have different value for students.

The autonomy students are allowed in working.

Give students a range of options that set valuable tasks for them, but also allow them to follow personal interest. The balance must be just right. Too much autonomy is bewildering and too little is boring.

How students are recognized for their accomplishments.

Students should be recognized for improving on their own personal best, for tackling difficult tasks, for persistence, and for creativity.

Grouping Practices.

Motivation can greatly influenced by the ways we relate to the other people who are also involved in accomplishing a particular goal. When the task involves complex learning and problem skills, cooperation leads to higher achievement than competition, especially for students with low abilities. The interaction with peers that the students enjoy so much becomes a part of learning process. The need for belonging described by Maslow is more likely to be met and motivation is increased.

Evaluation Procedures.

The greater the emphasis on competitive evaluation and grading, the more students will focus on performance goals rather than mastery. Low-achieving students who have little hope of either performing well or mastery the task may simply want to get it over with.

How can teachers prevent students from simply focusing on the grade or doing the work "just to get finished"? The answer is to de-emphasize grades and emphasize learning in the class. Students need to understand the value of the work or how the information will be useful in solving problems they want to solve. One way to emphasize learning rather than grades is to use self-evaluation.

Scheduling of time in the classroom.

Most teachers know that there is too much work and not enough time in the school day. Even if they become engrossed in a project, students must stop and turn their attention to another subject when the bell rings or the schedules demands. Furthermore, students must progress as a group. So, scheduling often interferes with motivation by making students move faster or slower and interrupting their involvement. Therefore, teacher should be

able to give extended period when everyone, even the teachers engage in activity or to have some sort of block scheduling in which teachers work in teams to plan larger blocks of time.

Strategize with Struggling Students

When students are struggling with poor academic performance, low self-efficiency or low motivation, one strategy that may help is to teach them how to learn. That is, to outline specific strategies for completing an assignment, note-taking or reviewing for an exam.

Examples of learning strategies

Specific Learning Strategies:

- **Pre-action phase (preparing for task)**- take a reasonable risk, work toward goals that are challenging but attainable, work in manageable, bite-size pieces, take responsibility for your actions, believe in your own effort and capability, set a plan and work from it.
- **Action phase**- search the environment, ask questions, visualize it (?)
- **Reaction phase (after one task, preparing for the next one)** - use feedback from prior tasks; monitor your own actions, giving yourself instructions.

7. EXERCISE

Read the statements carefully and encircle the correct option.

1. The word “motivation” refers to the definitions below except:
 - a. The factors that establish the activities engaged by students.
 - b. The force that energizes directs and sustains behavior towards a goal.
 - c. The internal process that activates guides and maintains behavior overtime.
 - d. The constructs of attention, needs, goals and interests that stimulating students.’
 - e. Interest in learning and their intention to engage in activities.

2. For behaviorists, motivation is simply a product of effective contingent _____. According to Humanistic views of motivation, effective teachers handle their problem students by:
 - a. First, building a personal relationship with them
 - b. Warning them before punishing any infractions of rules.
 - c. Establishing rules for the class at the beginning of the school year.
 - d. Trying to understand their need for achievement.

3. Almost all teachers use _____ reinforcement to stimulate students’ task engagement that take the form of praise, a smile, an early mark or loss of privileges such as missing out on sport.
 - a. reinforcement – internal
 - b. incentive – internal
 - c. reinforcement – external
 - d. incentive - external

4. Which of the following are considered to be activities that are intrinsically motivating?
 - a. Activities perceived as challenging.
 - b. Activities in which learners feel like they have a sense of control.
 - c. Activities in which learners feel like they’re likely to be reinforced
 - d. Activities that have novel or surprising results.

5. According to Humanistic views of motivation, effective teachers handle their problem students by:
 - a. First, building a personal relationship with them
 - b. Warning them before punishing any infractions of rules.
 - c. Establishing rules for the class at the beginning of the school year.
 - d. Trying to understand their need for achievement.

8. SELF ASSESSMENT QUESTIONS

- Q. 1 Define and describe the term motivation.
- Q. 2 What are different types of motivation? Discuss in detail.
- Q. 3 What are the different factors that influence student motivation?
- Q. 4 Write a brief note on the theories of motivation.
- Q. 5 Review the key concepts in motivation such as extrinsic and intrinsic motivation and consider how these apply to you.
- Q. 6 Compare the behavioral and humanistic perspectives on motivation.
- Q. 7 How can teacher's expectations affect students' motivation?
- Q. 8 What strategies a teacher can use in the classroom to motivate students?

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Unit No. 4

INQUIRY METHOD

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INTRODUCTION

Students have diverse nature of learning environments and also diverse styles of learning. They come from different backgrounds and have different study habits; moreover the learning of the individual depends upon the intellectual abilities, attitude and motivation for the learning. It is teachers' responsibility to adjust the instruction as per context and the level of the students' to enhance the learning by providing appropriate teaching learning environment. The most important factor is to understand the level of the students' abilities and then use the appropriate technique, but the problem is that in our teaching learning environment we have less recourse and our classes are overcrowded. In this context the need arise that we should prepare our teachers to combat the situation and adjust the teaching methods to promote authentic learning.

This course of teaching methods is an attempt to meet the objective that after completing this course the prospective teachers will be capable to select and apply the appropriate method to facilitate the learners. This unit of inquiry approach is to empower the prospective teachers with the knowledge, and skills to use inquiry approach in the classroom also this will develop more positive attitude towards the use of this approach. According to Kahn and O'Rourke, (2005) inquiry based learning is student centered learning and is a paradigm shift from passive to active learning process. Therefore inquiry based learning can be perceived as broader term that involves:

- Range of teaching learning approaches
- Process of guidance by supportive inquiry
- Active involvement of the learner to foster critical thinking.

In this particular unit we will focus on inductive and deductive methods of teaching, application of scientific method, and problem solving approach in teaching learning process.

In Prince and Felder (2006) views the term *inquiry learning* refers to method of instruction that imposes questions and problems to provide contexts for learning whereas deductive instructional process is based on the elaboration of facts and principles with the help of examples and explanations, and then deducing the results.

This unit includes the scientific method and its application in the teaching learning process. The unit ends with the insight to the problem based learning. It is based on the assumption that learning is an active, integrated, and constructive process influenced by social and contextual factors.

Apart from this advantages and disadvantages of the inquiry approach are also discussed in the later part of this unit.

OBJECTIVES

After completion of this unit you will be able to:

1. Use the inductive and deductive methods of teaching in the actual classroom setting.
2. Use scientific method to enhance learning of their students.
3. Use problem solving approach to leaning for authentic learning of their students.
4. Select appropriate teaching technique as per context and content of the lesson.
5. Develop appropriate AV aids to foster inquiry.
6. Make informed decisions as to when the use of inquiry method will be most conducive.

1. INDUCTIVE METHOD

In any class students come from different backgrounds and contexts, they have different capabilities and different styles of learning. This situation demands different teaching techniques, strategies and methodologies, which teacher adjusts according to the situation and requirement. There are variety of techniques and methods which teachers use under the umbrella term inquiry approach. Inquiry is an approach that roots in the Socrates logical thinking. Teachers often use logic to foster the thinking of their students. During this process the teachers impose questions to their students after judging the level and ability. If the student answers the question correctly the question of higher order is asked. On the other hand if he/she could not the follow up questions are imposed to create the link between the known and the unknown. There is variety of techniques but many teachers prefer inductive method according to Prince and Felder (2006) in inductive teaching learning process the instruction begins with specifics for example a set of observations or experimental data to interpret, a case study to analyze, or a complex real-world problem to solve. As the students attempt to analyze the data or scenario or solve the problem, they generate a need for facts, rules, procedures, and guiding principles, at which point they are either presented with the needed information or helped to discover it for themselves.

The inductive reasoning method moves from specific to general. These examples will help us to understand the concept of inductive reasoning. Consider this “Previous car accidents of this sort were caused by **brakes failure**, and therefore, this accident was also caused by **brakes failure**.” Similarly while doing exercises of mathematics children use induction method “as previous question was solved by adding the numbers, therefore, this question may also be solved by same method”, and most of the time it comes true. Some important aspects of the inductive teaching method are given as below.

1. It gives new knowledge as student are supposed to involve in the process of knowledge construction.
2. It is a method of discovery, where students discover the fact by their own involvement.
3. It is a method of teaching; teachers used this by starting from the known facts and using different inquiry techniques to discover the hidden ones.
4. Child acquires firsthand knowledge and information by actual observation.
5. It is a slow process, as all the steps are interlinked and the students cannot move forward without the mastery of the previous one.
6. It trains the mind and gives self confidence and initiative to the students after being exposed to inductive method the students has more positive attitude towards taking initiatives in their studies.
7. It is full of activity, many activities lead towards the generation of new knowledge.
8. It is an upward process of thought and leads to principles, the students understand the philosophy behind that principle.

Activity

Select any lesson from the English Textbook of class six and develop five questions to use in inductive method of teaching.

2. DEDUCTIVE METHOD

In deductive reasoning we argue from the general to a specific instance. The basic idea is that if something is true of a sample of things/objects in general, this truth applies to all things/objects of that group. The important point to be considered, then, is to be able to properly identify things/objects of the sample. Improper selection may result in invalid conclusions. Application of deductive reasoning may help the teachers in the classroom and saves time also.

For example, we often say that “Be careful of that wasp: it might sting.” is based on the logic that wasps have stings; therefore each individual wasp will have a sting. So, it can be concluded that, we should not examine each and every wasp. Because of the validity of deductive reasoning, we may make an assumption that is both useful and efficient. Let’s have another example of deductive reasoning.

Every day, I leave my home for office at, at eight o’clock. Every day, the journey takes 30 minutes, and I arrive at work on time. If I leave my home at eight o’clock today, I will be on time and not late.

Deductive reasoning works from the more general to the more specific. Sometimes this is informally called a "top-down" approach. We might begin with thinking up a theory about our topic of interest. We then narrow that down into more specific hypotheses that we can test. We narrow down even further when we collect observations to address the hypotheses. This ultimately leads us to be able to test the hypotheses with specific data -- a confirmation (or not) of our original theories.

Consider this statement “Students must be in either the Committee Room or in the Library.” They are not in the Library; therefore they must be in the Committee Room. This is deductive reasoning.

One of the most common and useful forms of deductive reasoning is the syllogism. The syllogism is a specific form of argument that has three easy steps.

- Every X has the characteristic Y.
- This thing is X.
- Therefore, this thing has the characteristic Y.

This is same like as we say that:

All human beings are mortal; Aslam is a human being, so he is mortal.

At the end some important aspects of deductive method are as under:

1. It does not give any new knowledge, but helps to explore the existing knowledge.

2. This method is to verify the existing theories and laws and is called a method of verification.
3. This method helps to impart instructions to the students and considered as valid method of instruction.
4. During the process of deductive method of instruction students get ready made information and make use of it.
5. It is quick and time saving process and truth of the conclusion depends upon the sample selection.
6. It encourages dependence on other sources therefore the accuracy of the sources used makes the conclusions valid and reliable.
7. There is less scope of activity in it, teachers used the already planned lesson and not deviate from the plan.
8. It is a downward process of thought and leads to useful results, which are embedded in the specific environment.

3. INDUCTIVE AND DEDUCTIVE METHODS OF TEACHING

Educational institutions are interested in improving the teaching methods and many researchers' recommends that teaching methods can either be inductive or deductive or some combination of the two. We have already discussed the inductive and deductive methods, now we discuss the use of combination of both methods for instructional purposes.

According to Marwaha (2009) there are two major parts of the process of learning of a topic: establishment of formula or principles and application of that formula or those principles. The former is the work of induction and the latter is the work of deduction. Therefore, people, "always understand inductively and apply deductively" and a good and effective teacher is he who understands this slight balance between the two. Thus: "his teaching should begin with induction and end in deduction."

It may be concluded that inductive method is an ancestor of deductive method. Deduction is a process particularly suitable for a final statement and induction is most suitable for exploration of new fields. Probability in induction is raised to certainty in deduction. The suitable combination of the two is most appropriate and desirable.

Activity

Dear students: Observe the number of cars and motorcycle passing from a certain point on the road for one hour and predict the total number of cars and motorcycle passing from that point in day, to what extent your guess is valid? Identify the factors that affect the answer.

4. SCIENTIFIC METHOD

Every problem could be solved through a specific procedure. Scientists have also adopted some specific procedures and thereby contributed to scientific inventions. The procedure adopted by the scientists to find out the facts and scientific truths is called 'Scientific Method'. It is evident that if the scientific method is followed by the teachers and students in the classroom, the teaching-learning process would be effective.

Better understanding of the scientific method is a common component for increased awareness towards the knowledge acquisition. However, McPherson (2001) believes that lack of understanding of the scientific method is more out of control than is commonly believed, at least in part because many scientists and science educators do not understand all the components of the scientific method up to the level of application. Different scientists and researchers enlist different number of steps involved in the process of scientific method. The steps are explained in this unit with the purpose that students will be able to apply the method to solve science and social science problems with exercising command over the procedure.

4.1 Definition of Scientific Method

Many researchers have defined scientific method with slight difference but the main theme is the rigorous approach adopted to resolve the science and social science problems.

According to Keyes (2010) definitions of the scientific method can be found in textbooks in both the social and natural sciences and, while some variations exist, all have certain common features. Students collected a number of definitions of scientific method from textbooks in the natural (“hard”) sciences and then were asked to compare these to the one provided in their sociology textbook.

Some definitions list the steps or process involved while others provide a general overview of the method.

Consider the following definitions in the light of different disciplines.

In their geology book, Wicander & Monroe as cited in Keyes (2010) defined scientific method – a logical, orderly approach that involves gathering data, formulating and testing hypotheses, and proposing theories. McMurry & Fay, (2008) in their chemistry book defined it as “Scientific method – Scientific questions must be asked, and experiments must be carried out to find their answers”. In the context of biology “The classic vision of the scientific method is that observations lead to hypotheses that in turn make experimentally testable predictions” (Raven, Losos, Mason, Singer, & Johnson, 2008). In the psychological point of view “The scientific method refers to a set of assumptions,

attitudes, and procedures that guide researchers in creating questions to investigate, in generating evidence, and drawing conclusions” (Hockenbury & Hockenbury, 2000). Whereas in the context of sociology “The scientific method is an approach to data collection that relies on two assumptions: (1) Knowledge about the world is acquired through observation, and (2) the truth of the knowledge is confirmed by verification--that is, by others making the same observations” (Ferrante, 2008).

From the above definitions of the scientific method we can conclude that: The procedure adopted by the scientists to find out the facts and scientific truths is called Scientific Method. The following are the compulsory steps involved in the scientific method. The elaboration of these steps as:

1. Realizing the problem
2. Defining the problem
3. Analyzing the problem
4. Collecting data / information
5. Analyzing the information
6. Framing hypothesis
7. Verifying the hypothesis
8. Finding the solution
9. Applying the solutions in the life situations.

1. Realizing the problem

The urge to find out the truth for any scientific happening, is the first step which helps to solve the problem in scientific method. Each and every happening of nature catches the students’ attention and they wonder about the basic cause and its effects upon the nature. The students plunge in wonder. While using scientific method the prime duty of the teacher is to introduce a concept in the form of problem and motivate the students to find out solutions for the same.

2. Defining the problem

After sensing the problem clearly, it should be defined clearly so that the problem could be solved. This is the next step in Scientific Method. Only after defining the problem clearly, it is possible to plan methods and strategies to solve the problem. Students themselves can find out and write clear definitions using relevant words with the help of the teacher. Suitable definition can be selected from them.

3. Analyzing the problem

This is the third step in Scientific method which classifies and arranges the problem and its components. The learner should analyze the problem in parts to find out the details of each part to understand the actual dimensions of the problem.

4. Collecting data / information

Designing the Methods using available resources and techniques to solve the problem and collecting data accordingly is the important step in the scientific method. Data related to the problem can be collected under the following ways:

1. Collection of data through observation

2. Collection of data through experiments
3. Collection of data by surveying literature
4. Discussion with experts
- 5. Analyzing the information**

Analysis of Information collected develops the scientific attitude among the learners. The collecting of information can reveal the uniqueness and the diversity of the problem and its dimensions. Only on the basis of analysis of information formulating the hypothesis can be done. The irrelevant data and information can be discarded by this method. The teacher should support the learner for analysis of information. By this skills of classification and comparison can be developed among the learners.
- 6. Framing hypothesis**

Formulation of hypothesis or tentative solutions (Framing hypothesis) is the important step in the scientific method. Tentative solutions are derived from analyzing various data on the basis of organizing and grouping the data according to their similarities and dissimilarities. In this way, many tentative solutions can be obtained to the given problem. They are called hypotheses. All hypotheses cannot be the solutions to a problem. One among them will be the suitable solution to the problem. Students can be encouraged to formulate hypothesis on the basis of collected data by observation or by experiments.
- 7. Verifying the hypothesis**

Evaluation of hypothesis or verification of hypothesis is essential to find out the appropriate one which is most likely to be correct. On the basis of hypotheses, further data collected through the repeated experiments are analyzed and the most appropriate hypothesis need be selected. The tentative solutions may be discarded when there is lack of validity and experimental proof.
- 8. Finding the solution**

A hypothesis must be tested in variety of environments and from the results of the tests and experiments a valid hypothesis is selected. Selected and confirmed hypothesis is tested again and again. According to its consistency it becomes final solution to the problem and it can be announced as the result.
- 9. Applying the solutions in the life situations**

The derived results must be generalized. The generalized result can be utilized whenever the situations happened alike. The learner can apply the same or similar type of methods for problem solving.

4.2 Role of the Teacher

The scientific method can be used by the learner to understand the objects, activities and acquire the skills decision making and problem solving. The solutions or results derived

through this method can be applied to the living environment. In order to apply the solutions in life solutions the teacher should:

- Arrange a necessary environment to understand the problem.
- Guide the learner to collect the data or information.
- Help in classification and arrangement of data or information in a desired order.
- Formulate the hypothesis and test the same.
- Help to prepare a report on tested hypothesis.
- Give a life situation and enable the student to utilize the solution to find the result.

4.3 Characteristics of Good Teacher

- He / she should be open minded
- Interested in seeking accurate knowledge and searching for the truth
- Objective in nature (analyze all the happenings without any prejudice or bias)
- Not superstitious (free from superstition).
- Solve the problems based on upon the evidence and following scientific method
- Opinion and conclusions would be based on the adequate evidences only.
- Identify the measures to develop scientific attitude among the students.

4.4 Merits of Scientific Method

- Learners always try to solve their problem themselves
- Learning process is independent
- Highly motivated learning by experience is also felt
- Learning by doing enhances the motivation and self confidence in learning.
- Learner solves the problems scientifically and arrive new valid solutions too.
- Learner receives good skills and training from the scientific method
- Learners can develop their skills in data collection and analysis.

4.5 Limitations of Scientific Method:

- Time consuming
- Learners need to work hard for a longer duration
- There will be no facilities available for some problems
- If teacher is not competent in this method entire teaching-learning process will be collapsed.

Activity

Identify topics for the use of scientific method for any class;
develop a lesson plan by using this method

5. THE PROBLEM SOLVING APPROACH

Basically, Problem Based Learning (PBL) is a comprehensive approach where students are kept in a challenging situation, whereby they are put to some simple and unstructured problem, and they are required to find the solution of that problem by working in groups (normally of 5 each). The role of teacher is minimized as a guide and facilitator only. It is both a curriculum and a process which increases students' acquisition of critical knowledge, problem solving proficiency, self directed learning strategies and team participation skill (Rattanavich, 2008). Due to its nature this approach is addressed by many educators under the heading of inquiry methods.

The history of this concept goes back to 1950s and 1960, when it was originated in Canada in response to dissatisfaction with common practices in medical education there (Barrows, 1996 as cited in Gijbels, Dochy, Segers, & Bossche, 2005). It was conceived and adapted at Canada's medical schools in 1970s for teaching subjects in Medicine and Natural Science (Rhem, 1998; Ross & Hurlbert, 2004). The case study teaching technique was adopted at Hamilton, Ontario, McMaster University Medical School in Canada. The experiment was a great success and other medical schools in USA and in many other countries also followed this example. They were encouraged and inspired to take this technique to apply by modifying their syllabuses that should include real problems faced by the patients (Herreid, 2003). Gijbels et al (2005) present a brief list of disciplines where PBL has been applied by various researchers as; it has been applied to the study of architecture, business administration, economics, engineering studies, geology, law, nursing, social work, psychology and other domains of post-secondary education.

But the concept has intellectual roots back in far history, like question-and-answer dialectical approach associated with Socrates as well as the Hegelian thesis-antithesis-synthesis dialectic. Janet, and Cheryl (2002) mention Plato (360 B.C.E./1960) that Socrates guided his students through inquiry to answer their own questions, search out answers to problems, and relate their knowledge to life applications. He also applied apprenticeship training method where the students worked as apprentices under the guidance of experts through hands-on problem solving in which knowledge and skills were taught and practiced as needed. PBL is also similar to John Dewey's concept of learning by doing or discovery based of learning with the difference that he talked about 'engagement' on abstract level whereas in problem based learning the details can be carried out easily because of advances in cognitive science and in technology.

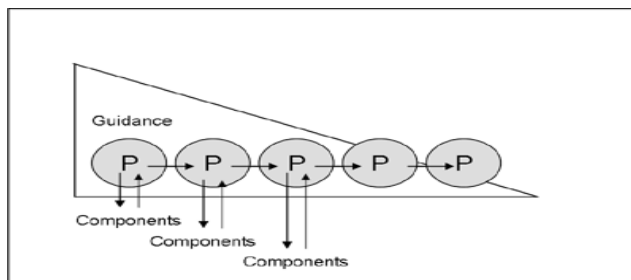
The classical approach defined PBL as small permanent groups of students working with a teacher on a new case every three class meetings. On the first day, the group receives a new case and begins to analyze the preliminary data. With teacher's assistance, the group decides on the issues to be addressed and distributes the research workload. When the students return the next day, they share their analysis, receive additional information, and continue their search. The third class meeting brings closure to the case when groups pull together their knowledge and prepare a final report. This classical definition of PBL has been redefined and modified in various ways for different courses (Herreid, 2003). Sonmez and Lee (2003) offer a functional definition of PBL more applicable to secondary education as:

PBL is an instructional approach that challenges students to seek solutions to real world (open-ended) problems by themselves or in groups, rather than learn primarily through lectures or textbooks.... PBL engages students in developing skills as self-directed learners.

5.1 Process of PBL

As mentioned above, Problem-based learning (PBL) is generally applied by organizing the class into small groups, the teacher being the facilitator provides a number of comparatively easy problems to the students and guides them how to tackle these. As the students gain confidence with some experience with PBL, the element of guidance is lessened (Merrill, 2002). The process can be stream-lined by providing the students with worked examples in the beginning, at later stages they can be challenged with some less complex problems and so on, till they reach maturity and could face more realistic problems (Merrill, 2002, 2007). The following figure shows the process of guidance and it's fading in PBL situation:-

Figure 3: Guidance is Progressively Faded



Source: Merrill, M.D. (2002)

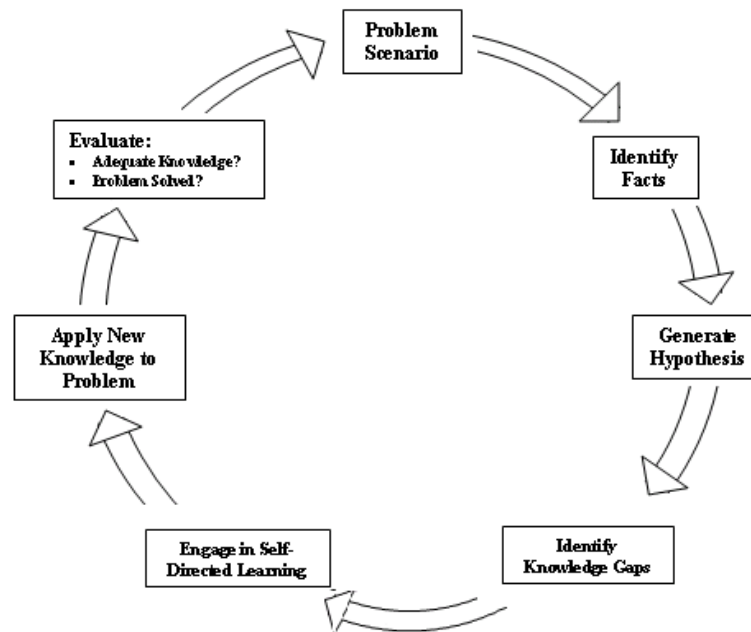
Figure above shows that guidance to the students is gradually minimized with the passage of time and they are made more independent in their learning in PBL. But many designers of PBL do not agree with Merrill and suggest that the students should be given

realistic problems from the very beginning, however the facilitator should provide them sufficient scaffolding at earlier stages, gradually it may be faded as the students grow competent in handling these (Silver, 2006 as cited in Silver, 2009). Silver suggested the use of white boards to help students scaffolding their problem solving by drawing four columns- facts columns, the ideas columns, the learning issues column, and action plan columns-on it to record their progress. The students should discuss the problems, define them in the light of their prior knowledge, form hypotheses, set their learning goals and organize further learning. After sorting out the solutions, they may present their findings to the whole class or larger groups. The students should also reflect on what has been learnt through the process. Savoie and Hughes cited in Anonymous (2009) wrote about a process that they used to design a problem-based learning experience for their students. They describe certain actions for creating such a process like identifying a problem suitable for the students, connecting the problem with the context of the students' world so that it presents authentic opportunities, organizing the subject matter around the problem, not the discipline, giving the students responsibility for defining their learning experience and planning to solve the problem, encouraging collaboration by creating learning teams and expecting all students to demonstrate the results of their learning through a product or performance.

5.2 Procedures of Applying PBL

Peter (2001) presents a very interesting procedure to apply PBL in the class and named it, "How to make a DENT in a problem: Define, Explore, Narrow, And Test." PBL can only be applied successfully if it is handled systematically and in some orderly manner. This orderly procedure can be explained as; First of all, when the problem is presented before the class, the students should define it precisely and quite carefully covering its various components and aspects. If it has more than one aspect, these should be stated separately agreed by all the members of the group. The statements can be spoken aloud to make them more clear and free of any errors. Second, then comes the next stage whereby the students discuss the possible answers using their prior knowledge through brainstorming, each one justifying his own arguments and listening to the others' and jotting down these in the form of a list. Various tasks may be assigned within the group to be tackled accordingly. This is called exploring the possible solutions. The third stage is narrowing down the choices (or delimitation in research) and selecting appropriate one only as per requirement of the problem. And, four, the sorted out solutions, and then be tested to verify the solutions and presenting the outcomes to the whole class. Silver (2009) has given the procedure of PBL in the form of a cycle as shown below:

Figure No.4: PBL Cycle:



Source: Hmelo-Silver, C. E. (2009, June, 10-12).

The above figure can be explained in these words: First of all the problem is presented before the students in an unstructured form, who identify facts using their prior knowledge and by discussing its various aspects at the second step. The third step covers their efforts to formulate hypotheses regarding the problem. They then endeavor to identify knowledge gaps between their prior knowledge and the possible solutions/ verification of hypotheses at the fourth step. This leads them to the fifth step where they engage themselves in self-directed learning and construction of new knowledge and experiences, so that they can apply this new set of knowledge to solve the target problem at the sixth step. Finally, evaluation of the acquired knowledge and the solutions are carried out in social context (it may be done with the whole class or in larger groups). Though the cycle completes here but it does not stop forthwith and the evaluation results are again applied for new set of problems that might be presented in the same class or in the next ones. Since the procedure is a continuous one, the PBL cycle remains a continuous process, each cycle leading the students to more maturity in this regard.

5.3 The Role of Teachers in PBL

The success of any PBL program depends on teacher's role and its effectiveness. It requires changes in the way teachers plan instruction, direct learning, transmit knowledge, oversee instruction, and assess student achievements (Gordon et al., 2001). The teachers facilitate the development of projects and act as expert consultants. They

ensure that projects create a need for seeking disciplinary knowledge and skill. The disciplines are taught as a response to a need created by ill-structured problems.

Successful implementation is not easy. It calls for a major change that must occur in the teacher's perspective. Teachers will need self-knowledge, commitment, determination, teamwork skills, and considerable understanding of the learning process to make PBL successful. The lack of training programs, curriculum materials, and rigid scheduling in the high school environment can create hurdles in successful implementation of PBL.

Having seen the background, goals, processes, and procedures of Problem Based Learning, its concepts on philosophical basis, its relationship with other similar techniques, the role teachers are expected to adopt this method as per resources and the environment or learning context.

Activity

Select any problem for the students of 9th class, Apply DENT model to solve the problem

6. ADVANTAGES AND LIMITATIONS OF INQUIRY METHOD

There is a certain consensus and also some evidence that inquiry as a pedagogical approach is a motivating, meaningful and pedagogically rich scenario for the learning.

It brings authenticity to the traditional classroom by involving students in reasoning and investigative tasks. In addition, inquiry as a teaching and learning approach is related often with constructivist ideas, thus involving student-centered learning, students' active involvement and crucial teacher guidance. The following are the major advantages of the inquiry approach.

- Be interested and enthusiastic
- Get students talking to each other and learning from the peers
- Promote the use of accurate current information resources as students research their learning issues
- Establish a good learning environment for the group Students develop skills in:
- Critical and creative thinking
- Communication
- Self-directed learning
- Team-work
- Project management
- Problem-solving and
- Students get to know one another better and make friends

The problem lies with the assessment of inquiry instruction and major problem with inquiry programs is that valid acceptable measures of the outcomes of inquiry based learning are hard to find or difficult to interpret. Inquiry learning is also difficult to quickly access and analyze through testing. Multiple-choice questions, the preferred mode for standardized testing, are not readily adapted to measuring the process skills needed for critical thinking. Structured short-answer questions have the ability to measure problem-solving abilities as well as knowledge recall, but are more time consuming to develop and score. Time spent in study outside of class is a factor of concern to both instructors and students alike, it is too much time consuming.

The scope of the inquiry method is limited in terms of contents also the effective applications of this approach requires motivated and mature students. The teachers also need to be well competent in planning, designing, conducting and monitoring the inquiry based learning.

7. SUMMARY

"Inquiry" is defined as "a seeking for truth, information, or knowledge -- seeking information by questioning." Individuals carry on the process of inquiry from the time they are born until they die. This is true even though they might not reflect upon the process. Infants begin to make sense of the world by inquiring. From birth, babies observe faces that come near, they grasp objects, they put things in their mouths, and they turn toward voices. The process of inquiring begins with gathering information and data through applying the human senses -- seeing, hearing, touching, tasting, and smelling. Unfortunately, our traditional educational system has worked in a way that discourages the natural process of inquiry. Students become less prone to ask questions as they move through the grade levels. In traditional schools, students learn not to ask too many questions, instead to listen and repeat the expected answers.

Some of the discouragement of our natural inquiry process may come from a lack of understanding about the deeper nature of inquiry-based learning. Effective inquiry is more than just asking questions. A complex process is involved when individuals attempt to convert information and data into useful knowledge. Useful application of inquiry learning involves several factors: a context for questions, a framework for questions, a focus for questions, and different levels of questions. Well-designed inquiry learning produces knowledge formation that can be widely applied.

The inquiry approach is more focused on using and learning content as a means to develop information-processing and problem-solving skills. The system is more student centered, with the teacher as a facilitator of learning. There is more emphasis on "how we come to know" and less on "what we know." Students are more involved in the construction of knowledge through active involvement. The more interested and engaged students are by a subject or project, the easier it will be for them to construct in-depth knowledge of it. Learning becomes almost unproblematic when something fascinates students and reflects their interests and goals.

Inquiry classrooms are open systems where students are encouraged to search and make use of resources beyond the classroom and the school. Teachers who use inquiry can use technology to connect students properly with local and world communities which are rich sources of learning and learning materials. They replace lesson plans with facilitated learning plans that account for slight deviations while still keeping an important learning outcome in focus. They meet on-target questions with, "How do you suggest we investigate that question?"

Most of our schools focus on teaching a set of basic skills, which do not serve the needs of modern society. Traditionally, schools stressed the accumulation of information, and did not emphasize skill development or promote inquiry-based habits of mind. Our modern society is faster paced, globally networked, technologically oriented, and requires

workers who can problem solve and think critically. Today, much learning, if not most, occurs after formal schooling. Our schools must change their approach to education to produce students who can thrive in the modern world.

Inquiry learning can turn information into useful knowledge. It stresses skill development and nurtures the development of good habits of mind. Information, lacking a useful context, often has limited applications beyond passing a test. Learning plans and teaching materials need to include a relevant context for new information to lead to broader understandings. It is often hard for students to understand the connections between activities within a particular subject. This confusion is heightened when students struggle to understand the connections between different subjects within traditional schools. Questions, whether self-initiated or "owned," are at the heart of inquiry learning. While questions are also a part of the traditional classroom, the sources, purposes, and levels of questioning are quite different. In the traditional classroom, the teacher is frequently the questioner. Questions are usually intended to provoke feedback about a reading or activity assignment. In an inquiry classroom, the teacher asks questions that are more open and reflective in nature. Appropriate questioning techniques are important in an inquiry-based classroom, especially in the lower grades where they become a foundation for self-initiated questioning.

An inquiry classroom is quite different from a traditional classroom. These differences become increasingly obvious as the teacher and students become more comfortable and experienced with inquiry learning. It can often be difficult to locate the teacher in an inquiry classroom, because she is rarely found in the traditional spot: behind the teacher's desk. Students also move around the classroom as they interact with others and locate the appropriate materials and resources for their work.

Ultimately, the importance of inquiry learning is that students learn how to continue learning. This is something they can take with them throughout life -- beyond parental help and security, beyond a textbook, beyond the time of a master teacher, beyond school -- to a time when they will often be alone in their learning.

Within a conceptual framework, inquiry learning and active learner involvement can lead to important outcomes in the classroom. Students who actively make observations, collect, analyze, and synthesize information, and draw conclusions are developing useful problem-solving skills. These skills can be applied to future "need to know" situations that students will encounter both at school and at work.

Another benefit that inquiry-based learning offers is the development of habits of mind that can last a lifetime and guide learning and creative thinking.

8. SELF ASSESSMENT QUESTIONS

1. Define the term inquiry approach; list the methods that come under the umbrella of this approach.
2. What is meant by inductive reasoning, provide examples regarding application of this method in classroom setting?
3. Differentiate between inductive and deductive reasoning, develop a lesson plan using combination of inductive and deductive methods.
4. Comment the statement “Problem solving Approach is student centered approach to teaching”.
5. Specify the role of teacher in problem solving learning.

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Unit No. 5

ACTIVITY METHOD

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INTRODUCTION

The primary obligation of the teaching profession is to guide children, youth and adults in the pursuit of knowledge and skills to prepare them in the ways of democracy and to help them to become happy, useful, self-supporting citizens. For obtaining these goals teachers have to use different teaching methods and teaching techniques some of the methods are teacher centered such as lecture method, bookish method while others are student centered, i.e. problem solving, discussion or activity methods. The main focus of the student centered methods is to make the teaching learning process more effective, interactive, communicative and attractive. It is said that the best gift we can give to each succeeding generation is effective education. This can only be possible if the existing practices regarding different components of education are renovated from time to time in the light of new developments and changing requirements. Particularly teacher's responsibility becomes more significant as an implementer. So teacher has to practice dynamic methods and techniques of teaching, as to give "effective education" to the succeeding generation. For this purpose different experts or educationists suggest that learning is more effective when a student is actively engaged in the learning process rather than attempting to receive knowledge. Regarding this most of the methods rely on some form of guided discovery where the teacher avoids most direct instruction and attempts to lead the student through questions and activities to discover, discuss, appreciate and verbalize the new knowledge. So the purpose of this unit is utilitarian, which answers the following questions. How activity method revolves around the developmental approach of student-cantered methods. What are the different kinds of projects in the context of activity methods? And what are the advantages and limitations of activity method?

OBJECTIVES

While focusing above questions following are objectives of this unit:

1. To describe the nature, meaning and need of activity method.
2. To examine the different kinds of activities and their utility in the learning of students.
3. To explore the advantages of activity method with the contrast of traditional method.
4. To enlist the limitations of activity method which oppose to frequent use of this method in teaching learning process.

1. NATURE MEANING AND NEED OF ACTIVITY METHOD

It is said that children learn best when they are allowed to construct a personal understanding based on experiencing things and reflecting on those experiences.

According to Confucius:

- What I hear, I forget
- What I see, I remember
- What I do, I know

This saying advocates the activity based learning of the students. Through which schools have to reshape as activity schools which emphasize the creative aspect of experience. Now a days it is considered that directed activities focus on reality of learning. For this purpose all available resources are being used for making the teaching effective. Activities are meant to provide varied experience to the student to facilitate the acquisition of knowledge, experience, skills and attitudes. Through these activities, students are prepared to know well, to do well and to behave well. Overall this method allows the student working individually or in small groups and develop real-life problem, simply in this method student' work independently and with the division of tasks clearly defined.

What is Activity Method?

Before explaining the activity method, it seems better to answer this question, what is an activity? Anything which is carried out with a purpose in a social environment involving physical and mental action. Such activities help in the establishment of stimulating environment for creative expression.

Types of Activities:

Activities can be of three types:

1. Exploratory – Knowledge getting
2. Constructive – Experience getting
3. Expressional – Presentation

Activities will vary according to the age group of the students. At elementary level of education pupils may involve in different activities such as listening observing, planning, collecting, talking, singing, dramatizing, experimenting and constructing. The variety of activities grows as children progress in elementary programme. This may include, painting, drawing, designing, wood carving, writing, composing, interviewing, acting, reading, map-making and graph making, field trips, gardening and camping. It is not always necessary that activity should only be motor or manipulative. It can also be mental. Knowledge-getting activities occupy a prominent place.

a) Knowledge – Getting Activities

- (i) Here a group of pupils may be asked to make a study of the various sources of food articles consumed at home by questioning parents, merchants etc; by

consulting labels on the foods. The data may be compiled and interpreted by the group.

- (ii) A committee of pupils may undertake to find out in a rural area, how many families have members who work also in the city or town for a part of the time. In a city, it may be enquired how many people in the local community have come from rural areas and why they have come. With the teachers help, rough estimate of probable experience can be made.

b) Experience – Getting Activities

For selection of activities and giving firsthand knowledge to the students teacher may arrange some field trips of any area such as industrial or agricultural. But for arranging the visit of any area, the provision of the available local resources must be focused, otherwise school will never allow for having this experience. Overall focused must be laid on no cost field visits.

c) Presentation

A debate can be arranged on the topic “In the opinion of the house, mechanized agriculture is the only way of economic uplift in the Punjab. Maps showing the distribution of (1) agriculture crops, (2) major industries, (3) outstanding and localized cottage industries in the Punjab can be drawn. Charts showing (a) The classification of industries on the basis of nature of goods produced, (b) flow of raw materials, labour and power to few major industries can be made. Graphs showing the member of industrial laborers in the Punjab from 1947 to 2010 etc can be prepared.

Practical and productive work can help in the better understanding of almost every subject. In geography, it may take the form of drawing maps, making models, illustrations, organizing excursions, keeping weather records, constructing in appropriate materials scenes from the life of different region is of the world etc. In history, in addition to the preparation of suitable illustrations, they may prepare and stage historical plays making the costumes, the stage effects, fixing the lights etc, themselves or co-operatively study local history or set up a small history museum and in fact, take up any projects that will bring history to life, in connection with the study of languages – particularly the mother tongue – they may undertake to write small booklets on subjects of special interest to them. The collection of material from relevant sources, its writing, editing, the binding of the booklets attractively will all form parts of a joyous project. Illustrated charts about great writers may be prepared-containing their pictures, short notes on their lives and works and brief appropriate question in prose or poetry from their writings or they may possibly attempt translations of some easy books and articles in English with the object of providing rich reading material for their fellow students in the library. Taking in view these three types of activities, some of the activities are suggested as under:

1. Local survey and excursions.
2. Debates, discussions, dialogues and symposiums.
3. Hobbies
4. Dramatization
5. Clubs and societies

6. Projects
7. Competitions
8. Re-creational and cultural programmes
9. Social Service squads
10. Students-self Government
11. Camping
12. Writing of community books in games etc.

In modern education, creative activities are occupying a prominent place in the school programme. Creative experiences and social activities are breaking away from the other approaches and exploring the new avenues of learning. This emerging pattern for teaching requires that teachers play a more vital role. The creation of a stimulating atmosphere for the learner, both in the learning laboratory and in the community is essential for an experience approach to function. Education for children should be rich enough to meet all needs in a way that will contribute to society.

Examples of Classroom Activities

Furthermore, in the classroom, students work primarily in group and learning and knowledge are interactive and dynamic. There is a great focus and emphasis on social and communication skills, as well as collaboration and exchange of ideas. This is contrary to the traditional classroom in which students work primarily alone, learning is achieved through repetition, and the subjects are strictly adhered to and guided by a text book. Some activities encouraged in the classroom:

- **Experimentation:** Students individually perform an experiment and then come together as a class to discuss the results.
- **Research Project:** Students research a topic and can present their findings to the class.
- **Field Trips:** This allows students to put the concepts and ideas discussed in class in a real-world context.
- **Films:** These provide visual context and thus bring another sense into learning experience.
- **Classroom Discussions:** This technique is used in all of the methods described above. It is one of the most important distinctions of student centered teaching methods.

Activity method is more applicable in computer assisted teaching and online learning.

Role of Teacher

The teacher occupies very important position in the activity method. While it is really a sound practice that pupils should involve practically in different learning activities but, in all this accomplishment, the teacher has to play a vital role. The teacher has got mature experience, deeper and broader knowledge than the pupils. For this very reason, his guidance and prompting is not only desirable but also indispensable. The pupils are out on a venture; they need suggestions and guidance at every step. The teacher has to save the pupils from faltering and floundering. So the teacher has skilfully guided in the selection of activities. The teacher is supposed to give help when help is required. So, let

the teacher be a good prompter, just behind the curtain and not make his appearance on the stage itself, for stage is meant and reserved for the actors and actresses, the pupils.

The relations of the teacher to the pupils are to be much closer and informal than it is in an ordinary classroom teaching. He is there like a friend or elder brother with rich and mature experience. He is a director and not a dictator. His psychological knowledge must be thorough and scientific.

The teacher must be a keen observer and a true sympathizer. He should be able to win the good will of the pupils so that they would not feel discouraged. He should be a storehouse of information and knowledge so that he may anticipate the difficulties before-hand and suggest remedies as and when necessary. He should command respect of the pupils so that the pupils might look to him for help, guidance, support and affection. No method, however good, is ever superior to its teachers. So the need is for devoted educational leaders.

The teacher has still another role to play. He has to see that all the pupil's work co-operatively. The activity method is based on correlated teaching. This presupposes that the teacher should have knowledge of many subjects. He has to guide the selection and execution of the activities in such a way that the maximum number of subjects concerned is learnt by the pupils; gaps are properly filled. He should see that not only practical knowledge is to be imparted but complete and integrated knowledge is given. Experiences and contributions of the group should provide increased knowledge in the particular context.

Lastly, the teacher should be able to spare enough time for the success of this method. Only a devoted and enthusiastic teacher can make a success of this method, not the discouraged, time-serving, bell-watchers.

Overall in the activity based teaching learning classroom, the teacher's role is to prompt and facilitate students. Thus, the teacher's main focus should be on guiding students by asking questions that will lead them to develop their own conclusions on the subjects.

Benefits of Activity Based Learning Approach

- The learners are actively involved as the environment is democratic.
- The activities are interactive and student-centered.
- The teacher facilitates a process of learning in which students are encouraged to be responsible and autonomous.
- Children learn on their own pace.
- Provision of more time for self-directed learning and teacher directed learning is reduced considerably.
- Group learning, mutual learning and self learning are promoted.
- Teachers teaching time is judiciously distributed among children. Only needy children are addressed by teachers.
- Children participation in every step is ensured in the process of learning.
- Evaluation is inbuilt in the system it is done without the child knowing it.

- Role learning is discouraged and almost no scope for rote learning.
- Periodical absence of child from school is properly addressed.
- Classroom transaction is based on child's need and interests.
- Freedom to child in learning as he chooses his activity.
- Multigame and multilevel in learning is effectively addressed.
- No child can move to the next higher step of learning unless attains the previous one.
- Sense of event boosts child's confidence and morale.
- Attractive cards and activity create interest among children.
- Scope for child's development in creative and communicative skills.
- Children will have a feel of security as they sit in rounds in the groups.
- Children are allowed to move in the classroom as they choose their activity.
- Moreover the distance between teacher and the child is largely reduced and the teacher acts as a facilitator rather than teacher.

Limitations of Activity Method

- Careful consideration of emotionalized controls may be overlooked during classroom activities. Apparently some teachers forget that all classroom activities contribute directly or indirectly to the formation of attitudes, favorable or unfavorable.
- Some classroom activities become contradictory with values of and culture of the students.
- This method is time consuming and does not cover the course/subject matter timely.
- Our teachers are over burden. So they feel difficulty to plan relevant and appropriate activities all the time.
- Our classes are overcrowded so there is problem to arrange, organize and manage classroom activities properly.
- Lack of professional training of teachers affects to plan and process the innovative classroom activities such as computer based activities.
- Lack of physical, financial and instructional facilities become hurdles in the application of activity method.

Activity

Select a topic in mathematics which might be used for a unit in a grade in which you have special interest. Indicate suitable expressional activities to be included in the unit.

2. INDIVIDUAL PROJECT

The individual project is by far the most important single piece of work in activity method. It provides the opportunity for individual or student to demonstrate independence and originality, to plan and organize a project for prescribed period, and to put in to practice some of the techniques to be taught. During individual project student can show his/her individuality and inspiration in this project. Overall an individual project is an economically indivisible series of works fulfilling a precise technical function and with clearly identifiable aims. An individual project may include one or more sub-projects. An individual project generally addresses a single activity or issue of economic, environmental or social need within any one of the priority sectors of any programme.

Steps Involved in Individual Project

Following steps are focused during individual project:

1. Project Outline
2. Preliminary Assessment
3. Application / Implementation
4. Appraisal
5. Decision

1. **Project Outline**

Keeping in view the purpose of given task or activity student will prepare project outline. This outline comprises on propose targets, resources, methodology and time schedule.

2. **Preliminary Assessment**

Before execution of project student will assess the requirements of task or activity which are prerequisite, for it. For example to analyze the physical, human and financial resources which are required for the fulfillment of given task.

3. **Application/Implementation**

On this stage project will be implemented or executed practically for the accomplishment of given task or assigned activity.

4. **Appraisal**

At this stage student will organize the appraisal of project through which it will be analyzed to what extent given task or assigned activity has been achieved.

5. **Decision**

Finally the success or failure of the task or activity will be determined.

In all steps teacher's role will be a guide and facilitator to assist the student regarding the accomplishment of project.

3. GROUP PROJECTS

Learning and working in groups involves shared and learned values, resources and ways of doing things. Effective groups learn to succeed by combining these factors. Your group, and each individual within it will only be as effective as they are willing to respect differences within the group. The aim of group work is to produce better (more effective, more detailed, more comprehensive) presentations reports. This achieved through the combined talents of group members, contributing knowledge and ideas.

One difficulty with group work is that you can't work as quickly as you can by yourself. Patience, communication skills and commitment are all required to make the most of the contributions of all group members. Thus effective group work requires each member to focus on the process rather than just the product.

Why Group Project?

Few of us act alone in the real world. Most things are done with the help or ideas of other people. Group projects are great practice for high school, college, and real life, when you will probably have a job that requires working with others. Right now, group projects can be fun and they often allow you to do a bigger, more interesting project than you could alone. With group work, you can actually learn more in less time.

Group projects also give you a chance to get to know kids you might not otherwise know or talk with. Group projects are also a way to practice skills you're not so sure of. For example: working on a deadline, staying organized, or being patient. And if you're a little nervous talking in front of a group, a joint project can help you become more comfortable with it.

Getting Started

One of the most important things about group work is talking and meeting together. It's a good idea to continually check with everybody on their progress and to see if anyone needs help. Here are some other tips for making group work really work.

You might think the first step is figuring out who will do what, but actually it's getting to know one another a little. Take a few minutes to chat. Even if you know each other well, it can help to take a minute to think about your skills and share your strengths and weaknesses. For instance, you might say, "I 'am a good artist, if you want me to make the poster. "Or, "I 'am not the greatest artist, but I 'would like to get better at it – would anyone like to be my partner on the poster?"

The second step is to go over ground rules from your teacher and any that you want to create together as a group (for example, how the group will help people who are behind on their work). Will all of your meetings be in class? Do you need to plan time to work together outside of school?

Focusing on Fairness

Figuring out individual jobs within the group is a really important part of the process. One of the most common pitfalls of group work is that someone may end up doing all the work if the rest of the team can't quite get it together.

From the beginning, it's important to divide the work fairly and evenly. If you feel like you or another kid is doing too much, gently bring it up with the group. If nothing changes, you might want to talk with your teacher.

Holding Good Meetings

One key to a good meeting is having a leader, who should help the group to stay focused. It doesn't have to be the same person.

Group Projects for School

In fact, it's better if it's not. It's a good idea to talk about how the work is going, and if anyone needs help. What if you're not the leader? Important roles to play during a meeting include:

- The starter makes suggestions and offers ideas.
- The asker asks members to share information or ideas on a topic.
- The peacemaker looks at opposing views and finds something useful in each of them, helping people work out differences.

And try not to play any of these negative roles:

- The non-participant does not contribute and/or discourages the others.
- "Captain Critical" responds to other people's ideas with criticism.
- The dominator interrupts and talks more than listens.
- The clown distracts the group and keeps it from focusing on the work.

More on Group Projects

- **Interaction with the Group** is based upon mutual respect and encouragement.
- Often creativity is vague
Ideas are important to the success of the project, not personalities.
A group's strength lies in its ability to develop ideas individuals bring.
- **Conflict can be an extension of Creativity**
The group should be aware of this eventuality. Resolution on conflict balances the end goals with mutual respect. In other a group project is a cooperative, rather than a competitive, learning experience.

The two major objectives of a group project are:

- What is learned: factual material as well as the process
- What is produced: written paper, presentation, and/or media project

Role of instructors/teachers/professors:

- Out comes depend on the clarity of the objective (s) given by teachers. The group's challenge is to interpret these objectives, and then determine how to meet them.
- Group work is only as effective as teachers or instructors manage and guide the process.
- Group projects promote the cooperative and collaborative attitude among the students.
- Students must be aware of, and should be prepared for this group process.
- Cooperative group projects should be structured so that no individual can coast on the efforts of his/her team-mates.

Scoring:

- Rewards ideally should be intrinsic to the process, with group members deriving their reward from their contributions to the group and project.
- External reinforcement (Grades, etc) for individuals can be based upon improvement, as opposed to comparative, scoring. Traditional, comparative scoring works to the detriment of teams with low-achieving members. Evaluation based upon improvement rewards the group for an individual's progress. Peer, comparative evaluations can have a negative effect on teams: low scoring members are considered "undesirable" and drag upon performance.

High achievers versus low achievers

We assume high achievers mentor or teach low achievers.

In the process of teaching others, we can learn more about the topic.

As we tutor, even simple questions from the tutee make us look at our subject matter freshly. As we explain, we gain a deeper understanding of the topic. Low achievers then tutor or teach high achievers!

- High achievers profit in cooperative learning in other ways: Leadership skills, self-esteem gains, conflict resolution skills, and role-talking abilities which become part of the learning process, and betterment of the student.

4. RESEARCH PROJECTS

Generally, a research is a quest for knowledge through experimentation, investigation and thorough search. It is aimed at discovery and interpretation of new knowledge or at resolving debatable existing knowledge. There are systematic procedures and methods for explorations, targeted at obtaining new knowledge. The starting point of a research is to think of a good idea. Your research is good as your idea.

Before starting any long term or complicated task, it is wise that we make a rough plan or a map which will guide us throughout the course of the job. In the same way, before the commencement of our research, we need to devote time and think logically on the area of our research and how we are going to about it.

Typically, a research project revolves around following three questions.

- (i) What do you plan to accomplish?
- (ii) Why do you want to do it?
- (iii) How are you going to do it?

Types & kinds of research projects

Research projects can be broadly categorized into the following types:

a) Academic Research Projects

- Social research project
- Scientific research project

b) Commercial Research Projects

- Sales Project
- Grant Project
- Business Project
- Funding Project
- Marketing Research Project

c) Basic Steps in the research process

Selection of the problem

A researcher may be concerned with conditions or relationships that exists, practices that prevail , beliefs, points of view or attitudes that are held, processes that are going on, effects that are being felt or trends that are developing, and may select the problem accordingly from the area or field in which he is interested.

Statement of the problem

The researcher must state the problem clearly as it is done in case of other types of research. The statement must identify the variables involved in the study. It should specify clearly whether the study is merely seeking to determine the

present status of these variables or whether it will also explore relationships between the variables.

Identification of data

After stating and defining the problem, the next step for the researcher is to list the data to be collected for the study. He has to specify whether the data are of qualitative or a quantitative nature and whether the data will be collected in the form of counts, test scores, responses to questionnaires, interviews, and so on.

Selection or Development of Tools

The nature of the data to be collected helps the researcher to select the appropriate tools for the study. If the readymade tools are not available, the researcher has to develop his own tools. Questionnaires, interviews, psychological tests, rating scales, schedules and attitudes scales are the most frequently used tools for descriptive research. If the researcher uses readymade tools, he should satisfy himself about their reliability, validity, and suitability for sample chosen for the study. If the researcher develops his own tools, he should try them out with a small group in order to evaluate them and make modifications if necessary.

Selection of the Sample

The researcher must select the sample about which he wishes to seek information using appropriate sampling techniques. The sample selected should adequately represent the population.

Collection of Data

The researcher should specify the practical schedule for gathering the data from the sample selected for the study with the help of appropriate tools.

Analysis and Interpretation of Data

The data collected is quantified in the form of counts, test scores, responses the questionnaires, etc. These are analyzed and interpreted with the help of appropriate parametric or non-parametric statistical tests.

Writing of the Research Report

It is the last stage in the research and the researcher should exercise extreme caution in generalizing conclusions and reporting them with all the limitations of the study. For writing the research report university approved format will be focused which is followed by APA style.

5. ACTIVITY/EXERCISE

Discuss with IV grade teachers about the problems faced by them during the teaching. And design a outline for research project on one of the most common problem of primary school teachers.

6. SELF ASSESSMENT QUESTIONS

1. What is an activity? Discuss the importance of activity method. Name the different types of activities you would use in English.
2. List some of social activities and illustrate their importance for promoting the social skills among students.
3. Why should both individual and group projects be considered by a teacher? Illustrative the function and importance of each.
4. Summarize the main points bearing on the role of research project. What does your answer suggest regarding the problems faced by researchers in Pakistan?
5. Elaborate the teacher role in activity method. Also highlight the problems faced by our teacher for using activity method in classroom.

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Unit No. 6

DISCUSSION METHOD

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INTRODUCTION

Most of the time human beings are in one way or other interacting with each other. They are discussing on different ideas. Discussion is simply exchange of ideas and opinions. In classroom settings, teachers use different teaching methodologies. Discussion method is of great worth. What teachers are doing when they engage in classroom discussion is quite different from what is typically considered discussion. The modern theoretical and pedagogical developments in instruction have fostered effective classroom discussion a crucial teaching skill. The purpose of classroom discussion is to enable the teacher to pull the content dictated by the curriculum out of the class by imposing a limited discussion-like format.

The discussion method employs two-way communication and open-dialogue technique between the teacher and the learner. The method starts with a discussion between teacher and learner; and among the learners. Verbal and non-verbal feedback from teacher is the key element in this method, which permits the learner to determine if the desired learning outcomes have achieved. If not, the learner may be directed to work more and present the information again, but in a different manner.

Discussion method is vital not only for students as well as teachers. From the learners' side, it gives them a chance to express their views clearly, to rationalize judgments, and to endure different visions. It not only allows active engagement of students but also stimulates thinking about key learning points. It changes and develops learners' attitudes by providing understanding and insights into new ideas. It also offers students' an opportunity to request for explanation; to observe their own thoughts; to appraise ideas; and to create their own perspectives. Many students may be afraid or feel shyness to discuss in class, but open dialog gives superb learning experience. Students who have different opinion from teacher should move and describe it. To participate in classroom discussion, students have to follow certain steps. First step is to follow what everyone is saying. Second step is to write down the important points during discussion. Third step requires students to feel free to ask questions, and also make an effort to give answers of the questions because it enhances learning by giving clarification of the material. Next step motivates students to make an effort to summarize important points during discussion. Restating the idea is another strategy to start talking and to strengthen the statement and to provide clarification of the discussed idea.

Classroom discussions occur on different basis. Perhaps teacher wants to arrange a discussion to launch a fresh idea or project. May be discussion is needed to critique on a sample essay etc. Whatever the condition, teacher should take care of his/her role, as well as the goals of teaching learning process. Taken together, these provide a starting point to give shape to classroom discussions. Classroom discussion is fruitful if it is planned well. When preparing a discussion, a teacher has to consider his/her every day goals and should know the expected outcomes from the students after discussion. A teacher should also know whether the planned discussion will add to the overall goal for the lesson or not.

OBJECTIVES

After studying the unit, it is hoped that you will be able to:

1. Explain the structure of classroom discussion.
2. Discuss characteristics and different types of classroom discussion.
3. Understand the procedure of planning an effective classroom discussion.
4. Develop rules to organize classroom discussion.
5. Discuss rationale and different types of questions in classroom discussion.
6. Evaluate the tips for asking and answering questions during classroom discussion.
7. Identify advantages and disadvantages of discussion method.
8. Specify the rules for improvement of classroom discussion.

1. CLASSROOM DISCUSSION

Discussion is an expression and exchange of verbal or written ideas based to achieve certain objectives and goals. Classroom discussion is an important teaching strategy because of its relation to the development of participatory citizenship, critical thinking, and classroom community. Class discussion facilitates learners to observe, assess and share knowledge about specific subject matter. It also gives a feeling for students to sight from multiple angles, to make fresh thoughts, ideas, and improve their communication and expression talents (Larson and Keiper, 2000).

There are several definitions of classroom discussion. The Dictionary of Education as cited in Jones et al (1994, p.1) describes discussion as:

"An activity in which people talk together in order to share information about a topic or problem or to seek possible available evidence or a solution. It is used more and more in student-centered learning venues as a means of engaging students in the "active" construction of learning through collaboration and the exchange of perspectives".

The above definition highlights that discussion method promotes student-centered learning by creating active learning environments. Nystrand, Gamoran, Kachur, and Prendergast (1996, p.16) state that high quality discussion occurs when every student is an active participant.

"By discussion we mean turn-taking among students and teachers which departs from the normal structure of classroom discourse and does not obligate students to wait for teacher's evaluation before responding themselves to another student's response, and where their teacher, rather than evaluating a student's response, joins in and becomes a conversant".

They discussed that important ingredient of classroom discussion is dialogue, the exchange and expression of ideas, and transmission of knowledge between students and teacher. Discussion might take place in a variety of ways from structured and planned activity to unplanned opportunity to exchange ideas and thoughts. Peter (2008, p.127) states discussion method as:

"Discussion is an excellent way of developing thinking skills and higher-order learning. Discussions are important when exploring opinions, beliefs and attitudes and encouraging learners to appreciate other points of view".

He has extended the concept of classroom discussion in the above definition and highlighted that it promotes higher order thinking skills. Moreover, classroom discussion serves several learning objectives because it is not only an exclusive classroom talk but also a very particular group dynamic. It involves teachers and students to talk backward and forward at a lofty affective and cognitive levels to discuss on the subject matter being taught. Dillon (1994) stated that during discussion, teacher and students talk about an issue, some topic which is in question for them. Their talk results in variety of opinions and proposals over the issue.

Larson and Keiper (2000, p2.) have conceived discussion as an effective teaching strategy to foster active participation of learners.

“Discussion is thought to be a useful teaching technique for developing higher order thinking skills that enable students to interpret, analyze, and manipulate information. Students explain their ideas and thoughts, rather than merely recount, or recite, memorized facts and details. During discussion learners are not passive recipients of information that is transmitted from a teacher. Rather, learners are active participants. Discussion, when combined with probing, open-ended questions, requires students to organize available information for the purpose of arriving at their own defensible answers.”

They have highlighted that discussion method enhances students’ vision and motivates them for learning. Moreover the above definition reveals the importance of questions to make classroom discussion an effective instructional strategy.

1.1 Structure of Classroom Discussion

Marilla and Svinicki (2011, Pp.133-134) have elaborated the structure of classroom discussion. The discussion class is necessarily a tiny crowd trying to complete an assignment. As such, the class can perform its tasks more effectively if each student in the group is conscious of the different types of activities and responsibilities he/she can perform to make discussion smoother. Every individual has his own specific style of acting in classroom discussion. Some students prefer to lead, some students work to keep the group focused on the discussion task, and some act to keep the group from taking itself too seriously. Here are some different tasks students usually perform in discussion group:

1.1.1 Task Functions

These functions are related to the completion of a given discussion topic. Students usually act in the following manners:

1. *Information and opinion giver*: Offers facts, opinions, ideas, suggestions, and relevant information to help group discussion.
2. *Information and opinion seeker*: Asks for facts, opinions, ideas, suggestions, and relevant information to help group discussion.
3. *Starter*: Proposes goals and tasks to initiate action within the group.

4. *Direction giver*: Develops plans on how to proceed and focuses attention on the task to be done.
5. *Summarizer*: Pulls together related ideas or suggestions and restates and summarizes main point discussed.
6. *Coordinator*: Shows relationships among various ideas by pulling them together and harmonizes activities of various subgroups and members.
7. *Diagnoser*: Figures out sources of difficulties the group has in working effectively and the blocks to progress in accomplishing the group's goals.
8. *Energizer*: Stimulates a higher quality of work from the group.
9. *Reality tester*: Examines the practicality and workability of ideas, evaluates alternative solutions, and applies them to real situations to see how they will work.
10. *Evaluator*: Compares group decisions and accomplishments with group standards and goals.

1.1.2 Social Functions

These functions are related to the interpersonal and intrapersonal communication, negotiation and socialization process. These tasks are done in the following manner:

1. *Encourager of participation*: Warmly encourages everyone to participate, gives recognition for contributions, demonstrates acceptance and openness to ideas of others, is friendly and responsive to group members.
2. *Harmonizer and compromiser*: Persuades members to analyze constructively their differences in opinion, searches for common elements in conflicts, and tries to reconcile differences.
3. *Tension reliever*: Eases tensions and increases the enjoyment of group members by joking, suggesting breaks, and proposing fun approaches to group work.
4. *Communication helper*: Shows good communication skills and makes sure that each member understands what other members are saying.
5. *Evaluator of emotional climate*: Asks members how they feel about the way in which the group is working and how they feel about each other, and shares own feelings about both.
6. *Process observer*: Watches the process by which the group is working and uses the observations to help examine group effectiveness.
7. *Standard setter*: Expresses group standards and goals to make members aware of the direction of the work and the progress being made toward the goal, and to get open acceptance of the groups' norms and procedures.
8. *Active listener*: Listens and serves as an interested audience for other members, is receptive to others' ideas, and goes along with the group when not in disagreement.
9. *Trust builder*: Accepts and supports openness of other group members, which reinforces risk taking and encourages individuality.
10. *Interpersonal problem solver*: Promotes open discussion of conflicts between group members in order to resolve conflicts and increase group togetherness.

Tkfinley (2011) has suggested different ways to create classroom discussion where students enjoy more freedom and safety to express them. These are as followings:

1. *Classroom arrangement:* Chairs and desks arranged in a circle is a preferred classroom arrangement for a discussion group. Students do not feel comfort in sitting in rows because it covers too much space and classroom looks confined. With a circle, the room will also feel less cluttered and students are likely to have more conversations because they can see each other's faces.
2. *Respect of opinions:* Teacher should establish rules before generating classroom discussion. An environment where every one's ideas are given respect is highly appreciated.
3. *Tackle the opinions:* Teacher should tackle the wrong answers very carefully. Students with wrong answers should not be openly disagreed in front of the class. It may create unrest and fear among students of giving wrong answers. If a student gives an incorrect answer or doesn't understand the material, he/she may be asked questions to get him to reconsider. These questions can also be directed at the group. This process of asking questions will help him to rethink his position, help other students who are confused and give their peers the opportunity to answer correctly.
4. *Memorization of students' names:* It is important for a teacher to motivate students to learn each other's names. The first few days of class, if students have learnt their names and shared something interesting among the class, it would give them an opportunity to develop some rapport for onward classroom discussions. Teacher can play his role to help students to memorize their names by playing a game where students try to match names with personal information. When students are given permission to speak, call names. Identifying everyone by name will make the class more personable.
5. *Grouping:* grouping is another important thing to create a smooth discussion. Small groups are more preferable. In these smaller groups, each student may be given a mini-assignment. Now everyone in the small group has a responsibility and something to share. This encourages students who are shy or less comfortable with speaking in front of larger groups.
6. *Students' involvement:* Keep students involved in the discussion. Some students are very open and feel comfortable to share their opinions but some students are very shy to share their views with others. Teacher should ask follow-up questions to encourage students to get involved.
7. *Flexible schedule:* flexible class schedule is also very important. Local, national, and international events can grab students' attention. Take some time to discuss these events. It will show to students that they are being valued what they're thinking about.

Activity No. 1

Fill in the blanks with suitable words:

Discussion is a/an _____ and exchange of verbal or written ideas.

An important ingredient in classroom discussion is _____

The discussion class is necessarily a _____ crowd trying to complete an assignment.

In discussion group, the functions of students related to interpersonal and intrapersonal communication are called _____ functions.

Chairs and desks arranged in a _____ is preferred in classroom arrangement.

1.2 Characteristics of the Discussion Method

Cooper and Simonds (1995, p. 256) have highlighted some characteristics of discussion method:

1. **Experiential Learning**

Students learn best when they are actively involved in the learning process. Using the discussion method, a student's concrete, personal experiences are followed by observation, reflection, and analysis of these experiences. This process leads to formulation of abstract concepts and generalizations, which, in turn, leads to hypotheses to be discussed and tested in future experiences.

2. **Emphasis on Students**

Students' experiences serve as the basis for the discussion. Although the teacher must have a specific goal in mind and a general framework for reaching the goal, student input determines the specific direction the discussion takes. In this way students' feel that they are given worth and value.

3. **Focus on Critical Thinking**

Discussion method develops and enhances students' critical thinking skills. Developing critical thinking skills involves consideration of three areas: instructional design, a focus on learning by doing, and strategic teaching. There are three phases of developing critical thinking among students. These include identification phase; focusing phase; and application phase.

- **Identification phase**

It includes identification of students' existing ideas. This could be done through a series of questions or a diagnostic test.

- **Focusing Phase**

Once students' existing ideas have been identified, students and the teacher focus on the students' initial ideas. This could be done through an activity or situation that challenges the students' initial ideas. Teacher can use "What if..." questions to stimulate students' thinking about the consequences of the criteria used.

- **Application Phase**

In this phase, students have the opportunity to practice using the new material in a variety of contexts. At this point in the critique unit, students could view videotaped speeches, critique them, and then discuss their critiques. This phase requires strategic teaching. "*Strategic Teaching*" calls attention to the role of the teacher as a strategist, making decisions about the what, when, and how of teaching and learning:

What: decisions involve the material of instruction which includes the content, skills, and strategies.

When: decisions involve the conditions under which it is appropriate to apply a given strategy or skills and about teaching students this information.

How: refers to making decisions about the particular procedures needed to implement a given strategy or skills about teaching those procedures to students.

In the application phase, the teacher plays an important role and he is considered "*The strategic teacher*". A strategic teacher is a model and mediator who demonstrates how to think through a given task, how to apply the strategies, and "what to do when you don't know what to do". Intercedes between the students and the learning environment to help students learn and grow. Anticipates problems in learning and plans solutions to solve them. Guides and coaches students through the initial phases of learning to independent learning.

4. Use of Questions

Discussion method encourages use of questions. Questioning technique stimulates students' active participation and critical thinking skills. Varied question levels i.e. probe, rephrase, prompt, wait for student responses, ask process questions ("How did you get that answer?") not only enhance students' understanding of meaning but also promote critical thinking.

Activity No. 2

Read article 6.3.2 and give short answers to the following questions:

1. Enlist salient characteristics of discussion method.
2. Discuss application phase of students' critical thinking.
3. Explain importance of use of questions in classroom discussion.

1.3 Types of Classroom Discussion

There are different types of classroom discussion which can be effectively used by the teacher. Kinne (2000) has suggested the following types of classroom discussion:

1.3.1 Small Groups

Small groups have fewer than 20 members, making it easier for people to actively participate. They meet as small gatherings or as break-outs of large meetings and offer many opportunities for creative, flexible interchange of ideas and lively, meaningful participation. Small group discussion is usually preferred for classroom discussion. Size will depend on time and the sensitivity or complexity of the subject. In most cases each group selects a reporter to summarize its discussion. Haugen (1998) has given some suggestions for small group discussion:

1. Make a safe place. Students don't contribute to a discussion if they are afraid that they will be ridiculed for what they say.
2. Small group discussion is useful when there are clear learning objectives. Teacher should have clear objectives for the discussions and communicate them clearly. It's helpful for the teachers and students if the objectives are stated in "action" terms. Useful objectives relate to what students should know, understand, be able to apply, or use effectively. The memorization of a list of facts or dates is not in itself

- a very useful objective but being able to identify how current events both resemble and differ from an historic event, for example, would be a workable objective.
3. Teacher should formulate and communicate his/her expectations of the students. Will they be graded on participation? So, there should be clear expectations for what is expected from the students and how they will be tested. Students also need to understand what they will have to know, how well they need to know it, and how they will have to demonstrate what they know.
 4. Avoid yes/no questions. Ask "why" or "how" questions that lead to discussion and when students give only short answers, ask them to elaborate. Also, avoid questions that have only one answer.
 5. Don't fear silence. This may be the most difficult thing to do but it's absolutely essential. When small group discussion is facilitated, teacher tends to feel that a lack of response within one or two beats is stretching into an eternity. But even if teacher has posed a very interesting question or situation, the students will need some time to think and formulate a response.
 6. When possible, set up the room for discussion. A circle works best, especially if the group can sit around a table. If it's difficult to re-arrange the furniture; then teacher should move around the room, sit among the students; become a discussion participant rather than a teacher.
 7. Get to know the students' names and who they are. Students are more likely to be engaged with the group if addressed by name rather than by being pointed at. If a teacher knows the interests, majors, experiences, etc. of the students, it becomes much easier to think of ways to involve them.
 8. Participants should be provided positive feedback. Feedback can be a good means of getting through a lull in the discussion also. A recap of what has been discussed so far helps to reinforce main points, and often stimulates further discussion.
 9. Show enthusiasm for the subject. Students can't become interested in a discussion topic for which the instructor shows no enthusiasm. If teacher is interested in the subject, then it will help him to discover what students think and feel about it.
 10. Teach students how to participate. Many of them may have had little or no experience with small group discussion, and most of those who have experience have never been taught how to do it well. Teacher could prepare a handout for his students or assign a project that involves their preparing information for the rest of the group about small-group communications.
 11. Ease students into discussion. One tactic is to arrive at the classroom early and engage the first students to arrive in "chit chat" about the weather, a recent sports event, something in the news, etc. The point is to get students comfortable and talking so that to make them at ease into the subject for the day. This will also help teacher to establish the idea that discussion is a natural process, not cruel and inhuman punishment, or something with which they have no experience.
 12. Teacher should also clarify his role as a discussion facilitator. If a teacher is uncomfortable, his students will also be uncomfortable.
 13. Provide opportunities for students to talk to each other in smaller, unsupervised groups so that they get to know each other and become comfortable with sharing

ideas. Instructor can do this with small "break-out" groups which are assigned a specific task about which they will report to the larger group. Students can also be assigned group projects, encouraged to form small study groups, or have the class form interest groups which are responsible for contributing something related to their particular interest periodically. The point is to encourage interaction that is not under the watchful eye of the instructor and helps students to become comfortable with each other.

14. Manage both process and content. This is often rather difficult at first but becomes much easier with practice. Good discussion is as much about process as it is about content and if teacher concentrates on one but neglects the other, he is likely to have problems. To a great extent, teacher will need to take his cues from the students. While instructor is part of the discussion, he has the added responsibility of monitoring it as well.
15. Listen, learn, and adapt. There is no single prescription for all groups. Much like individual people, groups have individual characters and teacher will need to adapt his style to them as much as is comfortable for him. If instructor can be open to those differences, they will become part of what makes teaching an interesting challenge year after year after year.

1.3.2 Buzz Groups

In buzz group every member of a larger group is directly involved in a discussion process. Participants discuss in pairs for a limited period. This method is especially effective for articulating ideas in preparation for a general discussion or to give expression to personal response to a film, presentation, or experience. After talking in pairs, couples might be asked to combine in groups of four and compare their opinions. ([Lesmeister](#), 2011).

In buzz groups the learners are divided into small groups, usually two or three. These small groups meet for a short period to consider a simple question or problem. The ideas, thus exchanged, may then be presented to the other participants by each of the small groups in turn, so promoting further discussion. Buzz groups are devised to enable every person in a group to seek advice from other members of a group, to produce fresh ideas on a topic and to resolve a clashes within a group. There is a discussion leader who poses a simple question or problem. This is discussed by the small groups for a limited period (up to three minutes) without any time for preparation or reflection. A representative of each small group then reports briefly to the other participants. This method is equally effective for small and large groups. For small groups, it can be used to consult all the members of a group on a precise question. It can be applied to settle a conflict between members of a group. Or it can be used to produce fresh ideas on a topic or a problem. In all these cases, it can be used within a group which is already discussing a topic, or is about to discuss a topic. On the other hand, it can be used with a much larger group at the beginning, or during a talk. In such a case, the participants simply turn to face one another, making small groups of two or three people, without too much disturbance, or rearrangement of the chairs. After the discussion, they turn to face the speaker and report

their findings. It is worth noting that a similar method (known in French as 'Six Six') involves larger groups of up to six people, discussing a topic for up to six minutes (hence the title). This can also be used at the beginning of, or during a talk (The Scout Association, 1999).

[Lesmeister](#) (2011) has given the role of facilitator in buzz group. He has indicated that the facilitator should split the large group into smaller groups (3-5). Then he should present a problem or pose a question for the brainstorming of the groups. Every group should be given 5-10 minutes. To discuss simple topics, each group should be given 5 minutes, and 10 minutes for difficult or complex topics. Afterwards, each group should be encouraged to report (1-2) key thoughts from their discussion.

1.3.3 Talking Circle / Word Wheels

The whole class is divided into two groups; these groups sit together in one circle; one group sits in a circle facing outward and the other facing inward so that each person faces someone else. The participants of these groups then share their views on a given problem/topic. The facilitator sets a time for discussion session and then asks questions from everyone on the inside to move one seat to the right and discuss with the new person sitting opposite. This process continues until each person has changed views with several others (Kinne, 2000).

1.3.4 Talking Tickets

Talking tickets provide every student an equal opportunity to speak. Each participant is given three talking tickets, each representing a certain amount of "air time." Once someone has used all her or his tickets, that person has no further opportunities to speak. This technique not only encourages students for critical thinking, time management and confidence, but also gives every student an equal opportunity to speak. Whole class is involved in discussion and more talkative and less talkative students are given equal chances to speak (Kinne, 2000).

1.3.5 Think-Pair-Share

This technique was introduced in 1981 by Professor Frank Lyman. This strategy is based on the idea of co-operative learning and peer interaction. It is considered as a foundation stone for the development of cooperative classroom with a basic purpose to develop thinking skills, increase information and develop communication skills among students. The core of this method is 'wait or think' time, which improves students' responses to questions. It is an effective and simple strategy, useful from early childhood through all consequent stages of education. It has a very flexible structure, which has been utilized in variety of ways for various learning purposes. It helps students to share information, develops effective listening ability, questioning skills, summarizing others' ideas, reinforces positive interdependence, enhances individual accountability, promotes equal participation, increases simultaneous interaction and develops paraphrasing ability. There are four steps in think-pair-share technique:

- **Problem:** Teacher asks students an open-ended question or poses a problem to which there may be a variety of answers.
- **Think:** Students are given ‘think time’ and are directed by the teacher to think about the problem or question.
- **Pair:** Students utilize the ‘think time’ and turn their faces to their learning partner and work together to share ideas, discuss, clarify, challenge and arrive at possible solutions.
- **Share:** The pair then shares their ideas with another pair, or with the whole class. It is important that students need to be able to share their partner’s ideas as well as their own (Ledlow, 2001).

The above discussion indicates that in the think-pair-share technique, participants have time to write or simply think on their own about a critical question; they then link with one other person to discuss and then bring their reflections to the entire group.

1.3.6 Write Around

In this method, the discussion is carried out in written form. It is also called silent discussion. Teacher poses a key question and asks students to write a response at the top of a page. Each paper is then passed to the person on the right, who reads the first statement and responds to it by writing something below. This process is repeated until three or four people have had an opportunity to respond. Then students pass the papers back to the left so that everyone can see what has been written on the pages. Because the facilitator does not see what participants write, this method can enable them to express views they might desire to keep from the facilitator (Kinne, 2000).

1.3.7 Guided Discussion Method

Guided discussion method helps the instructor to query the student on a certain topic to assess the knowledge and learning of student that what the student knows, and what he does not know. In this method, teacher “draws out” information and encourages students’ questions. There are different types of questions in guided discussion method:

1. Overhead/How/Why: This category of questions is directed to the whole group.
2. Rhetorical: Rhetorical questions prompt group thought and thinking.
3. Direct: direct questions are asked of a particular student.
4. Reverse: In response to a question, another question is asked.
5. Relay: Relay the question to the group if asked by a student.

An effective question is that which is suitable for the subject, contains an objective, organizes main and subordinate points logically, and guides students in their preparation. Guided discussion is effective when it is planned and followed by a logical sequence. Below is the structure of guided discussion:

- **Objectives:** Before starting guided discussion, the instructor should have clear objectives.
- **Introduction:** The instructor should introduce the discussion simply by posing a question or telling of a story to help get the discussion off the ground.

- **Discussion:** The instructor should try to keep students focused on topic. It demands attention from the instructor and continual evaluation of students' knowledge.
- **Summary:** Before moving to the next section, the instructor should summarize previous section.
- **Conclusion:** Review and recap is indispensable in guided discussion to have an idea what was covered in the discussion. This will help the student grasp the "larger picture." The instructor should clarify any questions (Kinne, 2000).

It indicates that the guided discussion method has a clear meaning and is designed for specific purpose to stimulate thought of students by relating new information with previous knowledge.

1.3.8 Reflective Discussion Method

Weeks (2011) highlighted that in reflective discussion method, the teacher generates a [structuring device](#) or key question. The students are provided with a series of points by the teacher which they have to bring up during the discussion. Students are then encouraged to prepare potential questions around those points. The teacher uses questioning technique to encourage students to deeply investigate the topic. It may be a topic which allows students to defend their own values; however, they should be observed so that the values of other students will not be threatened. In addition, the teacher should refrain from allowing his/her values to dominate the discussion. The teacher also shares the control and direction of the lesson with the students. This fosters student to student interaction. For the conclusion, the teacher re-asks the main question and lets students respond by summarizing their opinion as an answer to the question. The students then defend their opinion with reasons and information obtained from the discussion, as well as with their prior knowledge of the subject. A teacher summary and reiteration of the lesson's significance concludes the discussion.

Example

1. Teacher presents the structuring question, for example the teacher may ask; "What measures should we adopt to overcome poverty in Pakistan".
2. The teacher allows the students to answer the question together. The students are allowed to question one another, ask for clarification and justification as necessary, in order to challenge each other to be precise and accurate with suggestions they introduce.
3. The teacher's role becomes one of facilitator. He/she asks clarification and justification questions, encourages all to participate, and points out their contradictions in logic as the students interact.
4. In conclusion, the teacher gets students to respond to the main question, and the discussion concludes with a statement of what was learned and why the discussion is useful and important to them (Kinne, 2000).

Green (2000) has also suggested following types of discussion:

1.3.9 Turn to Your Neighbor

This is used when there are easy answers to questions and teacher wants quick response. It contains simple structure in which a question is asked; students turn to a classmate sitting next to them to discuss their answer. Usually, students are given 30 seconds to discuss an answer.

1.3.10 Round Robin

This technique is useful when students are divided into groups (3-5 students per group). Teacher poses a question and students quickly go around in the circle and share their answers. This technique is also useful to elicit quick responses from pupils. Students are allowed to offer answers until teacher tell them to stop. Students are also given one opportunity to pass on answering. At the end, group members share their ideas with the class. Teacher can randomly call on individuals to share and allow the others in the group to clarify what was said.

1.3.11 Line-Ups

In this technique, students are lined up to some standard, such as height, weight, birthdays or alphabetical order. The teacher poses a question. At this point, the line is folded in a way that the member at the ends move together to form two lines facing each other. Students then discuss with the person in front of them. Teacher can then have volunteers share with the entire class or students can be randomly called. This technique fosters great discussions by allowing students to move out of their seats and to talk with a diversity of students.

1.3.12 Value Lines

This technique requires the longest to carry out. It is used when teacher wants pupils to acquire a stance on a problem. When teacher posits a questions or an issue, then students stand on one side or the other of an imaginary line. One side of the line is for those who agree with the statement, and the other side is for those who disagree with it. Then students on the either side of the line turn to each other and discuss why they agreed or disagreed with the statement. Then each pair turns to another pair across the line and discusses their agreement and disagreement. Students can be randomly called to share what they heard from individuals with different opinions from theirs. This technique also allows students to move out of their seats and expose a variety of different opinions. In this technique, monitoring of students is a challenging task for teacher.

1.3.13 Jigsaw

In this technique, material or work is divided among each member of the group. Every individual has a portion of the required task and no one has everything that is needed to complete the task. Teacher usually uses this method to divide an assignment so that each group member takes a part. Students share their information within the group members. Group members need each other to obtain the full experience.

1.3.14 Sharing Limited Resources

Sharing limited resources is another way to create positive interdependence. Giving one paper/book/quiz/poster/markers/assignment/ to a group helps draw group members together to complete an assignment. Limiting resources is important not only in light of budget constraints but is also the best way to increase the chances that cooperation will occur within the group.

1.3.15 Question and Answer Pairs

Teacher seats the class in circle and divides students into question and answer pairs. These pairs ask and answer questions on assigned reading or as a great review activity before a test. These pairs are assigned numbers 1 and 2. The "1's" are told that they will not be moving. The "2's" are told that they will be moving throughout the activity. Teacher then asks questions and students in 1s and 2s pair up, and sort out the best answer for the question. Teacher needs to check the amount of time before the "2's" are told to move to their left, and meet the next 1. They then answer the next question on the review sheet. This continues as the 2's circle around the room until they are back at their own original seat. Students should be encouraged to place a check/asterisk by any questions that they are sure of. Those that they do not feel confident on, they can revisit on their own studies. The students receive the benefit of being able to talk to each other one on one.

1.3.16 Advanced Preparation Pairs

Students are to write a short analysis paper summarizing the vents/relevancy/opinion of an assigned reading for class. Students bring copies of the paper to the class. The members of their base group or discussion pair will listen to the team member read the paper, then edit, and evaluate the paper. Criteria for review can be predetermined by instructor, class, or peer group. Each group can select the "outstanding" paper as they deem it, then in large group it can be discussed as to why it stood out from the others.

Above discussed different types of classroom discussion not only provide an opportunity for the teacher to improve teaching learning process, but also motivate students to develop critical thinking skills and develop interest in learning.

Activity No.3

Identify below statements as true/false (T/F):

- | | | |
|--|---|---|
| 1. Small groups have more than 20 members. | T | F |
| 2. In buzz groups, only the group leader is involved in discussion. | T | F |
| 3. Discussion method in which class is divided into two groups which sits together in one circle is called Talking circle/Word Wheels. | T | F |
| 4. In Talking Tickets, every student is provided three talking tickets. | T | F |

5.	In 1981, Professor Frank Lyman introduced Write Around technique.	T	F
6.	The method in which discussion is carried out in written form is called Write Around method.	T	F
7.	Reverse questions are asked in Guided discussion method.	T	F
8.	Teacher generates a structuring device or key questions in Round Robin technique.	T	F
9.	In Jigsaw method, material is divided among each member of the group.	T	F
10.	In Advanced Preparation Pairs method, teacher seats the class in circles and divides students into question and answer pairs	T	F

2. PLANNING THE DISCUSSION

There are two misconceptions about planning a discussion. First misconception is that most of the teachers think planning a discussion does not require much effort; second misconception is that discussion cannot really be planned because of its spontaneous nature. Both ideas are wrong. Effective classroom discussion requires much effort and proper planning before conducting discussion. Beforehand planning by the teacher leads fruitful discussion. Kern (2006, p.127) has suggested following principles for planning a classroom discussion:

1. Determine the goals of discussion.
2. Assess prior knowledge and experiences of students.
3. Assess and build your background knowledge on the topic.
4. Provide a supportive environment for discussion.
5. Offer your viewpoint, when necessary, to build knowledge or correct misinformation.
6. Allow for alternative viewpoints to agree or disagree.
7. Plan meaningful connections between the discussion, over the content, and real-life experience.

Arends (2004, Pp 431-437) has also suggested following steps for planning effective classroom discussion:

- **Consider Purpose**
“Deciding that discussion is appropriate for a given lesson is the first planning step. Preparing the lessons and making decisions about what type of discussion to hold and specific strategies to employ are of great importance.
- **Consider Students**
Knowing about students’ prior knowledge is just as important in planning discussion as it is in planning other kinds of lessons. Experienced teachers know that they must also take into consideration their students’ communication and discussion skills. They consider for instance, how particular students in the class will respond differently to various kinds of questions; they predict how some will want to talk all the time whereas others will be reluctant to say anything. When planning discussions, it is important to devise ways to encourage participation by as many students as possible, not just the bright ones, and to be prepared with questions and ideas that will sparkle the interest of a diverse student group.
- **Choose an Approach**

There are several different kinds of discussions, and the approach chosen should reflect the teacher's purposes and the nature of the students' involved. There are three most common approaches.

Recitations: Although recitation is often overused, it nonetheless has its place. One important use is when teachers ask students to listen to or read information on a particular topic. Recitation can cover variety of topics. Teachers generally ask students to read or listen with a definite purpose in mind. Sometimes it is to glean important information about a topic, whereas at the other times it is to become familiar with a particular author, a specific type of literature, or a point of view or particular interpretation. Brief question-and-answer session (recitation discussions) about assigned reading materials or a lecture can provide teachers with a means of checking student understanding. They also motivate students to complete their reading assignments or listen carefully when the teacher is talking.

Inquiry or Problem-Based Discussion: Discussions are sometimes used to engage students in higher-order thinking and, thereby, to encourage their own intellectual investigation. Normally, such discussion is part of some type of problem-based teaching. Although a number of specific approaches have been developed, they all have a common syntax in which the teacher opens the lesson by presenting students with what Suchman (1962) labeled as *discrepant event* what Palinscar and Brown (1989) called *mystery spots*. Both refer to puzzling situations that are not immediately explainable, such as water appearing to run uphill, metal changing shape when heated, and social data that confront conventional wisdom. Because these situations are puzzling to students and create cognitive dissonance, they provide a natural motivation to think. When using this approach, teachers encourage students to ask questions, to generate empirical data, and to formulate theories and hypotheses to explain the puzzling situation. In this type of discussion, teacher helps students to become conscious of their own reasoning processes and teach them to monitor and evaluate their own learning strategies.

Sharing-Based Discussion: Often teachers hold discussion for the purpose of helping students develop their sharing of meaning from common experiences or to confront one another with differences of opinions. Younger children may be asked to talk about what they learned from their visit to the zoo or the apple farm. Older students may be asked about what they have learned from a science experiment they performed or from a novel they read. Important current events are often discussed in the classrooms so that different point of view may be explored. Unlike recitations, during which teachers ask students to recall specific information, sharing-based discussions help students to form and express thoughts and opinions independently. Through dialogue about shared experiences and what these experiences mean, ideas are refined or expanded and questions are raised for future study.

- **Make a Plan**

A lesson plan for a discussion consists of a set of objectives and a content outline. The plan should include not only the targeted content but also a well-conceived focus statement, the description of a puzzling event, and / or a list of questions. If the discussion is to follow a lecture, it is likely that the teacher already has the content firmly in mind and has explored the important conceptual relationships. When the discussion follows assigned readings, experienced teachers know that they must have extensive notes not only about specific facts but, more important, about the main ideas, and point of view.

Sometimes a teacher finds using the *conceptual web* technique a useful planning device. A web provides a visual image of the characteristics and relationships around a central idea. To make a conceptual web, a teacher identifies the key ideas associated with a particular topic and arranges them in some logical pattern. Teachers will find that careful attention to preparation will help immensely as they strive to keep details straight for students and as they facilitate students understanding and higher-order thinking. For some types of discussions, asking students questions become a key feature. In preparing their questioning strategy, teachers need to consider both the cognitive level of questions and their level of difficulty.

During the past three decades, many systems have been developed for classifying the cognitive level of teacher questions. Most of the classification systems are similar but all consider questions in terms of the cognitive processing they require of students. Teachers can also use Bloom's *Revised Taxonomy of Educational Objectives*, to design questions for classroom discussions. These include six categories of questions i.e. *Remember, Understand, Apply, Analyze, Evaluate, and Create*. Questions in the "remember" and "understand categories require students to recall information (facts, events, principles) that they have learned and to explain what it means. "Apply" and "Analyze questions require more of students and ask them to focus on the "why" of some situation and / or apply particular kinds of knowledge. These questions are sometimes called convergent questions because they ask students to focus on a single, best answer or conclusion and to explain known relationships. "Evaluate" and "create" questions, on the other hand, require students to make judgments based on criteria or answer "what if" questions. These are called divergent questions. Divergent questions allow multiple answers, conclusions, and creativity on the part of students.

In preparing the lesson plan and questioning strategies, teacher should remember to think through the issues associated with question difficulty. Experience helps teachers to know their students and to devise questions of appropriate difficulty. Decisions about question type and difficulty can be better made during the quiet of advanced planning than during discussion itself.

- **Use Physical Space Appropriately**

Another planning task involves making arrangements for appropriate use of physical space. The best seating arrangements for discussion are the U-shape and circle formations illustrated in the figures 6.1 and 6.2. Both seating patterns allow students to see each other, an important condition for verbal interaction. Both can be accommodated in most classrooms. Each, however, has some advantages and disadvantages that should be considered.

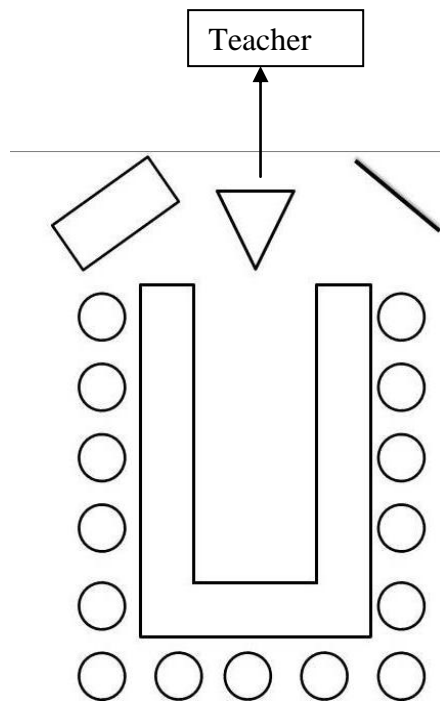


Figure 5 U-shaped seating Arrangement

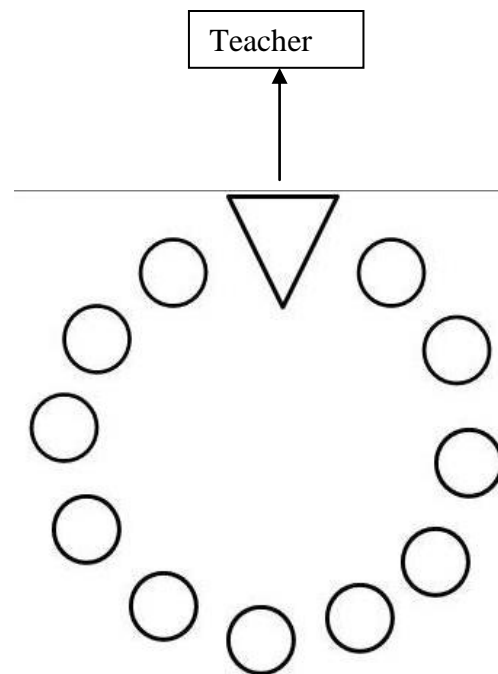


Figure 6 circle seating Arrangement

The U-shape seating arrangement, with the teacher situated in front at the open end of the U, gives a bit more authority to the teacher, an important feature when working with groups of students who lack discussion skills or where behavior management is a problem. The U-shape also allows freedom of movement of teachers. They have ready access to the chalkboard or flip charts, which may be important during the course of a discussion, and they can move into the U to make closer contact with particular students when necessary. The disadvantage of the U is that it establishes some emotional distance between the teacher, as discussion leader, and students. It also puts considerable physical distance between students who are sitting at the head of the U and those sitting at the end.

The circle seating pattern, on the other hand, minimizes both emotional and physical distance among participants and maximizes opportunities for students to talk freely with one another. The disadvantage of the circle is that it inhibits the teacher from moving freely to the chalkboard or among students.

Most elementary and secondary schools today have furniture and other features that make movement from one seating arrangement to another possible. In some instances, however, teachers will be confronted with situations that severely limit this possibility. For example, some science laboratories have fixed tables that make moving tables impossible. This situation requires special problem solving on the part of teachers. Some experienced teachers have students stand in a U-shape during discussion sessions; some elementary teachers have their students sit on the floor. The specifics of the classroom space and the teacher's own personal preferences certainly are strong considerations when making planning decisions about the use of space prior to discussion".

Activity No. 4

- If you are given a task to arrange classroom discussion for 5th class, how will you plan your discussion? Make a chart of your plan by following the guidelines mentioned in the unit.
- Find someone you don't know, introduce yourself, and share your ideas about the benefits of classroom discussion.

3. ORGANIZING THE DISCUSSION

For a successful classroom discussion, teacher needs to organize it in a way to foster on students' active involvement and interaction. It also requires rules that support mutual respect and open exchange. Eglin and Connor (2011) have suggested some rules to organize an effective classroom discussion:

1. **Teacher as a Facilitator:**

Depending on the type of discussion, role of teacher will also vary. The role teacher assumes will form his/her facilitation plan as well. The teacher should follow the following steps:

- **Creating Classroom Community:**
Teacher should decide what type of classroom community he is willing to create. Would he like to conduct a discussion in which participation from all students is mandatory? Is there any objection if three or four talkative students dominate discussions? Would he like discussion in which students sit in circles or rows? Mostly it depends on the nature of the class. If there is a quiet class, then participation of all students is obligatory then letting two or three students to participate and answer every question. The decisions teacher make about classroom community reflects his/her style and needs of students.
- **Accommodate Multiple Learning Styles:**
There are various learning styles. When building classroom community, teacher should think about different ways in which students' learn. Some learners can retain information for longer period, while others require visuals to strengthen concepts. Some learners learn better through lectures, while others like learning by doing. During discussion, class teacher should try different approaches and see how well students respond.
- **Remain Objective: Focus on Student Contributions:**
During discussion, teacher should stay objective on thematic problems. If learners pick up teacher's ideas, they might only participate with what they "think" teacher desires to listen. This blocks critical thinking and hinders them to express their own ideas. Also, if teacher shares too many views, students may disprove these in class. This places teacher in a situation to defend his opinions. That's why teacher should encourage students to come up with their own ideas.
- **Be Honest: Criticize Constructively:**
Students' comments should be honestly validated. Teacher should provide constructive criticism when students give incorrect answers. Although it isn't an easy job, but criticism should not be embarrassing and awful. There are careful approaches to be honest while still rewarding a student for participating in the discussion. When a student gets off track teacher could ask him tactful comments and questions to explain his answer or make corrections in his response.

2. **Stay on Track**

In spite of the type of discussion, one of the teacher's most imperative facilitation targets is to keep it on track. Its teacher's skill how he keeps students' focused. It largely depends upon a teacher's personal teaching style because there is no single way that is suitable for every student. It depends on teacher's efficiency how he structure's classroom community. If student-centered environment is created, it requires considerable contribution to make discussion creative and productive. There are some suggestions to help teacher to start thinking about ways to keep classroom discussions on track:

- **Plan “Goal-Oriented” Discussions**
Before starting a discussion, teacher must have a goal and to determine what is expected to achieve. The plan should be goal-oriented because it will help teacher to keep students on track when they start drifting astray. It will also assist teacher to focus on the attention of students when they start to go off-topic.
- **Ask “Goal-Oriented” Questions**
Teacher should kick-start discussion with such questions which are designed to focus students' attention on the pre-planned objectives. Discussion initiated with goal-oriented questions will move students in a specific direction. Before starting discussion, it is preferable if objectives are written down on board. Objectives written on board will help teacher and students to not veer off-topic and focus attention on the topic being discussed.
- **Avoid Being Derailed**
Unrelated questions bump teacher off target. Teacher should not tackle off course issues during discussion. Students who raise concerns and questions that threaten to disrupt the discussion; should be asked to meet with teacher after the class. Dealing with off-topic matters during class can cause lesson plans and objectives to suffer, if not go unmet altogether.
- **Deal Irrelevant Questions and Comments**
Questions and comments directly related to the discussion topic should be solicited. Undue attention to the irrelevant comments wastes time. Students who ask irrelevant questions interject concentration. Teacher should take instant steps to stay on track.
- **Refocus Attention: Write to Learn**
When a discussion twists into an intense debate, or jumps so far off target and students start to lose their attention from the topic, teacher should refocus their attention by assigning them Writing-to-Learn (W.T.L.) activity. In this activity, students take out a sheet of paper and write down their personal views on whatever has gotten everybody off target. In this way, teacher can redirect students' attention back to the original discussion thread.

3. **Thinking on Your Feet**

Thinking on your feet can be the most challenging part to organize a discussion. In this step, teacher deals with variety of activities which are going on all at once. He is reflecting what is accomplished and what is left to accomplish. He is also dealing with students' queries, concerns, views and ideas at the same time. Here are a few tips to help teacher to improve this step:

- **Be Well Prepared**
Teacher should be well prepared. Discussion topics, introduction of these topics, transition activities, and conclusions should be planned in advance. Discussion questions should also be prepared ahead of time to keep students focused on the topic. Examples to demonstrate or clarify a new concept should be ready before time.
- **Learn to Stall**
If teacher doesn't hear the questions, or think that he was unable to hear the question properly, or doesn't have an answer right there on the tip of the tongue, then he should have the ability to stall and take thinking time. For instance, teacher should ask for the question to be rephrased or repeated. This will give teacher a few minutes in which to consider the question further, and to shape the response.
- **Be Honest**
If teacher don't know answer, the perfect way is to say that he didn't know. Because being a breathing living human being; no one knows all the answers. Students usually know when teacher don't have an answer. Rather than giving wrong answer, teacher should explain them clearly that he is unsure. But teacher should follow up with a promise that he will look in to it and get back to them as early as feasible. Then it should be done. Honesty is rarely disregarded, because students appreciate the courteousness teacher shows them.
- **Don't Fear the Silence: Respect and Use It**
Get comfortable in the presence of silence. Teacher should give at least fifteen seconds to give himself time before responding to the questions. Students usually respect once they've seen that teacher has taken the time to consider their question carefully before responding. Similarly, when teacher asks a question, students should also be given some time to think. If students cannot understand question and take too much time to think then teacher should rephrase the question.

4. **Gauging Comprehension**

For a teacher, it's imperative to understand how well students are grabbing main concepts and ideas. Here are some suggestions for getting the feedback teacher needs to gauge whether they are "getting it" or not and what they are missing.

- **Avoid Yes or No Questions**
Students' critical thinking should be enhanced. Teacher should shun posing yes or no questions. To help students comprehend key ideas and concepts, pointed questions should be asked because these entail students to utilize their previous knowledge. Open-ended questions may also be asked because these require some critical thinking.

- **Summarizing and Paraphrasing**
After teacher has clarified an imperative idea or a complex set of instructions, then students should be asked to give their own reflection by paraphrasing or summarizing it in their own words. Whenever appropriate, students should be asked to include examples. If teacher likes to determine the amount of all students' knowledge, they should be asked to write their summaries or they might be given a homework assignment.
- **Using Quizzes**
To gauge the comprehension of students, teacher should give short quizzes on important concepts or ideas covered either in class or in an assigned reading.

5. **Suggestions to Organize Classroom Discussion**

Svinicki (2010) elaborated that for effective classroom discussion, teacher must have goal to encourage students' participation. When the students are actively involved in manipulating ideas and information, they have a much greater chance of learning them and remembering them. He has also given some suggestions to organize effective classroom discussion:

- **Give the students a chance to be prepared for discussion**
Students should be encouraged for discussion only for those topics on which they have been briefed well in advance of the class period. Discussion will be more effective if students are provided with reading materials, thought questions and objectives of the topic under discussion. This practice enables students to be more at ease about what will go on during discussion.
- **Give yourself plenty of preparation time before class**
Teacher should take time to analyze what the main objectives for the class period are. If a list of questions is prepared in advance, then it will be helpful during class to decide what to say next. Such advance preparation will also let teacher to cover all the levels of questioning appropriate to the instructional goals.
- **Ask questions at a variety of taxonomic levels during class**
Teacher should be well prepared in asking questions according to a variety of taxonomic levels during class. A list of questions prepared before the discussion should contain questions regarding knowledge, comprehension, application, analysis, synthesis, and evaluation. This will make it easier for students to respond to the questions and contribute in discussion.
- **Provide encouragement and praise for correct answers**
Teacher should use varied response styles for correct answers. A word of praise or a restatement of the student's answer or an elaboration of it can encourage other students to participate. Students should also be encouraged to ask questions from each other and from teacher.
- **Occasionally the use of a blind quiz will help to encourage class review**
In this process teacher gives a short quiz at the start of the period. Students are asked to answer the questions but forbade writing their names on the papers. These

“blind” quizzes are jumbled and passed out again to serve as a basis for discussion. Since the student is giving someone else’s answer during the period, he or she will be more likely to answer because the situation is less frightening. Also, such quizzes provide the students an idea of how well they know what’s going on in the material without it disturbing their grades.

- **Maintain a warm, outgoing, friendly atmosphere in class**
Teacher should not be defensive or feel threatened by the students. Rather he should be more confident, friendly and warm, because he is the role model in front of the students and they will follow the behavior showed by the teacher. Teacher should learn the students’ names and some background by having them fill out a 3x5 card on the first day.
- **Summarizing the main points**
At the end of class teacher should spend a few minutes summarizing the main points of the discussion.

Exercise

1. Define the term “classroom discussion”.
2. Discuss structure of classroom discussion.
3. Distinguish among different types of discussion. Which type do you think suitable for elementary classes?
4. Specify the role of teacher in planning classroom discussion.
5. How would you organize effective discussion in your classroom? Discuss with examples.

4. PRACTICING IN ASKING QUESTIONS

In classroom discussion, questions are starting points. A question is any sentence which has an interrogative form or function. In classroom settings, teacher questions are defined as instructional cues or stimuli that convey to students the content elements to be learned and directions for what they are to do and how they are to do it. Discussion, when combined with probing, open-ended questions, requires students to organize available information for the purpose of arriving at their own defensible answers. The type of the questions depends upon the discussion goals. Perhaps teacher is using some writer's ideas to produce ideas for students' writing, or extracting major concepts from a text and organizing them into an academic summary. Teacher might wish to determine whether or not an author's choices are useful. All these choices will depend upon the planning of discussion goals. If teacher is wishing to teach students summary skills, then the discussion questions should be planned to achieve this goal. Teacher might form questions which motivate students to describe an author's purpose and find out the major ideas. Mostly, discussions will be dynamic, focusing on numerous rationales and goals.

Classroom discussion is different from what is typically considered discussion. The purpose of classroom discussion is to enable the teacher to pull the content dictated by the curriculum out of the class by imposing a limited discussion-like format. For effective discussions, teacher should use questions as a guide. Teacher should also practice to develop his own questions. If discussion goal is to teach pupils essay writing skills, a list of questions should be prepared relevant with an essay. Flexible questions, that are planned in a logical order work better. Before starting a discussion, preparation of a list of things that must be covered helps to focus on hierarchy of questions. Care must be taken to not insist on a particular order. Rather, questions connected with one another assist teacher to adapt during discussions.

Teacher may ask variety of questions to stimulate students' thinking and guide discussion. There may be definitional questions like "what does it mean?" there may be evidential questions i.e. "what reasons can you give to defend your point of view?" or there may be policy questions i.e. "what should be done?" (Larson and Keiper, 2010). The type of the questions should depend upon the educational objectives and the students. Kinne (2000) has suggested that teachers should develop the skills of asking questions by keeping the goal of discussion clearly in mind to encourage active participation and analysis. There are some typical types of open questions:

- Hypothetical: "What you will do if...?"
- Speculating: "How can we resolve this issue?"
- Defining: "Can anyone give additional elaboration about the feasibility of that idea?"
- Probing: "Why do you feel that?"
- Clarifying/Summarizing: "Am I exactly saying what you think that...?"

4.1 Questions According to Bloom's Taxonomy

Cooper and Simonds (1995) have elaborated that questions based on Bloom's taxonomy are more effective to obtain the best results from discussion. They have given the following thoughts:

- *Knowledge:* In this domain, questions entail students to simple recall previously learned material. If teacher's purpose is to stimulate this domain, questions should be based accordingly.
- *Comprehension:* In this domain, questions entail students to restructure or restate material in a way to demonstrate their understanding of important meaning.
- *Application:* In this domain, such questions are asked which entail students to apply previously learned material to solve problems in new situations.
- *Analysis:* Questions that demand students to split a concept into its constituent parts for logical analysis.
- *Synthesis:* Questions that require students to combine their ideas into a statement, plan, product, and so forth, that is new for them
- *Evaluation:* Questions that require students to judge something based on some criteria

4.1.1 Probing Questions

Teacher should ask probing questions to stimulate students' mental processes. These questions also help to start a discussion, modify the subject, or change the direction. There are different types of probing questions:

- **Exploratory questions:**
These questions are asked to explore facts and probe basic knowledge of students.
- **Challenge questions**
These questions are solicited to check assumptions, conclusions, and analysis.
- **Relational questions**
These questions check students' ability to compare different themes, thoughts, or problems.
- **Diagnostic questions**
These questions probe students' motives or causes.
- **Action questions**
These questions call for a conclusion or action.
- **Cause-and-effect questions**
These questions are solicited to ask students to develop causal relationships between events, ideas or actions.

- **Extension questions**
These questions are asked to expand the discussion.
- **Hypothetical questions**
These questions are asked to examine students' ability to pose a change in the facts or issues.
- **Priority questions**
Through these questions, teacher tries to recognize the most important issue.
- **Summary questions**
Mostly these questions bring forth synthesis.

4.1.2 Tips to Ask Effective Questions

One of the teacher's prime tasks is to facilitate discussion. In order to have energetic and substantive discussions, teacher needs to be acquainted with the skill to ask effective questions. Following are some handy tips for teacher to ask questions:

- **Discuss the Elements of a Successful Discussion**
From television talk shows, students usually gain the perception that discussion is a heated debate. In fact, successful discussion isn't essentially adversarial. Certainly, pupils might challenge a concept that has been discussed, but they might also examine the concept or discuss questions or present examples given by another student's remarks.
- **Brainstorm**
Brainstorming about a topic helps teacher to get students' involvement and participation. Role of teacher is to record their views, ideas and concepts on the blackboard.
- **Rearrange Your Classroom**
Students' seated in a square or a horseshoe gives them confidences to speak to one another and not to focus their attention entirely on teacher.
- **Pause**
Considerable amount of pause to give students' time to think and generate their answers is necessary. Teacher shouldn't feel forced to call on the students who raise their hands first. If students are not provided with a pause or thinking time, then class will resemble a game show in which those who raise their hand first are the winners.
- **Avoid unproductive questions**
Certain types of questions are unproductive.
- **Recall questions**
Teacher shouldn't ask questions to which the answer is clear.

- **Rhetorical questions**
Teacher should avoid asking questions exclusively for dramatic effect.
- **Yes or no questions**
Yes or No questions should not be asked because these slow down discussion.
- **Leading questions**
Open-ended questions are preferred.
- **Guess What I'm Thinking questions**
Don't ask questions where teacher has already devised the answer students' desire.
- **Ask the kinds of questions that stimulate discussion**
Recall or simple agreement or disagreement questions are ineffective. In contrast, open-ended questions are effective because these engage higher-order thinking skills i.e. analysis, interpretation, application, prediction, generalization, and evaluation.
 - *Questions for students' input:* Keeping in view the remedial measures to stop pollution, what steps you will take?
 - *"How" and "why" questions:* How might this argument be made more persuasive? Why do you think that_____ made this argument?
 - *Evaluative questions:* How convincing is the Iqbal's poetry?
 - *Prediction questions:* If ozone layer will destroy, what will happen next?
 - *Justification questions:* What confirmation compelled you to wrap up that...?
 - *Rationale questions:* Can you give the reason for your point of view?
 - *Generalization questions:* How you will generalize your opinions?
- **Facilitate, don't orchestrate:**
Resist the temptation to react to student comments yourself. Utilize multiple strategies that get discussions going:
 - Ask other students if they agree or disagree with the previous student's comments.
 - Collect multiple responses to the same question.
 - Ask students to comment on a previous student's comments.
 - Redirect a student's question to the other students.
- **Encourage students to respond to one another:**
Generate an atmosphere where students are encouraged to respond to the preceding student's remarks before affixing their own observations. For example, the pupils might question the comment given by a student or elaborate on it.
- **Give students the opportunity to lead a discussion.**
Teacher's role might be to sum up the discussion before presenting his own ideas.
- **Build in reflection.**

Students should be asked to reflect on the discussion. They might be asked to give their own reflection on the discussion.

Activity No. 5

Write the correct word in the blank spaces in the below statements.

1. In classroom discussion, questions are -----points.
(starting, ending, mid, final)
2. Hypothetical questions are ----- questions.
(open, close, probing, multiple choice)
3. In the knowledge domain, questions entail students to ----- previously learned material.
(recall, restructure, judge, logically analyze)
4. Relational question check students' ability to ----- different themes, thoughts, or problems.
(compare, explore, develop, recognize)
5. Cause and effect questions are -----.
(open questions, close questions, probing questions, multiple choice questions)

5. PRACTICING IN ANSWERING QUESTIONS

When discussion goes on, unfortunately, pupils won't always give the intuitive replies teacher dreams of. In such circumstances, teacher needs anticipation where his questions may receive trivial answers and plan to involve students with questions like, "Can anyone give me an example of that? Or, can anyone relate it with your life experiences?" sometimes students are not catching up with what teacher expects in his question. Teacher should try alternative ways to phrase questions differently, or next to each question, list a few alternative ways to ask it. This helps to facilitate a smooth discussion session. Cooper and Simonds (1995, p. 256) have given some guidelines to help teacher to encourage students to give answers.

1. Keep all students on-task.
2. Teacher should avoid answering his own questions because it hinders students' to answer.
3. Seat students in a semicircle.
4. Get a student to take the initiative if the group is experiencing a momentary lull.
5. Respond to student answers positively and constructively.
6. Some students don't like criticism, this hinders them to answer. Praise rather than criticize.
7. Use active listening.
8. Encourage students' input.
9. Student may not give answers due to fear of mistakes, so teacher should accept students' mistakes.
10. Encourage students to use variety of responses.
11. Encourage quiet students.
12. Sometimes students may not response due to shortage of time, teacher should provide wait time.

Discussion provides the student with the opportunity to develop questioning skills and responses. It offers an opportunity to develop organization and formulation of answers. In essence, the student begins to think and organize on his/her feet.

6. ASSESSING THE DISCUSSION

As with the other tasks teacher has to perform assessment task during discussion. One consideration is the sequence and follow-up of discussion and other is grading. Arends (2004) has given following thoughts on follow-up and grading of classroom discussion:

1. Follow-Up Discussions:

To follow-up discussion, teacher should make formal and mental notes. These notes help to focus on the discussion content and decide subsequent lessons. For example, it might be possible that teacher identifies some serious gaps in students' learning and knowledge about a topic. He/she can then arrange a presentation on that particular topic and assign some reading tasks to students. This will also help students to identify the topics of their interest. The information gained through discussion will also aid teachers to plan lessons and identify strengths and weaknesses of students' thinking processes as well as group's capability to involve in productive discourse. Teacher can also find assistance to plan lessons to strength areas targeted for improvement. For this purpose, rating scale can be used by the teacher to sought information from pupils to judge what they thought regarding discussion and their role in it.

2. Grading Classroom Discussion:

Grading classroom discussion is an important and challenging task for teachers because it is difficult to quantify students' contribution in any satisfactory way. If students are not graded, they might think it as less necessary then the task on which they are graded. Before grading discussion, teacher has to confront the issue whether to reward quantity or quality. There are two methods which teacher can use in the grading dilemma.

One method is to give bonus points to students who consistently come up with valid ideas. Before using this method, teacher should tell it to students. Care should be taken that students who want to contribute should be given chance to participate.

Second method is to use discussion as a springboard for a reflective writing assignment. In this method, students are given a post-discussion writing essay in which they reflect in words what the discussion meant to them. Teacher should tell students about this method before leading discussion. This method is very effective but its one serious drawback is that it requires much time to read and assign grades to each essay.

7. RULES FOR DISCUSSION

If discussion rules are developed in advance, it helps students to make an environment of trust and mutual respect. Kinne (2000) suggested the following rules for discussion:

- Explain the ground rules for participation.
- Ask students what makes an excellent class discussion.
- Give pointers on how to participate in class discussion.
- Ask students to think of some principles for discussion, which they think everyone should follow.
- Teacher should write all of these suggested principles where every student can see them. If suggestions are not obtained from students, teacher can suggest some of the following principles for the students:
 - Pay attention to the participant who is speaking;
 - Only one participant speaks at a time;
 - Before saying something, raise hand;
 - When someone is speaking, don't interrupt;
 - In case of disagreement with a response, be careful that there should be criticism on the response, not on the person;
 - Don't mock on the person who is responding during discussion;
 - Give confidence to every student to participate.
- Copy the list of rules neatly and hang it where participants can refer, add, or make changes to it as necessary.
- Set the norms for discussion in the first week of class.
- Conduct think-pair-shares on specific issues.
- Use small group assignments and have a group scribe or reporter from each group share with whole class.
- Divide class into teams for informal "debates" (teams prepare outside of class or one class period prior to the debate).
- Use concentric circles to stimulate discussion.
- Have students share their individual concept maps in groups and write a group concept map.
- Give students a complex question to consider. Have each write on this question for 5-15 minutes. Then discuss in small groups or with the whole class.
- Divide the material among students or groups of students. Require each group to teach their peers the material they have studied.

Activity No. 6

Write short notes on the following:

1. Write down five tips of practicing in answering questions.
2. Enlist the criteria to assess the discussion.
3. What do you perceive by follow-up discussion?
4. Explain two methods of grading classroom discussion.

5. Highlight the rules for discussion.

8. ADVANTAGES AND DISADVANTAGES OF DISCUSSION METHOD

Jones et al (1994) has given the following advantages and disadvantages of discussion method:

Advantages:

1. The information acquired through discussion method is meaningful and helps students to develop critical thinking and problem solving skills.
2. Discussion technique leads students towards attitudinal change through self-awareness.
3. Discussion technique can help the student to develop a positive self-concept.
4. During discussion, student maintains high degree of mental alertness. Thus, discussion puts positive effect upon students' mental activity. This alertness is one reason why discussion is often praised as being a motivator.
5. Discussion gives the teacher information about the student which can help in a better understanding of students, individually and collectively.
6. If teacher is carefully observing the discussion session, it can provide him information about the social, psychological, emotional, and skill development of the student.

Disadvantages:

1. Discussion requires much time. That's why this technique is usually time-consuming.
2. Discussion often becomes a confused, meaningless activity because of some boring topics or lack of students' interests.
3. In discussion, some students may never participate while a few may tend to dominate.
4. Long and/or frequent periods of silence can occur in a discussion. Such silence often leads the teacher to take over the class in pursuit of the topic.
5. During discussion, there is always a risk of controversial ideas which disturbs the purpose of discussion.
6. Teachers often become irritated because discussion may fail to lead to a suitable conclusion or a desirable conclusion.
7. Students usually don't have sufficient informational background about the topic or maturity to contribute to a meaningful discussion.
8. Finally, there is the problem of evaluation. Teacher always face problem to device measures to accurately measure the contribution of students during discussion.

9. GUIDELINES FOR MAXIMUM UTILIZATION

- Jones et al (1994) has given some suggestions for classroom teachers to improve classroom discussion:
- There should be an atmosphere of acceptance between teacher-student and student-student relationship. Students must feel free from threat in order to speak openly.
- The teacher must be fully familiar with the discussion topic. So preparation of teacher is necessary.
- Preparation of students is also important for higher level of participation. In this regard, the teacher must plan sufficient learning activities prior to the discussion and encourage students to participate.
- Discussion should be used when learning objectives are considered worth the extra time required. Generally, the objectives appropriate to the discussion process would involve higher- level cognitive, affective, and skill learning related to discussion.
- The topics for discussion should be properly stated.
- Teacher should introduce the discussion topic by writing it on the board.
- When introducing the topic, teacher should take time to clarify terms, establish the relevance of the topic, and create a sense of psychological safety in the classroom.
- Variety of discussion types may be employed i.e. panels, forums, debates, or buzz-sessions.
- When discussion is in progress, the teacher plays his role as moderator by clarifying concepts, making tentative summaries, stating conclusions, and keeping the discussion on track. Teacher should realize his role with responsibility.
- Dominance of the overly eager students may be handled by discouraging them privately.
- When discussion is over, a summary of the discussion by the teacher is desirable, but it is better if it is presented by students.
- Follow-up activities should be planned to enhance students' learning.
- Metts (2011) and Green (2000) have also given the following suggestions to facilitate effective classroom discussion:
- Teacher should use words with the vocabulary range of the students.

- After asking a question there should be wait time. Five seconds pause gives students to think over the question and suitable answers.
- Teacher should not answer his own question. Once students realize that the teacher will answer his or her own questions, they don't take interest.
- Question should be given to the whole class first. If teacher decides to call on a specific student, he should say the student's name, repeat the question, and then wait for the response.
- Strategies should be developed to handle the over-enthusiastic student and the quiet student.
- Lengthy responses and fully developed answers should be encouraged.
- Teacher should not interrupt a student who is answering a question and other students should also be stopped to interrupt.
- Teacher should make the class responsible for their discussion. Teacher should facilitate, not dictate the discussion.
- Encourage students to comment on the responses of classmates before summarizing or moving to another question.
- Care must be taken to repeat an answer.
- When a student asks a good question, turn it back to the class to answer. If the class answers the question, then let the answer stand and move on.
- Students' non-verbal signals should also be attended.
- Teacher should know his own nonverbal behavior when students are asking or answering questions.

10. EXERCISE

1. Offer a working definition of classroom discussion in the light of different definitions elaborated in this unit.
2. “Discussion is an excellent way of developing thinking skills and higher-order learning”. Discuss in detail.
3. Elaborate different types of classroom discussion.
4. Critically analyze different tasks students usually perform in a discussion group.
5. Elaborate three phases of developing critical thinking among students during classroom discussion.
6. Compare and contrast among identification phase, focusing phase and application phase of critical thinking.
7. Write short notes on:
 - Small groups
 - Buzz groups
 - Talking Tickets
 - Think-Pair-Share

11. SELF ASSESSMENT QUESTIONS

- Q. 1 Analyze the effectiveness of guided discussion method.
- Q. 2 Explain the structure of guided discussion method.
- Q. 3 Make a comparison between “Line-ups” and “Value Lines” techniques of discussion method.
- Q. 4 Critically evaluate the discussion method techniques highlighted by Green (2000).
- Q. 5 What are the steps to plan discussion? Discuss.
- Q. 6 Discuss the importance of appropriate use of physical space in discussion method.
- Q. 7 Analyze the rules to organize classroom discussion.
- Q. 8 Elaborate the suggestions to organize classroom discussion.
- Q. 9 Discuss in detail the importance of asking questions in classroom discussion.
- Q. 10 State tips to ask effective questions.
- Q. 11 Briefly discuss the assessment procedure of classroom discussion.
- Q. 12 Explain advantages and disadvantages of classroom discussion.
- Q. 13 What are the suggestions to improve classroom discussion? Discuss in detail.

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Unit No. 7

COOPERATIVE LEARNING

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INTRODUCTION

Cooperative learning is an educational approach to teaching and learning that involves groups of learners working together to solve a problem, complete a task, or create a product. Cooperative learning is based on the idea that learning is a naturally social act in which the participants talk among themselves.

Cooperative Learning (CL) is a philosophy. In all situations where people come together in groups, it suggests a way of dealing with people which respects and highlights individual group members' abilities and contributions. There is a sharing of authority and acceptance of responsibility among group members for the group's actions. The theme of cooperative learning is based upon consensus building through cooperation by group members, in contrast to competition among individuals. There are many mechanisms for group analysis and introspection the fundamental approach is teacher centered whereas cooperative learning is more student centered.

OBJECTIVES

After studying this unit you will be able to:

1. Describe the nature of Cooperative learning
2. Explain Cooperative learning principles
3. Discuss different strategies of cooperative learning
4. Discuss Cooperative learning structures and techniques
5. Apply the conditions for effective cooperative learning
6. Manage activities based on cooperative learning strategies

1. COOPERATIVE LEARNING

Cooperative learning is the instructional use of small groups so that students work together to maximize their own and each other's learning (Johnson and Johnson, 1993, p. 9). Further these are principles and techniques for helping students work together more effectively (Jacobs, Power, & Loh, 2002, p. 1). According to UNESCO 2003:

Cooperative learning is the process of getting two or more students to work together to learn. Students often work in small groups composed of participants with differing ability levels and using a variety of learning activities to master material initially developed by an instructor, or construct knowledge on substantive issues. Each member of the team is responsible for learning what is taught and for helping teammates learn (Retrieved from <http://webworld.unesco.org/gcexhibition2003/169/online/instructstrat.html> accessed on 27-10-2011).

Figure No. 7: Cooperative Learning



Source: <http://edtech.kennesaw.edu/intech/cooperativelarning.htm>

Panitz (1996) differentiates between collaboration and cooperation in the following words: “Collaboration is a philosophy of interaction and personal lifestyle whereas cooperation is a structure of interaction designed to facilitate the accomplishment of an end product or goal.”

Gerlach (1994) described the definition of cooperative learning as “Cooperative learning is based on the idea that learning is a naturally social act in which the participants talk among themselves. It is through the talk that learning occurs.” While Gokhale (1995)

defines cooperative learning as “An instruction method in which students work in groups toward a common academic goal.”

Different authors categorize “community” as “...cultural aggregations, a group of people who exchange words and ideas” (Rheingold, 1994), “alliances of members based on emotional relationship” (Dyson, 1997), “people who interact socially to satisfy their own needs” (Preece, 2000), “members with a shared goals, interest need” (Issacs, et al, 2000), “people who create, manage, and participate in a group” (Kom, 2000).

Figure No. 8: Sharing of Ideas in Cooperative Learning



Source: <http://edtech.kennesaw.edu/intech/cooperativelearning.htm>

Speaking in groups is more natural, because in real life students spend most of their time talking to one another. If they speak to a large group of people, it is usually a more formal situation where they have spent time preparing what they are going to say (Qiang, 2007, p100). Small group work helps students learn to work cooperatively and it helps them develop interpersonal skills. When students work with other students who are not their friends, they learn how to work with a wider variety of people and this fosters development of tolerance, mutual respect and harmony. If students cooperate in harmony and with joy, anxiety will surely be forgotten.

Cooperative learning creates the special learning environment that is open for any kind of beneficial information, exchange of ideas, trust building, sharing of ideas, and ongoing cooperative process. Learners work together, participating in various groups and teams. That is why the definition “learning community” is so often mixed with such definitions as “learning teams”, “partnerships”, or “mentorships”.

The main difference of learning communities from other Internet communities (geographical communities, communities of practitioners, non-profit and non-governmental communities, etc.) is the specific educational goal that influences both teachers and learners, identifies their roles in the educational process, and requires the thoughtful organizational basis of the learning process. A sense of a learning community can only be created within an online course, or “virtual university”, under the certain circumstances. The lessons are based on a learner-oriented approach to teaching and within an overall democratic learning environment; collaboration, cooperative learning

and project-based learning are the leading methods of teaching. A common set of the tools for communication and knowledge sharing (Internet software and hardware) is available to all members. The benefits of learning communities, enrichment of ideas, informal discourse and knowledge swap over that provide deeper understanding of the learning content; development of communication skills; socializing of the members within group learning and community activities; improved emotional and learning support of the learning communities' members, decreasing drop-outs in distance learning environment; high motivational level of learning and awareness of individual responsibility for the success in learning; development of the group learning experiences, which are more than the sum of individual experiences because of the interactive nature of the knowledge construction process; learning through practice, learning as experience, making meaning in a social context.

The structural approach to cooperative learning is based on the design, analysis and logical application of structures, or content-free ways of organizing social communication in the classroom. Structures usually involve a chain of steps with proscribed behavior at each step. An important cornerstone of the approach is the distinction between "structures" and "activities".

To exemplify, teachers can design many excellent supportive activities such as making a team mural or a coverlet. Such activities almost always have a specific content-bound objective and thus cannot be used to deliver a range of academic content. Structures may be used repeatedly with almost any subject matter, at a wide range of grade levels and at various points in a lesson plan.

Computer-Supported Cooperative Learning (CSCL) is a relatively new educational paradigm within cooperative learning which uses technology in a learning environment to help mediate and support group interactions in a cooperative learning context. CSCL systems use technology to control and monitor interactions, to regulate tasks, rules, and roles, and to mediate the acquisition of new knowledge. Most recently, one study showed that using robots in the classroom to promote cooperative learning led to an increase in learning effectiveness of the activity and an increase in the student's motivation. Researchers and practitioners in several fields, including cognitive sciences, sociology, computer engineering have begun to investigate CSCL, thus, it constitutes a new trans-disciplinary field.

The cooperative learning is based on constructivist theory that knowledge is socially produced by communities of inhabitants, and each person could get this awareness if he would join these communities. The inhabitants share their ideas, experiences, way of thinking, information, and within this practice of exchange of ideas, they come to the consideration of what is important and acceptable for the other members of the group, and for the group on the whole. The main ability that students get within collaboration is the skill to listen to other people; to respect their views, understand the substitute points of view, not rejecting the personality, but at the same time, remaining the associated member of the community.

2. COOPERATIVE LEARNING PRINCIPLES

Many principles have been proposed for cooperative learning. Below is one list of eight such principles.

1. **Heterogeneous Grouping.** This principle means that the groups in which students do cooperative learning tasks are mixed on one or more of a number of variables including sex, ethnicity, social class, religion, personality, age, language proficiency, and diligence.
2. **Collaborative Skills.** Collaborative skills such as giving reasons are those needed to work with others. Students may lack these skills, the language involved in using the skills, or the inclination to apply the skills. Most books and websites on cooperative learning urge that collaborative skills be explicitly taught one at a time.
3. **Group Autonomy.** This principle encourages students to look to themselves for resources rather than relying solely on the teacher. When student groups are having difficulty, it is very tempting for teachers to intervene either in a particular group or with the entire class. We may sometimes want to resist this temptation because as Roger Johnson writes, “Teachers must trust the peer interaction to do many of the things they have felt responsible for themselves” (<http://www.clcrc.com/pages/qanda.html>).
4. **Simultaneous Interaction (Kagan, 1994).** In classrooms in which group activities are not used, the normal interaction pattern is that of sequential interaction in which one person at a time – usually the teacher – speaks. In contrast, when group activities are used, one student per group is speaking. In a class of 40 divided into groups of four, ten students are speaking simultaneously, i.e., 40 students divided into 4 students per group = 10 students (1 per group) speaking at the same time.
5. **Equal Participation (Kagan, 1994).** A frequent problem in groups is that one or two group members dominate the group and for whatever reason, impede the participation of others. Cooperative learning offers many ways of promoting more equal participation among group members.
6. **Individual Accountability.** When we try to encourage individual accountability in groups, we hope that everyone will try to learn and to share their knowledge and ideas with others.

7. **Positive Interdependence.** This principle lies at the heart of CL. When positive interdependence exists among members of a group, they feel that what helps one member of the group helps the other members and that what hurts one member of the group hurts the other members. It is this “All for one, one for all” feeling that leads group members to want to help each other, to see that they share a common goal.

8. **Cooperation as a Value.** This principle means that rather than cooperation being only a way to learn, i.e., the *how* of learning, cooperation also becomes part of the content to be learned, i.e., the *what* of learning. This flows naturally from the most crucial cooperative learning principle, positive interdependence. Cooperation as a value involves taking the feeling of “All for one, one for all” and expanding it beyond the small classroom group to encompass the whole class, the whole school, on and on, bringing in increasingly greater numbers of people and other beings into students’ circle of ones with whom to cooperate.

3. STRATEGIES OF COOPERATIVE LEARNING

Cooperative learning strategies could be used in the planning, translating and reviewing. The teachers should encourage the students to participate in good discussions. Different cooperative strategies included:

1. **Jigsaw:** Groups with five students are set up. The faculty member divides an assignment or topic to the group. Each student is assigned some material to learn and to teach to his group members. The representative of the students working on the same topic gets together and discusses the important concepts and the ways to teach it to the whole class. After the practice in these “expert” groups the original groups get together and teach each other. Tests and assessments follow.
2. **Think-Pair-Share:** This is a simple and quick technique; the instructor develops and poses questions preferable one demanding analysis, gives the students a few minutes to think about a response, and then asks students to share their ideas with a partner. This “think-time” can be spent writing, also. Students then turn to a partner and share their responses. This task gives them opportunity to collect and organize their thoughts. “Pair” and “share” components encourage learners to compare and contrast their understanding with those of another, and to rehearse their response first in a low-risk situation before going public with the whole class. And then responses can be shared within a four-person learning team, within a larger group, or with an entire class during a follow-up discussion. All students have an opportunity to learn by reflection and by verbalization.
3. **Three-Step Interview:** Common as an ice-breaker or a team-building exercise, this structure can also be used also to share information such as hypotheses or reactions to a film or article. In it each member of a team chooses another member to be a partner. In the first step students form dyads (pair of individuals); one student interviews the other. Then Students switch roles. And at the third step the dyad links with a second dyad. This four-member learning team then discusses the information or insights gleaned from the initial paired interviews.
4. **Numbered Heads Together:** Members of learning teams usually composed of four individuals, count off: 1, 2, 3, or 4, the instructor poses a question, usually factual in nature, but requiring some higher order thinking skills. Students discuss the question, making certain that every group member knows the agreed upon answer. The instructor calls a specific number and the team members originally designated that number during the count off respond as group spokespersons. Because no one knows which number the teacher will call, all team members have a vested interest in understanding the appropriate response. Again, students benefit from the verbalization, and the peer coaching helps both the high and the low achievers. Class time is usually better spent because less time is wasted on inappropriate responses and because all students become actively involved with the material.
5. **Round Robin:** It is primarily a brainstorming technique in which students generate ideas but do not elaborate, explain, evaluate, or question the ideas. Group members take turns responding to a question with words, phrases, or short answers. The

order of responses is organized by proceeding from one student to another until all students have had an opportunity to speak. This technique helps generating many ideas because all students participate, because it discourages comments that interrupt or inhibit the flow of ideas. The ideas could be used to develop a piece of good paragraph on a given topic.

6. **Three-minute review:** Teacher stops any time during a lecture or discussion on the various formats of letter writing, report writing, etc and give team members three minutes to review what has been said, ask clarifying questions or answer questions.
7. **Numbered Heads:** A team of four is established. Each member is given number 1, 2, 3 and four. Questions are asked of the group. Groups work together to answer the questions so that all can verbally answer the questions. Teacher calls out a number (three) and the number three in each group is asked to give the answer. This could be used for comprehension exercises.
8. **Buzz Groups:** Buzz groups are teams of four to six students that are formed quickly and extemporaneously. They discuss on a particular topic or different topics allotted to them. The discussion is informal and they exchange the ideas. Buzz Groups serve as a warm-up to whole-class discussion. They are effective for generating information and ideas in a short period of time. This technique could be used to write essays on current issues.
9. **Talking Chips:** In talking chips, students participate in a group discussion, surrendering a token each time they speak. This technique ensures equitable participation by regulating how often each group member is allowed to participate. This technique encourages silent students to participate and solve communication or process problems, such as dominating or clashing group members.
10. **Critical Debate:** This activity could be used while drafting argumentative essays. In this individual students select their side of an issue in contrary to their own views. They form teams and discuss, present, and argue the issue against the opposing team. It exposes the class to a focused, in-depth, multiple-perspective analysis of issues. It can move students beyond simple dualistic thinking, deepen their understanding of an issue, and help them to recognize the range of perspectives inherent in complex topics. This technique is suitable for tertiary level students.
11. **Write Around:** For creative writing or summarizing, teachers could give a sentence starter (for e.g. If there were no plants on the earth. A man met an alien on the sea shore) then all students in each team have to finish the sentence. Then, they pass the paper to the right, read the one they receive, and add sentence to than one. After a few round, four summaries or stories emerge. Students should be given time to add a conclusion and/or edit their favorite one to share with the class.
12. **Praise-Question-Polish:** In this technique the group members take turns to read aloud their papers as their other group members follow along with copies. First, the respondents are asked to react to the piece of writing by asking them to identify what they liked about the work (Praise), then identify what portion of the writing they did not understand (Question), finally offering specific suggestions for

improvement of the writing (Polish). The students would be able to improve their own writing by critically evaluating the writing of their peers.

4. COOPERATIVE LEARNING TECHNIQUES

There are many cooperative learning techniques available for just about any learning situation. Kagan (1989/1990) provides an excellent overview of the various cooperative learning techniques, including their academic and social functions.

1. Roundtable

Roundtable structures can be used to brainstorm ideas and to generate a large number of responses to a single question or a group of questions.

- Faculty poses question.
- One piece of paper and pen per group.
- First student writes one response, and says it out loud.
- First student passes paper to the left, second student writes response, etc.
- Continues around group until time elapses.
- Students may say “pass” at any time.
- Group stops when time is called.

The key here is the question or the problem you’ve asked the students to consider. It has to be one that has the potential for a number of different “right” answers. Relate the question to the course unit, but keep it simple so every student can have some input.

Once time is called, determine what you want to have the students do with the lists...they may want to discuss the multitude of answers or solutions or they may want to share the lists with the entire class.

2. Focused Listing

Focused listing can be used as a brainstorming technique or as a technique to generate descriptions and definitions for concepts. Focused listing asks the students to generate words to define or describe something. Once students have completed this activity, you can use these lists to facilitate group and class discussion.

Example: Ask students to list 5-7 words or phrases that describe or define what a motivated student does. From there, you might ask students to get together in small groups to discuss the lists, or to select the one that they can all agree on. Combine this technique with a number of the other techniques and you can have a powerful cooperative learning structure.

3. Structured Problem-solving

Structured problem-solving can be used in conjunction with several other cooperative learning structures.

- Have the participants brainstorm or select a problem for them to consider.
- Assign numbers to members of each group (or use playing cards). Have each member of the group be a different number or suit.
- Discuss task as group.

- Each participant should be prepared to respond. Each member of the group needs to understand the response well enough to give the response with no help from the other members of the group.
- Ask an individual from each group to respond. Call on the individual by number (or suit).

4. **One Minute Papers**

Ask students to comment on the following questions. Give them one minute and time them. This activity focuses them on the content and can also provide feedback to you as a teacher.

- What was the most important or useful thing you learned today?
- What two important questions do you still have; what remains unclear?
- What would you like to know more about?

You can use these one minute papers to begin the next day's discussion, to facilitate discussion within a group, or to provide you with feedback on where the student is in his or her understanding of the material.

5. **Paired Annotations**

Students pair up to review/learn same article, chapter or content area and exchange double-entry journals (see below) for reading and reflection.

Students discuss key points and look for divergent and convergent thinking and ideas. Together students prepare a composite annotation that summarizes the article, chapter, or concept.

6. **Structured Learning Team Group Roles**

When putting together groups, you may want to consider assigning (or having students select) their roles for the group. Students may also rotate group roles depending on the activity.

Potential group roles and their functions include:

- *Leader* - The leader is responsible for keeping the group on the assigned task at hand. S/he also makes sure that all members of the group have an opportunity to participate, learn and have the respect of their team members. The leader may also want to check to make sure that all of the group members have mastered the learning points of a group exercise.
- *Recorder* - The recorder picks and maintains the group files and folders on a daily basis and keeps records of all group activities including the material contributed by each group member. The recorder writes out the solutions to problems for the group to use as notes or to submit to the instructor. The recorder may also prepare presentation materials when the group makes oral presentations to the class.
- *Reporter* - The reporter gives oral responses to the class about the group's activities or conclusions.

- *Monitor* - The monitor is responsible for making sure that the group's work area is left the way it was found and acts as a timekeeper for timed activities.
- *Wildcard* (in groups of five) - The wildcard acts as an assistant to the group leader and assumes the role of any member that may be missing.

7. **Send-A-Problem**

Send-A-Problem can be used as a way to get groups to discuss and review material, or potential solutions to problems related to content information.

- (1) Each member of a group generates a problem and writes it down on a card. Each member of the group then asks the question to other members.
- (2) If the question can be answered and all members of the group agree on the answer, then that answer is written on the back of the card. If there is no consensus on the answer, the question is revised so that an answer can be agreed upon.
- (3) The group puts a Q on the side of the card with the question on it, and an A on the side of the card with an answer on it.
- (4) Each group sends its question cards to another group.
- (5) Each group member takes one question from the stack of questions and reads one question at a time to the group. After reading the first question, the group discusses it. If the group agrees on the answer, they turn the card over to see if they agree with the first group's answer. If there again is consensus, they proceed to the next question. If they do not agree with the first group's answer, the second group writes their answer on the back of the card as an alternative answer.
- (6) The second group reviews and answers each question in the stack of cards, repeating the procedure outlined above.
- (7) The question cards can be sent to a third, fourth, or fifth group, if desired.
- (8) Stacks of cards are then sent back to the originating group. The sending group can then discuss and clarify any question.

Variation: A variation on the send a problem is to use the process to get groups to discuss a real problem for which there may be no one set answer.

1. Groups decide on one problem they will consider. It is best if each group considers a different problem.
2. The same process is used, with the first group brainstorming solutions to a single problem. The problem is written on a piece of paper and attached to the outside of a folder. The solutions are listed and enclosed inside the folder.
3. The folder is then passed to the next group. Each group brainstorms for 3-5 minutes on the problems they receive without reading the previous group's work and then place their solutions inside the folders.
4. This process may continue to one or more groups. The last group reviews all the solutions posed by all of the previous groups and develops a prioritized list of possible solutions. This list is then presented to the group.

8. **Value Line**

One way to form heterogeneous groups is to use a value line.

- (i) Present an issue or topic to the group and ask each member to determine how they feel about the issue (could use a 1-10 scale; 1 being strong agreement, 10 being strong disagreement).
- (ii) Form a rank-ordered line and number the participants from 1 up (from strong agreement to strong disagreement, for example).
- (iii) Form your groups of four by pulling one person from each end of the value line and two people from the middle of the group (for example, if you had 20 people, one group might consist of persons 1, 10, 11, 20).

9. Team Expectations

Some of the common fears about working with groups include student fears that each member will not pull their weight as a part of the group. Students are scared that their grade will be lower as a result of the group learning vs. learning they do individually. One way to address this issue is to use a group activity to allow the group to outline acceptable group behavior. Put together a form and ask groups to first list behaviors (expectations) they expect from each individual, each pair and as a group as a whole.

Groups then can use this as a way to monitor individual contributions to the group and as a way to evaluate group participation.

10. Double Entry Journal

The Double Entry Journal can be used as a way for students to take notes on articles and other resources they read in preparation for class discussion.

- Students read and reflect on the assigned reading(s).
- Students prepare the double entry journal, listing critical points of the readings (as they see them) and any responses to the readings, in general, or specific critical points.
- Students bring their journal notes to class
- Once in class, students may use their double entry journal to begin discussion, to do a paired annotation, or for other classroom and group activity.

11. Guided Reciprocal Peer Questioning

The goal of this activity is to generate discussion among student groups about a specific topic or content area.

- Faculty conducts a brief (10-15 minutes) lecture on a topic or content area. Faculty may assign a reading or written assignment as well.
- Instructor then gives the students a set of generic question stems.
- Students work individually to write their own questions based on the material being covered.
- Students do not have to be able to answer the questions they pose. This activity is designed to force students to think about ideas relevant to the content area.
- Students should use as many question stems as possible.
- Grouped into learning teams, each student offers a question for discussion, using the different stems.

Sample question stems:

- What is the main idea of...?
- What if...?

- How does...affect...?
- What is a new example of...?
- Explain why...?
- Explain how...?
- How does this relate to what I've learned before?
- What conclusions can I draw about...?

12. The Make-up of a Cooperative Learning Session

Members of effective cooperative learning groups have specific roles. Each member may assume several roles at a given session; in fact, for smaller groups it will be necessary for each member to have more than one duty.

- Chair or Leader
 - This person is the agenda-setting facilitator.
 - In other words, the chair or leader sets the agenda of the session, with input from the rest of the group.
- Time Keeper
 - This person is the agenda facilitator.
 - The time keeper keeps track of the amount of time spent on each activity in the session and makes sure pre-arranged time allocations in the agenda are followed.
- Room Scheduler
 - This person arranges the date, time and place of the study session with school administrators, if necessary.
 - The room scheduler may also be responsible for contacting study group members to remind them about sessions.
- Resource Arranger
 - This person arranges for supplies and resources for the session.
 - Resources may include reference books from the library, peer tutors, or overhead projectors.
- Group Process Evaluator
 - This person evaluates the effectiveness and efficiency of the session.
- Producer or Participant
 - This person takes part in the scheduled activities of the session.
 - In most cases, all members of the study group are participants.
- Resource Person
 - This person is not necessarily a constant member of the group.
 - The resource person is present when needed to provide additional resources to the group members.
 - The resource person may be a faculty member, a tutor, or another knowledgeable person.

5. INTERACTIVENESS IN COOPERATIVE LEARNING

1. **Pre and Post-Tests:** Before the session begins, learners can be given a 3-5 question quiz or asked to list 3-5 points they would cover in an essay on a particular question. If learners are provided access to correct or sample answers, the tests can be self-scoring. These tests can help focus learner attention on key ideas and provide feedback to learners on whether or not they understand the material. (This can work for online instruction, too.)
2. **Attention Span Breaks:** After every ten to twenty minutes of your session pose a question that summarizes the subtopic or foreshadows the next portion of the session. Or, you could ask learners to vote on an opinion question relevant to your topic. In pairs, you might ask learners to provide a written example appropriate to your topic, collect them, and discuss a few that are either excellent or erroneous examples.
3. **Reflecting on and Improving Note-taking, a three-session technique:** Provide a triple-spaced outline of your session as a guide for learners' note-taking. After 20 minutes, ask learners to compare their notes with two other people in the class. Give the next 20 minutes of the session without an outline, then ask learners to compare their notes with the same two learners. For the next session, provide an outline for only half the session but follow the same procedures as above, having learners compare notes twice during the session. At the beginning of the third session, conduct a short discussion as to what learners learned from comparing notes. Have learners compare notes once a week thereafter. You may want to join in and take a look at some of their notes as well.
4. **Checking Learner Understanding:** After 15-25 minutes of lecturing (or after a page or two of an online, textual session) ask learners to respond to one or two questions. Vary the questions, sometimes asking questions that check comprehension or summarize main points, other times asking learners to apply, analyze, or evaluate conceptual material.
5. **Think-Pair-Share:** This is a cooperative learning technique that can have dramatic results. After a bit of lecturing, ask a multiple-choice question that is fact-based or checks learner comprehension. After counting the vote to each choice, ask learners to pair-up and explain their answers, then take the vote again. Almost inevitably the number of votes for the right answer increases dramatically.
6. **Making Material Relevant:** After lecturing on an idea or concept, stop and ask learners for examples from their own experiences or readings. Or, you might show a news clip or a movie segment and ask learners how it relates to the session material. The variety of learner perceptions can be amazing and provide the instructor with feedback about how learners think.
7. **Changing People's Minds:** Sessions have been shown to be fairly ineffective at changing people's attitudes or values. Discussion and concrete experiences are

better for meeting these types of learning goals. When appropriate, ask learners to discuss or write you a note at the end of class discussing how the course material has affected their thinking or beliefs.

8. **Discussion Questions:** At some point during the session, groups of 2-4 learners respond to a carefully prepared and written out discussion question. It is extremely useful to give learners the type of discussion question that they might find on an exam as a short answer to essay question.
9. **Group Activities:** A variation on discussion is to provide a small group activity instead of a discussion question. For example, learners could be asked to fill out a comparison chart between philosophers discussed in the session, list the causes of an event noted in the session, define terms used in session in their own words, or list attributes of theories identified in the session.
10. **Summarizing and Evaluating:** At the end of the session or a session segment, ask learners to summarize or evaluate the session in a short paragraph. Take these home and flip thought them. You will learn much.
11. **Hints for Better Learning Groups**

Below is a checklist adapted from Bowen and Jackson (1985-6) of things groups can do to function better. If appropriate for your class, distribute to your students.

- i) Before the group begins:
 - Expect to learn, to enjoy, and to discover.
 - Team up with people you don't know.
- ii) As the group begins:
 - Make a good first impression.
 - Build the team.
 - Do something that requires self-disclosure.
 - Take interpersonal risks to build trust.
 - Establish team goals as appropriate.
 - Start thinking about group processing.
- iii) While the group is in existence:
 - Work at increasing self-disclosure.
 - Work at giving good feedback.
 - Get silent members involved.
 - Confront problems.
 - Apply lessons from class work.
 - Work on issues in the group even if they appear at first to be just between two members.
 - Don't assume you can't work with someone just because you don't like or respect them.
 - If the group can't solve a problem, consult the instructor as a group.
 - Regularly review your data.
 - Vary the leadership style as needed.
- iv) Wrapping up the group:
 - Summarize and review your learning from group experiences.
 - Analyze the data to discover why the group was more effective or less so.
 - Provide final feedback to members on their contribution.
 - Celebrate the group's accomplishments.

6. ADVANTAGES OF COOPERATIVE LEARNING

Some of the advantages enlisted by Cooper (1994) are:

1. Cooperative learning increases student retention by increasing student involvement
2. It can increase tolerance of diversity
3. It can increase learning in televised and interactive video classes
4. It increases critical thinking skills
5. It is an effective means to various liberal education goals
6. It prepares students for work groups in later employment
7. It builds a sense of community on campus
8. It offers a method to improve instruction
9. It responds to diversity of learning preferences and styles

7. SUMMARY

Cooperative learning is a style of education that gets students actively participating in the classroom. It is much more than group work, though that is a part of it. Cooperative learning is the process of getting two or more students to work together to learn.

Different principles of cooperative learning includes:

1. Heterogeneous Grouping.
2. Collaborative Skills.
3. Group Autonomy.
4. Simultaneous Interaction
5. Equal Participation
6. Individual Accountability.
7. Positive Interdependence.
8. Cooperation as a Value.

Different strategies of cooperative leaning included:

- Jigsaw
- Think-Pair-Share
- Three-Step Interview
- Numbered Heads Together
- Round Robin
- Three-minute review
- Numbered Heads
- Buzz Groups
- Talking Chips
- Critical Debate
- Write Around
- Praise-Question-Polish

8. ACTIVITIES

1. Visit a cooperative learning web site and briefly discuss (in 2 or 3 sentences) what you learned there.
2. Describe a cooperative learning lesson that you could use in your classroom. Show the content of the lesson, select a cooperative learning structure, select a classroom design pattern, explain (in 2 or 3 sentences) why you believe the cooperative learning structure and the classroom design pattern is appropriate for the cooperative learning lesson.
3. Write the five major topic of cooperative learning activity from your syllabus.
Read more: [Classroom Activities for Cooperative Learning | eHow.com](http://www.ehow.com/info_7916223_classroom-activities-cooperative-learning.html#ixzz1lyKIQN8i)
http://www.ehow.com/info_7916223_classroom-activities-cooperative-learning.html#ixzz1lyKIQN8i

9. SELF-ASSESSMENT QUESTIONS

1. Provide an explanation of what cooperative learning is, what the benefits of cooperative learning are and why you will be using it.
2. Enlist some critical thinking objective(s) for the cooperative learning activity.
3. What is cooperative learning and what is different strategies use for it?
4. Describe principles of cooperative learning.
5. Discuss different cooperative learning structures.

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Unit No. 8

TEACHING SKILLS

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INTRODUCTION

Education is back bone in the development of a society and teacher has a pivotal role in the education system. Effectiveness of a teacher is always gauged on the basis of teaching skills. Effective teaching skills are a precondition for translating theory into practice. The criterion of effective teacher includes not only the subject expertise, but ability to create an effective classroom environment in the classroom to reshape and redesign the knowledge, stimulate intellectual curiosity, encourage innovative and independent thinking of students. To inculcate these attributes in teachers, teacher training programs put utmost stress on developing skills among student teachers. During teaching practice, the novice student teacher uses teaching skills strictly per guidelines given by the teacher educator, but this state of affair becomes different in real class room situations.

Most importantly, the aim of teachers has always been to assist students to learn efficiently. To meet with this target, teachers have to be expert in applying different teaching skills during instruction. To achieve learning targets and to maximize learning, teachers must understand the significance of individual skill and the integration of various skills. This is imperative in secondary classes where teacher uses various techniques to keep students involved in the classroom, e.g. discussions, questions answers, use of teaching aids to change the sensory focus and, in particular, summarize to help students learn. A thorough knowledge of content matter is fundamental for teaching effectively. Besides this, logical presentation of subject matter is also essential for effective instruction. To plan the instruction in a logical sequenced way, teaching expertise is crucial. Even experienced teachers need to refine this aspect and add value to maximize the effect of teaching in the classroom (Sharma, 2000).

Teacher training programs inculcate effective teaching skills among teachers. Such Pre-service training programs assist teachers in grasping different teaching-learning theories related to help them to design subject matter, develop curriculum, and know psychological principles of andragogy and pedagogy. Such trainings foster teachers to learn the basics to teaching-learning process. Without understanding of how and under what circumstances a pupil becomes engaged in instructional activities, mapping a learning environment is vague. The circumstances under which students engage in learning include the classroom environment, the explicit teaching strategy used, and the place of the learning goal. In executing plans for instruction, a significant role is the introduction of introductory experiences a teacher applies to produce the yearning high

level of students' involvement. Techniques for set induction are crucial for planning and following precise procedures for getting the best of instruction. Pre-service training programs make use of a range of techniques i.e. simulation, demonstration, and especially, micro teaching to increase teaching skills among novices. Much value is attached to proper use of set induction, presentation, understanding students' psychological needs and students' evaluation (Murthy, 2008).

There are two aspects of effective teaching. One aspect focuses on the teaching behavior and second aspect emphasizes on learning outcomes. Effective teacher is one who intellectually effective and utilizes different approaches during instruction by applying different learning activities. Implementation of teaching principles in the classroom is facilitated with certain skills acquired by teachers through education and training. Teaching skills is the combination of verbal and non-verbal behavior of a teacher. These skills can be examined and gauged in terms of a student's change in behavior. This indicates that teaching skills are instructional techniques used by teachers to make teaching learning viable by initiating two way communications between teacher and student. Teacher's performance is judged by the ability to know where and how to apply these skills. Teaching skills are essential for teachers as the means to accomplish the eventual target of bringing constructive and desired change in the behavior of the students. All the teaching skills are interrelated and indispensable for each other. Teacher's success is not determined not by the number of skills he/she applies in the class, but depends on how these skills are interlinked, regulated and adapted to make teaching an effective tool in helping students to become active learners, explorers and critical thinkers (Bhargava, 2009).

OBJECTIVES

After reading this unit, you will be able to:

1. Gain knowledge about importance of teaching skills.
2. Identify different teaching skills.
3. Explain the nature, importance and different types of set induction.
4. Discuss the process of identifying learning difficulties of students.
5. Examine the worth of preparing lessons according to the individual needs.
6. Analyze the importance of students' evaluation.

1. TEACHING SKILLS

Teaching is an indispensable part of education. Its unique function is to deliver knowledge, expand understanding and talents. It is generally linked with imparting of 3 R's (reading, writing, arithmetic). The teacher plays a fundamental role in imparting knowledge to the learners. Hence, teaching does not primarily mean telling. It is rather helping students to learn. This means the focus is on the learners instead on teachers. A teacher needs to get into the shoes of the students to know what they need and where they are in understanding a particular subject matter. This demands certain teaching skills from teacher to have an insight regarding the level of students' understanding. The teaching skills are defined as a group of teaching operations or behaviors or acts, which are aimed to assist students' learning directly or indirectly. To know how to teach is the great art of teaching (Brookfield, 1995). Here are some teaching skills which are necessary for effective teaching. These include set induction, presentation of content in a meaningful way, identification of students' learning difficulties, preparation of lessons according to individual needs, and students' evaluation. You will read the detail of each skill and grasp the importance of these on the following pages.

2. SET INDUCTION

Cheek (2006) says that sometimes students do not understand the lesson and disturb their classes. The opening of every lesson is imperative because this occasion is the base for understanding so that the rest of the lesson is established. An effective proactive teacher obtains the students' attention before launching the lesson. When all the students' attention is collectively obtained, it is called *set induction*. It is also called anticipatory set, and sometimes labeled as a "hook" to capture the learner's attention. Basic purpose of using set induction is to place students into a receptive frame of mind and to create an organizing framework for the ideas, principles, or information that is to follow. Teacher can use this skill technically in several ways i.e. teacher can use an announcement, apply a set of instructions, and ask a provocative question. Teacher can also launch the lesson by telling exciting stories about the lesson and motivate students by using examples or analogies to extend the understanding and the application of abstract ideas.

Set induction is about preparation of lessons. When the students are *set*, they are ready to learn. Set induction is thus about getting them ready, inducing them into the right mind-set. Sets are used before any new activity, from introduction of a new concept to giving homework. It is important in each set both to create *clarity* about what is expected happen

(both what you will do and what they should do), and to create *motivation* for what to occur, with students being fully engaged in the learning.

Set is a mental state of readiness, in which, *induction* brings it on. *Set Induction* gets learners thinking and ready for the lesson. *Anticipatory set* is another name used. Set induction should contain a statement of the learning to provide a reference point between what the student knows and the new material, thus creating a link from one lesson or class to the next. Moreover it must relate the lesson's objectives; and involve the learner in the learning. Relating the objective to some experience past, present and future helps in retention and transfer at a later time. Teacher can use certain techniques for involvement of the learner in the learning i.e. Covert, Overt, Questions, Activity, Pictures, Objects, Cartoons, Stories, Anecdotes, Outlines, Transparencies, Summarizing etc.

Set induction is useful strategy to explain prospective benefits to the learner, providing obvious instructions and describing what is going to happen.

The STEP acronym may be used to help remember what to do:

- *Start*: Welcome the students and settle them down and gain attention.
- *Transact*: Understand their expectations and explain yours. Link with previous learning.
- *Evaluate*: Assess the gap between their expectations and current reality. Clarify any discrepancies for them.
- *Progress*: Move on to the main body of learning.

There are several reasons for using set induction to induce students to concentrate and learn.

1. To focus attention on what is to be learned.
2. To create a frame of reference before or during a lesson.
3. To give meaning to a new concept or principle.
4. To stimulate student interest and involvement.

The question arises “how” set induction is used. Set induction is used for preliminary attention gaining and orientation purposes. For preliminary attention gaining purpose, teacher can give pause/ look at students and wait for their response. For orientation purpose, teacher can select an event, process, object or device which matches objectives. The teacher also needs to know “when” to induce a set. Sets are appropriate for almost any learning activity. For example, a set is appropriate:

- At the start of a unit
- Before a discussion.
- Before a question-and-answer period.
- When assigning homework.
- Before hearing a panel discussion.
- Before student reports,
- When assigning student reports.
- Before a film or other media event.

- Before a homework assignment based on a discussion that followed a filmstrip.

The most effective sets are those that catch the students' attention and interest them in the material.

Activity No. 1

Give short answers to the following questions:

1. What do you understand by teaching skills?
2. Define set induction.
3. Explain the acronym "STEP".
4. When set induction is appropriate?
5. What are the reasons to use set induction?

2.1 Importance of Set Induction:

Alliss (2011) says that many teachers spend outrageously little time preparing their students for classroom activities. Often this preparation consists only of telling their students to read some story by the next class session or to watch some demonstration carefully. With such a limited introduction, could any teacher truly expect students to be attentive and eager to learn the material?

Several psychological experiments have demonstrated the importance of set induction in learning. Research indicates that activities preceding a learning task influence the performance of the task. The research also indicates that the effectiveness of a set depends somewhat on the situation to which it is applied. Hence, teachers must find those kinds of sets most appropriate to their purposes and must modify these sets to fit the specific classroom situation.

In most cases, the initial instructional move of the teacher should be to establish a set. The set focuses students' attention on some familiar person, object, event, condition, or idea. The established set functions as a point of reference around which the students and the teacher communicate. The teacher uses this point of reference as a link between familiar and new or difficult material. Furthermore, an effective set encourages student interest and involvement in the main body of the lesson.

The establishment of a set usually occurs at the beginning of a class period, but it may occur during the session. Set induction is appropriate whenever the activity, the goal of the content of the lesson is changed so that a new or modified frame of reference is needed. Set induction is also used to build continuity from lesson to lesson and from unit to unit. Thus, a new set may be linked to an established set to a series of sets.

All of us have experienced the influence of set induction on our responses to a situation. If we have been told that some person is a brilliant scientist, we respond differently than we would if we had been told he or she was a star athlete. What we "learn" during our conversation with this person will depend in part on what we have been told. Similarly, whatever information a teacher gives students about the degree of difficulty and format of a test will probably affect the way they study for it.

Suppose that a teacher wants the students to read Chapter Six in their textbooks as homework. Suppose Chapter Six is about the “Independence of Pakistan”. What remarks or activities will produce the most learning for the next day? The teacher could say, "Now class, for tomorrow I want all of you to read chapter six in the text." Such a weak set would normally produce a weak response. The next day the teacher might discover that half the class had not read the assignment, and that the other half, although claiming to have read it, was unable to discuss it in any depth.

The teacher might have said, "For tomorrow, I want you to read Chapter Six in the text and come to class prepared for a discussion." This set is an improvement. It gives the students more information about the instructional goal; they are to prepare for a discussion. But the students need a good deal more information before they will be able, or disposed, to prepare themselves for an interesting, stimulating discussion. Exactly what will be discussed? What points should they consider as they read? What should be the focus while they read? How should they use previously learned material? Should they study facts or principles? Should they compare? Should they contrast? Both? Neither?

Activity No. 2

Discuss importance of set induction while teaching at primary level.

2.2 Types of Set Induction:

Set induction can be used by a teacher by variety of ways. Some of the set induction types include facilitating sets, motivating sets, and summary.

- **Facilitating Sets**
Facilitating set is used to summarize information presented in previous lessons. It is also used to summarize information that will occur. In short, teacher can use facilitating set to emphasize the cognitive aspects of a new lesson by reviewing or summarizing.
- **Motivating Sets**
By using this type of set, teacher can catch the students’ attention and arouse curiosity. In motivating set, teacher poses interesting questions and uses dramatic appeal. It also creates a need or interest among students and induces an affective or emotional response.
- **Summary**
It is best to provide both motivating and facilitating sets. Teacher can monitor behavior by involving students in overt behavior.

Set Induction Example:

Here is one example of set induction. If a teacher is teaching hypertension topic to 10th grade biology class, set induction may be used as following:

“How many of you have a friend or a family member that has a heart problem or blood condition? (After posing the question, teacher waits for the students’ answers and proceeds towards the topic).

Well, today we are going to learn about hypertension and its causes.

Making healthy lifestyle choices and starting those habits now can help you in preventing this disease in your future”.

Activity No. 3.

Read “Types of set induction” carefully. Which type do you think is more effective to teach at primary level?

3. PRESENTATION

Kyriacou (1998) highlights that lesson presentation is comprised of learning experiences which a teacher sets up to achieve the learning objectives. Basically, presentation introduces new information, checks learner comprehension of the new material, and models the tasks that the learners will do in the practice stage. There are variety of teaching strategies, and as a result of it, there is now a wide range of learning activities which a teacher can set up to achieve best results. Moreover, teachers are actively encouraged and expected to make use of a number of different teaching methods in their program of lessons. According to Kelley (2010) teaching/presentation includes input, modeling, and checking for understanding.

1. **Input:** The teacher provides the information needed for students to gain the knowledge or skill through lecture, film, tape, video, pictures, etc.
2. **Modeling:** Once the material has been presented, the teacher uses it to show students examples of what is expected as an end product of their work. The critical aspects are explained through labeling, categorizing, comparing, etc. Students are taken to the application level (problem-solving, comparison, summarizing, etc.)
3. **Checking for Understanding:** Determination of whether students have "got it" before proceeding. It is essential that students practice *doing it right* so the teacher must know that students understand before proceeding to practice. If there is any doubt that the class has not understood, the concept/skill should be re-taught before practice begins.
 - **Questioning strategies:** asking questions that go beyond mere recall to probe for the higher levels of understanding is necessary to ensure memory network binding and transfer. Bloom's Taxonomy of Educational Objectives provides a structure for questioning that is hierarchical and cumulative. By using this taxonomy, teachers can structure questions at the level of proximal development, i.e., a level at which the pupil is prepared to cope. Questions progress from the lowest to the highest of the six levels of the cognitive domain of the Taxonomy of Educational Objectives: knowledge, comprehension, application, analysis, synthesis, and evaluation. During presentation, questioning skill is indispensable for pupils' active participation and long term learning.

3.1 The Components of Presentation Skills:

According to Kyriacou (1998) teacher's manner is considered the key element in lesson presentation. Here are some components of lesson presentation skills which a teacher is supposed to possess. These are:

- **Voice:** Teacher should speak in a clear, firm voice and vary his volume and pitch when he wants to emphasize something. Make sure that all students can hear teacher's voice easily but be sure not to shout or talk so loud that his/her sound irritates students.
- **Tone:** Many teachers confuse voice and tone. Tone is the 'feeling' that emanates from voice and mannerisms. A tone that is confident and warm, and not dry or ego-centric works well in projecting a comfortable feeling to the students.
- **Vocabulary:** While presenting a lecture, teacher should stay away from unfamiliar terms and jargon as much as possible. If there is a need to introduce technical terms and jargon, teacher should take the time to define them for students to understand. Acronyms fall into this category. If teacher has to use them, then students should be told what the acronyms stand for.
- **Humor:** A teacher with a good sense of humor can actually help to create a more relaxed learning atmosphere for the students. Humor in teaching has been known to liven up boring material and helps to diminish the traditional idea that the teacher is dominant and the students are subordinate. Too much humor can be detrimental. Teacher wants the students to know that he takes his work seriously so they will too.
- **Body Language:** It is a known fact that students respond better to a teacher who is moderately active and moves around the room to connect with students. The teacher who stands at the board or sits at his chair all the day does nothing to present an image of comfort in the classroom. On the other hand, getting too close to a student's personal space is not good either. Teacher might want to try teaching from the back of the room when students are doing exercises so that teacher can readily see if anyone is having problems without making them draw attention to themselves. Questions such as "how is it going" as teacher approaches a workstation prevents him from startling the student.

Here are some tips by Flagler and Hamlin (2009) for teachers to make presentation more effective and attractive for students:

- Teacher should know the material. He should have the content well in hand. Most problems can be alleviated by being very well prepared.
- Teacher should show interest in the topic to be taught. He must try to find something unique of special interest about the topic and most importantly, shows your enthusiasm and interest. An enthusiastic teacher will get an enthusiastic audience.
- Teacher should also know the audience. Whom will he be presenting to? How involved with the topic is his audience? What level of sophistication does his audience have with the topic? Does he expect them to be asking questions? How teacher's presentation of the material will foster questioning, comments or arguments etc.
- Teacher should prepare an outline of his talk in advance. The fewer notes teacher uses the more natural his talk will be. Good teachers always get a clear idea of the

main points and supporting information, anecdotes, etc. Keep it simple and to the point and utilize all the appropriate parts of a speech including introduction, body and conclusion.

- There should be appropriate utilization of visual aids. They are a good way to draw and maintain interest from the students as well as highlight main points. Teacher must be sure they are appropriate and support his presentation. Check them out to be sure they work. When teacher does not use them, set them aside or cover them up.
- Good teachers always practice their presentation. Teacher should talk to himself OUT LOUD going through all the motions and gestures he expects to use during his presentation. He should try to make the practice as real as possible. It is easy to start practicing with notes, teacher will quickly find that he will no longer need them and his presentation will be more natural.
- Look sharp and expect butterflies. Teacher shouldn't be fooled! Everyone is nervous to some degree; some people hide it better than others. Preparation is an important event. Teacher should dress, eat, and sleep appropriately.
- Teacher should try to smile, speak and gesture as naturally as possible. It is important to remember that the more one practice's the more at ease one will become.
- Don't apologize. Teacher should not downgrade his self by making excuses either at the beginning or the end of his presentation. Rather, he should stand up. Give his talk with enthusiasm. Don't drag it out. Then, sit down and let others decide how well he did-unbiased by any apologies from him.
- Giving a good presentation requires skill. Above all, teacher must be well prepared and practiced. Be observant of others. Watch what they do well and how teacher thinks they can improve.
-

Activity No. 4

Fill in the blanks.

1. ----- is comprised of learning experiences which a teacher sets up to achieve the learning objectives.
2. Teaching/presentation includes input, -----, and checking for understanding
3. In ----- the teacher provides the information needed for students to gain the knowledge or skill through lecture, film, tape, video, pictures, etc.
4. Teacher's manner is considered the key element in -----.
5. Many teachers ----- voice and tone.
6. Teacher should ----- in a clear, firm voice and vary his volume and pitch when he wants to emphasize something.
7. While presenting a -----, teacher should stay away from unfamiliar terms and jargon as much as possible.
8. A teacher with a good sense of ----- can actually help to create a more relaxed learning atmosphere for the students.
9. Teacher should show ----- in the topic to be taught.
10. Teacher should try to smile, speak and ----- as naturally as possible.

4. IDENTIFYING LEARNING DIFFICULTIES OF STUDENTS

Every student has a unique identity, mind, learning styles and learning needs. During instruction students face different learning difficulties. Interstate New Teachers Assessment and Support Consortium (INTASC) (2010, Pp.1-4) has presented some standards for teachers to identify learning difficulties of students.

Standard # 1: The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

To accomplish this standard, the teacher should understand major concepts, assumptions, debates, processes of inquiry, and ways of knowing that are central to the discipline(s) s/he teaches. The teacher should also understand how students' conceptual frameworks and their misconceptions for an area of knowledge can influence their learning. In this regard, the teacher relates his/her disciplinary knowledge to other subject areas.

The teacher realizes that subject matter knowledge is not a fixed body of facts but is complex and ever-evolving. S/he seeks to keep abreast of new ideas and understandings in the field. The teacher appreciates multiple perspectives and conveys to learners how knowledge is developed from the vantage point of the learner. The teacher has enthusiasm for the discipline(s) s/he teaches and sees connections to everyday life. The teacher is committed to continuous learning and engages in professional discourse about subject matter knowledge and children's learning of the discipline.

The teacher can do following performances:

- The teacher effectively uses multiple representations and explanations of disciplinary concepts that capture key ideas and links them to students' prior understandings.
- The teacher can represent and use differing viewpoints, theories, "ways of knowing," and methods of inquiry in his/her teaching of subject matter concepts.
- The teacher can evaluate teaching resources and curriculum materials for their comprehensiveness, accuracy, and usefulness in representing particular ideas and concepts.
- The teacher engages students in generating knowledge and testing hypotheses according to the methods of inquiry and standards of evidence used in the discipline.
- The teacher develops and uses curricula that encourage students to see, question, and interpret ideas from diverse perspectives.
- The teacher can create interdisciplinary learning experiences that encourage students to integrate knowledge, skills, and methods of inquiry from several subject areas.

Standard #2: The teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social, and personal development.

To accomplish this standard, the teacher should understand how learning occurs-how students construct knowledge, acquire skills, and develop habits of mind-and knows how to use instructional strategies that promote student learning for a wide range of student abilities. The teacher should also understand that students' physical, social, emotional, moral, and cognitive development influence learning and knows how to address these factors when making instructional decisions. Moreover, the teacher should be aware of expected developmental progressions and ranges of individual variation within each domain (physical, social, emotional, moral, and cognitive), can identify levels of readiness in learning, and understands how development in any one domain may affect performance in others. The teacher should also appreciate individual variation within each area of development, show respect for the diverse talents of all learners, and must be committed to help them develop self confidence and competence. The teacher is supposed to be disposed to use students' strengths as a basis for growth, and their errors as an opportunity for learning.

The teacher can do following performances:

- The teacher assesses individual and group performance in order to design instruction that meets learners' current needs in each domain (cognitive, social, emotional, moral, and physical)and that leads to the next level of development.
- The teacher stimulates student reflection on prior knowledge and links new ideas to already familiar ideas, making connections to students' experiences, providing opportunities for active engagement, manipulation, and testing of ideas and materials, and encouraging students to assume responsibility for shaping their learning tasks.
- The teacher accesses students' thinking and experiences as a basis for instructional activities by, for example, encouraging discussion, listening and responding to group interaction, and eliciting samples of student thinking orally and in writing.

Standard #3: The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

To achieve this standard, the teacher should understand and identify differences in approaches to learning and performance, including different learning styles, multiple intelligences, and performance modes, and may design instruction that helps use students' strengths as the basis for growth. The teacher should also understand and provide adaptations for areas of exceptionality in learning, including learning disabilities, visual and perceptual difficulties, and special physical or mental challenges. The teacher should have knowledge about the process of second language acquisition and about strategies to support the learning of students whose first language is not English. The teacher needs to know how students' learning is influenced by individual experiences, talents, and prior learning, as well as language, culture, family and community values. In this regard, the

teacher should have a well-grounded framework for understanding cultural and community diversity.

The teacher can do following performances:

- The teacher believes that all children can learn at high levels and persists in helping all children achieve success.
- The teacher appreciates and values human diversity, shows respect for students' varied talents and perspectives, and is committed to the pursuit of "individually configured excellence.
- The teacher respects students as individuals with differing personal and family backgrounds and various skills, talents, and interests.
- The teacher is sensitive to community and cultural norms.
- The teacher makes students feel valued for their potential as people, and helps them learn to value each other.
- The teacher identifies and designs instruction appropriate to students' stages of development, learning styles, strengths, and needs.
- The teacher uses teaching approaches that are sensitive to the multiple experiences of learners and that address different learning and performance modes.
- The teacher makes appropriate provisions (in terms of time and circumstances for work, tasks assigned, and communication and response modes) for individual students who have particular learning differences or needs.
- The teacher can identify when and how to access appropriate services or resources to meet exceptional learning needs.
- The teacher can identify when and how to access appropriate resources to meet the needs of students with particular talents.
- The teacher seeks to understand students' families, cultures, and communities, and uses this information as a basis for connecting instruction to students' experiences (e. g. drawing explicit connections between subject matter and community matters, making assignments that can be related to students' experiences and cultures).
- The teacher brings multiple perspectives to the discussion of subject matter, including attention to students' personal, family and community experiences and cultural norms.
- The teacher creates a learning community in which individual differences are respected.

According to Sedita (2001), every student has an individual learning style based on his unique set of learning strengths and weaknesses. How can teachers present information in ways that suit various learning styles? What procedures should they follow to ensure that students understand and master language arts skills? The following teaching principles are universal; they represent good pedagogy for any instruction setting:

1. Apply Multi Sensory Strategies:

Multi sensory instruction means teaching that utilizes all learning modes, including visual, auditory, and tactile-kinesthetic. The principle of multi-sensory instruction

is useful beyond simply teaching reading and spelling. It should be used to teach any information or skill. Educators should encourage students to see, hear, re-verbalize, read, copy, write, discuss, and touch what they are learning. When teachers present information, they should appeal to all three modes of learning: visual, auditory and tactile-kinesthetic. Students need to be shown as well as told how to do something. Whenever possible, teachers should give an example or demonstrate skill.

2. Practice to the Point of Automatization:

Automatization means learning a skill to the point that the student can accomplish a task with ease, speed, and little deliberate attention. Automatic reading occurs when a response to a letter, syllable or word becomes so established that the student does not have to consciously try to select an appropriate response.

Automatization is not only essential to reading. Automatization is important for all language arts tasks. Every writing, spelling, comprehension, organization, and study skill should be practiced until it becomes a habit (e.g., spelling rules and patterns, strategies for identifying and formulating main ideas, grammar and punctuation rules, sentence and paragraph structures, and study skills strategies such as note taking and summarizing).

3. Micro-Unit and Structure Tasks:

Micro-uniting, also known as task analysis means breaking down a skill or task into a series of smaller steps or units. Each step is taught in turn, and then eventually combined to learn the larger skills or complete the larger task. The hierarchical nature of language structures lend themselves quite well to micro-united instruction. For example, students should learn and practice each step of the decoding scope and sequence (i.e., consonant and vowel sounds, consonant blends, double vowel combinations, etc.) so they can eventually apply these combined decoding skills to read text.

Often, assignments such as writing a composition or reading a text chapter can be overwhelming much in the same way that hiking a mountain might be to a novice hiker. When the hiker is given a trail guide that provides step-by-step directions and information about each part of the trail, the once formidable task becomes a series of manageable steps, each building upon the other. If teachers micro-unit their instruction, and teach students how to apply their own micro-uniting strategies to complete assignments, students will see a larger, overwhelming task in terms of manageable steps that they are confident they can complete.

Structure is key to micro-uniting. Tutorial goals should be clear and specific. Tutorial lessons should be planned and presented step by step. Directions should be clear and given one at a time.

4. Provide Direct, Systematic Instruction:

Although some students are able to intuit the structure of language and strategies for developing language arts skills, most need explicit, direct instruction in methods for reading, spelling, writing, and study skills.

Instruction should be systematic, starting with the most basic element of a skill, and progressing to more advanced elements. There is a scope and sequence for learning reading, spelling, writing and study skills, and it is best to follow those sequences without skipping steps. Teachers should be careful not to make assumptions about what skills students possess. Some students may appear to have some fairly advanced skills, such as writing an essay or taking notes, but at the same time they may be lacking in some very basic skills, such as telling time or spelling common sight words. The older and/or more cognitively adept a student is, the greater the temptation to make assumptions about skills.

5. Review and Spiral Back:

Sometimes students appear to learn something only to forget it a day, week, or month later. To achieve automatization, students need to constantly review and spiral back over previously learned skills and information. Do not assume that one demonstration of mastery is sufficient over a length of time. Teachers should provide frequent repetition of “old” skills, while slowly introducing and practicing new skills.

6. Provide Immediate Feedback and Opportunities for Success:

Provide immediate, specific feedback. When students make a mistake, you should offer corrective negative feedback, which doesn’t threaten or harm their confidence, but does allow them to see their mistakes. “Can you do this in another way?” or “You did this part O.K., but then what happened?” are examples of corrective feedback questions. The feedback must be given as immediately as possible so the student does not repeat the mistake or learn an incorrect pattern. Finally, offer praise that is genuine. When the student does something well, provide positive feedback, but not to the point that it becomes meaningless with overuse.

Activity No. 5

If you have to teach at primary level, what strategies you will follow to identify learning difficulties of students?

5. PREPARING LESSONS ACCORDING TO THE INDIVIDUAL NEEDS

Lesson planning is one of the most important and basic conditions in organizing learning, being one of the main duties of the teacher as a regulator of his pupils' learning. There is no doubt that organizing others' learning in a certain situation is considered to be a magnificent job which has its rules and conditions that a dutiful teacher should be aware of according to the available circumstances. Meaningful planning is a major step towards success to pave the way for a suitable atmosphere for learning inside or outside the classroom without wasting time in useless affairs.

Preparation is the teacher's best assistance in performing his duty whatever his lesson is (easy or difficult). A teacher should plan for his lesson whatever excellent the teacher is. It is not reasonable for anyone to excel any work without preparation and being ready to perform it. Inefficiency in this domain is considered an inefficacy in one of the main duties of his job. The teacher plans his year or term plan before the school year begins by specifying the main features of the subject (distribution, objectives, methods, techniques, suggested time and methods of evaluation). The teacher should also write his daily plan regularly by stating the behavioral objectives for each period and what techniques, aids, activities and timing does each objective need in addition to the various suitable evaluation techniques. Each teacher should be aware of the difference between the year plan and the lesson plan (daily plan) that lies in the level of execution i.e. the daily plan is prepared for one period while the year plan covers a complete school year or term. As for objectives, the year plan is characterized by generalization and the daily plan is characterized by specification.

Teacher's mental preparation (understanding his subject matter), psychological (getting his pupils ready to receive the new experiences) and materially (audio-visual aids, class findings etc.) in addition to his written preparation. Each period should have its own preparation, in case of teaching the same preparation in more than one class in different days, the teacher should denote to that by writing the date. If classes are different in the scientific standard or individual differences, the teacher must prepare the lesson for each class according to the different standards because lesson planning is related to the learner himself. Organizing the course and arranging its different elements logically in order to make the lesson well-linked and clear. Preparation should be free from grammatical or spelling mistakes. Handwriting should be good and clear. The teacher should take his preparation notebook with him in each classroom to make use of it. He shouldn't read from it in a noticeable way, instead, he can have a look whenever he needs that. Processing difficulties during the lesson daily planning leads to logical scientific and proper preparation. Revision lesson preparation should include the objectives and topics of the revision in addition to the aids and the questions that should be discussed. The test lesson preparation must contain objectives, questions and instructions of the test. The

teacher should organize the school library or any other learning resources visits and he should prepare for that in the special field according to the directives concerning this matter. The teacher should write the remarks and recommendations - written by the educational supervisor in the visits record - to be aware of what he is asked to execute in order to improve and develop his performance to facilitate the follow up process done by the school headmaster and the educational supervisor. Free reading and benefiting from the scientific and educational references can help in the teacher's continuous self cultivation and professional growth to enrich his experiences.

A teacher has to follow certain steps to prepare lessons according to individual needs. These include the following steps:

- Preparation
- Presentation
- Practice
- Evaluation
- Expansion

The five parts of a lesson may all take place in one class session or may extend over multiple sessions, depending on the nature of the topic and the activities. The lesson plan should outline who will do what in each part of the lesson. The time allotted for preparation, presentation, and evaluation activities should be no more than 8-10 minutes each. Communication practice activities may run a little longer.

1. Preparation:

As the class begins, teacher should give students a broad outline of the day's goals and activities so they know what to expect. He must help them focus by eliciting their existing knowledge of the day's topics. Teacher should:

- Use discussion or homework review to elicit knowledge.
- Use discussion of what students do and/or like to do to elicit their knowledge of the topic they will address in communication activities.

2. Presentation/Modeling:

Teacher should move from preparation into presentation of the content of the lesson and relevant learning strategies. Present the strategy first if it will help students absorb the lesson content. Presentation provides the lesson's input that gives students the foundation for their learning. Input comes from the instructor and from course textbooks. An important part of the presentation is structured output, in which students practice the form that the instructor has presented. In structured output, accuracy of performance is important. Structured output is a type of communication that is found only in language classrooms. Because production is limited to pre-selected items, structured output is not truly communicative.

3. Practice:

In this part of the lesson, the focus shifts from the instructor as presenter to the students as completers of a designated task. Students work in pairs or small groups

on a topic-based task with a specific outcome. Completion of the task may require the bridging of an information gap. The instructor observes the groups and acts as a resource when students have questions that they cannot resolve themselves. Activities for the practice segment of the lesson may come from a textbook or be designed by the instructor.

4. Evaluation:

When all students have completed the practice task, reconvene the class as a group to recap the lesson. Ask students to give examples of how they used the content and learning or communication strategies to carry out the academic task.

Evaluation is useful for four reasons:

- It reinforces the material that was presented earlier in the lesson.
- It provides an opportunity for students to raise questions of usage and style.
- It enables the instructor to monitor individual student comprehension and learning.
- It provides closure to the lesson.

5. Expansion:

Expansion activities allow students to apply the knowledge they have gained in the classroom to situations outside it. Expansion activities include out-of-class observation assignments, in which the instructor asks students to find examples of something or to use a strategy and then report back.

Activity No. 6.

1. Make a chart and highlight the importance of lesson preparation, then discuss it with a nearby primary school teacher.
2. Identify the main steps of lesson preparation.

6. STUDENTS' EVALUATION

According to Tufo (2002) evaluation is the process of determining the value or worth of a program, course, or other initiative, toward the ultimate goal of making decisions about adopting, rejecting, or revising the innovation. It should not be confused with assessment, which encompasses methods for measuring or testing performance on a set of competencies. Evaluation is the more inclusive term, often making use of assessment data in addition to many other data sources. While student evaluation is to make decisions about teaching and students' performance. Understanding the purposes of evaluation helps teachers make decisions about the types of assessments and criteria they will use in evaluating student progress. The purpose of an assessment may be clarified by asking "who is this information for and how will it be used.

There are different techniques for students' evaluation. Davis (1993) has highlighted following tools for students' evaluation:

- **Questioning:** A very simple tool for checking effective teaching is to incorporate specific questions within a lesson to gauge student understanding of the material. For example, an instructor may ask students to verbally answer a question similar to one that will be asked on an exam. This tool is more useful than simply asking if students have any questions because students who are confused may not be able to articulate their questions. Moreover, some students may falsely believe they understand the lesson and not ask questions. Checking for understanding within a lesson helps the instructor discover students' level of learning and to make adjustments during the lesson itself.

- **Classroom Response Systems:** A problem with simple questioning is that an instructor generally will get a response from only one or two students rather than the entire class. This problem can be resolved with a few strategies that fall under the Classroom Response umbrella.

The first strategy is the easiest to implement. An instructor asks a multiple choice question or makes an agree/disagree statement about the material. Students indicate by the position of their thumb whether they believe the answer is A (upright), B (sideways), or C (downward) or Agree (upright) or Disagree (downward). The instructor can then quickly look around the room to determine how many students have the correct answer.

The second strategy involves the use of colored index cards. Its method is identical to the first strategy except that the instructor is using color coded cards for the responses. The advantage of using colored index cards is that they are easier to see than thumbs.

The third strategy involves the use of hand-held remote controls ("clickers") to measure student responses. The technology is linked to software in a computer, either a laptop or a classroom computer and can keep a record of student responses. Many instructors use this technology by imbedding the question into their presentation software. Both the instructor and students receive immediate feedback to the responses. In addition to the recordkeeping aspect of this system, a primary advantage of clickers is student anonymity in their responses in the classroom. A

major disadvantage is the cost and performance reliability of the clickers themselves.

- **Open Class Discussion:** This technique can be used either during the class session or by monitoring student online discussion. By asking discussion questions that require critical thought, instructors are able to gauge students' understanding of the lesson material and whether they are making necessary connections to other course material. Many times students believe they know the material but their misunderstandings are revealed during discussion.
- **Minute Paper:** This evaluation tool is done at the end of class several times during the quarter. It derives its name from the fact that students spend no more than one minute answering any number of questions. The instructor reads the responses before the next class meeting and responds appropriately. Examples of questions asked are:
 - What was the most important thing you learned during class?
 - What unanswered questions do you have?
 - What was the muddiest point for you?
 - At what point this week were you most engaged as a learner?
 - Can you summarize today's lesson in one sentence? If so, please summarize it.
 - What has been most helpful to you this week in learning the course material?
- **Index Card:** A variation on the Minute Paper is for the instructor to write the responses to the following questions on a 3 x 5" index card following a lesson: "What worked? What didn't work? What are some ideas for changing the lesson?" The 3 x 5 card limits the amount of information that can be written down and serves as a reminder to write down ideas but to only spend a few minutes writing them down. Attach the card to the lesson notes to serve as a reminder the next time the lesson is taught.
- **Course Exams and Assignments:** Student success on course exams and assignments are a powerful data source on teaching effectiveness. A short questionnaire at the end of exams can ask students to identify which questions were the most difficult to answer and why they were difficult. A pattern may develop that can be used to make changes. Additionally, an instructor may ask students to critique assignments. Questions instructors may ask are:
 - Were instructions clear?
 - Did the assignment help students learn course material?
 - Were the expectations reasonable for the time-frame?
 - How many hours were devoted to completing the assignment?
- **Mid-quarter evaluation:** An effective way of gauging student learning and satisfaction is via anonymous mid-quarter evaluations. The evaluations can take a variety of forms. A simple survey asking students to describe what is working, what is not working, and suggestions for change can be conducted via paper-pencil or online. Many of the course management systems have tools that allow anonymous feedback. Instructors need to check with their system's administrator to find out how to do it. Many instructors provide 15-25 minutes of class time to a neutral party for the purpose of getting feedback from students. A more formal method is to use the same forms that are used for course evaluations. One thing to note is that even if course changes cannot be made during the quarter the evaluation takes place, mid-quarter evaluations allow instructors to engage in dialogue with their students regarding the teaching-learning process and students will feel more positive toward the instructor.

7. SELF ASSESSMENT QUESTIONS

- Q. 1 Offer a working definition teaching skills.
- Q. 2 “Set induction is about preparation of lessons”. Discuss in detail.
- Q. 3 Elaborate different types of set induction.
- Q. 4 Critically analyze importance of set induction.
- Q. 5 Kelley (2010) says that “teaching/presentation includes input, modeling, and checking for understanding”. Discuss with solid examples from Pakistan.
- Q. 6 Elaborate components of presentation skills with examples.
- Q. 7 Discuss some tips for teachers to make classroom presentation more effective.
- Q. 8 Analyze different standards to identify learning difficulties of students.
- Q. 9 Critically evaluate different strategies to identify learning difficulties of students.
- Q. 10 “Preparation is the teacher’s best assistance in performing his duty whatever his lesson is (easy or difficult)” critically analyze the statement.
- Q. 11 Explain the steps to prepare lessons according to individual needs. Give examples from Pakistan.
- Q. 12 Define the terms “Evaluation” and “Students Evaluation”. Also highlight the importance of students’ evaluation.
- Q. 13 Critically discuss different techniques of students’ evaluation.

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Unit No. 9

TEACHING TOOLS

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INTRODUCTION

Teaching tools are teaching aids that classroom teachers employ to help their students learn quickly and thoroughly. A teaching tool can be as simple as a chalkboard or as complex as a computer program. Because every individual learns in a different way, teachers rely on these tools to explain concepts to students with a wide variety of learning needs. Teaching tools are crucial for educators as they are keys in differentiating instruction for all types of learners.

As we all know that today's age is the age of science and technology. The teaching learning programs have also been affected by it. The process of teaching - learning depends upon the different type of teaching tools available in the classroom.

OBJECTIVES

After study the material, it is hoped that you will be able to:

1. Explain the teaching tools
2. Identify the audio-video materials
3. Discuss kinds of audio visual aids.
4. Pin points the preparation for audio- visual activities.
5. Evaluate the planning to use the material

1. THE TEACHING TOOLS

Every individual has the tendency to forget. Proper use of teaching tools helps to retain more concepts permanently. Students can learn better when they are motivated properly through different teaching tools.

Teaching tools develop the proper image when the students see, hear taste and smell properly. Teaching tools provide complete example for conceptual thinking. The teaching tools create the environment of interest for the students. Teaching tools helps to increase the vocabulary of the students.

Teaching tools helps the teacher to get sometime and make learning permanent. Teaching tools provide direct experience to the students.

(i) **Need and Importance**

Teaching aids play very important role in Teaching- Learning process. Importance of Teaching aids are as follows:

- 1) **Motivation:** Teaching aids motivate the students so that they can learn better.
- 2) **Clarification:** Through teaching aids, the teacher clarifies the subject matter more easily.
- 3) **Discouragement of Cramming:** Teaching aids can facilitate the proper understanding to the students which discourage the act of cramming.
- 4) **Increase the Vocabulary:** Teaching aids helps to increase the vocabulary of the students more effectively.
- 5) **Saves Time and Money:** Teaching aids are helpful to save time and money
- 6) **Classroom Live and active:** Teaching aids make the classroom live and active.
- 7) **Avoids Dullness:** Teaching aids motivate the students to take active part n the classroom activities and avoid dullness.
- 8) **Direct Experience:** Teaching aids provide direct experience to the students

(ii) **Purpose**

The Teaching aids are very purposeful. These are used:

- To supplement and enrich teachers own teaching to make teaching-learning more concrete
- To serve an instructional role in itself
- To create interest among the group
- To make teaching as an effective process

(iii) **History**

The globe is the earliest-known teaching tool. Originating in ancient Greece, the globe has been used as an educational tool since as early as 150 B.C. The hornbook was another early teaching tool. Used in classrooms starting in the mid-1400's, the hornbook is a piece of paper containing the alphabet that was mounted on wood, bone, or in some cases leather. The chalkboard was patented in 1923 by Samuel Read Hall, and replaced the hornbook in classrooms around the world.

(iv) **Types**

There are many aids available these days. We may classify these aids as follows:

- 1) Visual Aids 2) Audio Aid 3) Audio - Visual Aid

1) Visual Aids

The aids which use sense of vision are called Visual aids. For example :- actual objects, models, pictures, charts, maps, flash cards, flannel board, bulletin board, chalkboard, overhead projector, slides etc. Out of these black board and chalk are the commonest ones.

2) Audio Aids

The aids that involve the sense of hearing are called Audio aids. For example: - radio, tape recorder, gramophone etc.

3) Audio - Visual Aids

The aids which involve the sense of vision as well as hearing are called Audio- Visual aids. For example: - television, film projector, film strips etc.

Most teaching tools are visual in nature. Blackboards and whiteboards, posters, calendars, charts, drawings, and overhead projectors are all examples of visual teaching tools. This type of tool is important because many people learn best through use of visual/special thinking. Some teaching tools are aurally-based. These aural aids include recordings of spoken broadcasts and songs. Audio-visual teaching tools include film projectors, videocassettes, DVDs, and movies on the Web. Though audio-visual aids were once seen as a method for students to teach themselves, they are now considered to be educational tools rather than a replacement for teachers.

(v) Technology-Based Tools

Since the dawn of the technology age, computers have proved to be the most multifaceted teaching tool available. With technology like digital video presenters, power point presentations, and educational software, teachers are now able to quickly and accurately enlarge any physical visual aid, create and edit informational slides, and can ultimately provide their students with information in a faster, more comprehensive way. Computers provide an interactive educational experience that engages learners and makes the task of preparing lesson materials less time-consuming for teachers.

(vi) Considerations

A few considerations in this aspect are suggested, though teaching tools are crucial to successful teaching, they are not a replacement for quality teaching strategies. Instead of relying upon teaching aids to do the instruction, these tools are used as supplemental resources for educators. Many students cannot perform to their fullest potential without the use of teaching tools, but no student can produce their best work without a skilled teacher behind them. With a excess of multimedia resources available, it is important to remember that teaching tools are meant to enrich student learning, not provide it. Keeping these in view you should prepare a planner which would integrate teaching tools with teaching strategies.

2. SELECTING THE AUDIO VISUAL MATERIAL

Audio-visual aids are intended to impart knowledge to the pupils through senses to ensure quick and effective learning. No wise teacher can ignore the use of aids in order to make his lesson more interesting and real. It is an admitted fact that the child learns through the senses of sight and hearing have a great share in this process. But it should always be borne in mind that these aids should be used as aids to teaching and should not replace the teacher but revolutionize the methods of teaching.

For selecting the audio visual material these points may be kept in mind.

1. Audio visual aids should be integrated with learning.
2. Should be according to the age, intelligence and experiences of the students.
3. Should be suiting the physical, psychological, intellectual and social development of the group.
4. Language should be familiar and understandable.
5. Should be accurate, truthful and realistic.
6. Should be motivational and highly informative.
7. Should be available in the need.

3. PLANNING TO USE THE MATERIAL

There is need of proper planning for using effective audio visual aids for the students; Following are some suggestions which can be helpful for the planning to use the material.

1. The teacher must be trained and fully skilled in the use of the teaching aids. They should be actually taught and does not used for deco rational or ornamental value in the class.
2. While using the aid, active participation of the students should be sought.
3. The teaching aid should be adequately protected and preserved for maintaining due interest and motivation of the students.
4. The teaching aid should be within the range of immediate availability in the hour of urgent need.
5. The aid should be evaluated at regular intervals in order to know their use and effect of learning.

4. PREPARING FOR THE AUDIO-VISUAL ACTIVITIES

The key to preparing effective audiovisual aids is to remember that they are only aids. Their role is to add a visual dimension to the points that you made orally. They cannot make those points for you; they can only reinforce them. When you plan for audiovisual aids, follow these simple guidelines:

1. We can use them to summarize or show the sequence of content.
2. We can use them to visually interpret statistics by preparing charts and graphs that illustrate what you will say.
3. We can use them to illustrate and reinforce your support statements.
4. We can use them to add visual clarity to your concepts and ideas.
5. We can use them to focus the attention of the target group on key points.
6. We should not project copies of printed or written text. Instead, summarize the information and show only the key points on the visual aids. If the group must read every word, use handouts for reading, either before or after your presentation.
7. Do not put yourself in the role of aiding your visuals: A presentation is primarily an oral form of communication. If your only function is to read the information on your overheads or slides, the target group will become easily bored.
8. Do not use copies of your transparencies as handouts. They reinforce what you are saying-- they don't say it for you. If you want your target group to remember what you meant, you'll need to provide written text in addition to any key point summaries or charts that you need for your transparencies.
9. Do not use charts, graphs, or tables that contain more information than you want to provide. The group will have difficulty focusing on the point that you're trying to make.

5. KINDS OF AUDIO VISUAL MATERIALS

Teachers may wish to combine different types of media in a single presentation. The media used most often are overhead projection transparencies, flip charts, slides, blackboards, and handouts. Teachers may occasionally use videotapes and/or films.

According to Edger Dale: “audio visual aids are those devices by the use of which communication of ideas between persons and groups in various teaching and training situations is helped” These are also termed as multi sensory materials.

Audio visual aids are sensitive tools used in teaching and as avenues for learning. These are planned educational materials that appeal to the senses of the people and quicken learning facilities for clear understanding. A.V aids are multisensory materials which motivate and stimulate the individual. It makes dynamic learning experience more concrete realistic and clarity. It provides significant gains in thinking and reasoning. Audio visual material must be seen in their relationship to teaching as a whole and to the learning process as a whole, until the teacher understands the relationship between audio visual material and teaching learning process. Audio visual materials are produced, distributed and used as planned components of educational programs. It helps the process of learning that is motivation, classification and stimulation.

According to Kinder S. James: “Audio visual aids are any device which can be used to make the learning experience more concrete, more realistic and more dynamic”.

Classifications of Audio-Visual Aids

1. **Projected aids:** Projected aids are those which require projection material or any electric power.
2. **Non-Projected aids:** Non-Projected aids are those which require no projection material or any electric power.

5.1 Whiteboard/marker

Whiteboards have a smooth, shiny surface on which coloured felt tip pens can be used. Some are designed for use with water-soluble ink; more modern ones ("dry-marker" boards) must be used with special dry marker, solvent-based pens. Using the wrong kind of pen can damage the board. It is therefore important to know which type of board you are dealing with and it is a good idea to make sure no pens of the wrong kind are available near the whiteboard. Whiteboards are easier to use than chalkboard s from both the agent's and the audience's point of view. The pens flow smoothly over the surface and the colours are clearer than chalk on a chalkboard. Markers for white boards must be the erasable type. It would be advisable to provide your own chalk and markers--to make sure they are available and they are the correct type. The popularity of whiteboards increased rapidly in the mid-1990s and they have become a fixture in many offices, meeting rooms, school classrooms, and other work environments.

Advantages

- Whiteboard ink markings are less susceptible to external factors, such as water, because the ink adheres in a different manner than does chalk to a chalkboard. Using markers does not generate the dust that comes from using and erasing chalk, allowing their use in areas containing dust-sensitive equipment. Some who are allergic to chalk or are asthmatic use whiteboards as an alternative.
- A whiteboard can be used as the projecting medium for an overhead or video projector. This allows the person giving the presentation to fill in blanks, edit, and underline and make comments by writing directly onto the whiteboard, which in turn shows through the projected image. Proper dry wipe boards are high gloss to enable the dry marker ink to be wiped off easily and high gloss surfaces will reflect the projector light, creating a so called "hot spot", a glare back from the board. Semi-matte whiteboards are better suited for projection but more difficult to dry wipe clean.
- A whiteboard pen is easier than chalk to hold and write with. This can benefit persons with limited mobility in their hands, such as those affected by diseases such as arthritis or systemic lupus erythematosus. In addition, marking on a whiteboard takes less time, effort, and pressure than marking on a chalkboard
- Like chalkboards, whiteboards help to save paper.
- When compared to a chalkboard a whiteboard can have significantly more colors because markers have a greater range of color than chalk.

Disadvantages

- Only special whiteboard markers are suitable for use on whiteboards. Using other markers that resemble whiteboard markers but contain the wrong kind of ink creates markings that are hard or impossible to remove, depending on the surface type. However, some techniques have been developed, which include filling over them using a marker with the right type of removable ink and then erasing the ink; wiping the marks with acetone or alcohol; or by using board cleaning sprays or pre packaged wipes commercially available from the whiteboard manufacturers.
- The white background can cause contrast problems for people with vision impairment. Additionally, whiteboards cause some problems for those who write left-handed as many write with their hand curved around the pen, therefore causing their hand to drag across the board, smearing the marker strokes previously made. Similarly, right-handed people have this problem with right-to-left languages, such as the very "curvy" and cursive Arabic abjad, and to a lesser extent with the Hebrew abjad (due to the square and differentiated shape of the letters). This limitation is also present with a chalkboard.
- Markers on whiteboards are generally less pressure sensitive than chalk, making it harder to draw heavier/lighter lines
- Whiteboard markers are often sealed in opaque plastics and difficult to determine the amount of ink remaining; only fading in color intensity with use. Like other contemporary markers, they can dry out with if the writing tip is uncapped for long periods of time.

- Whiteboard markers often have a pungent and strong odor (depending on brand and color) whereas chalk has a mild smell mainly from the chalk dust.
- Whiteboard markers, once dry, are disposed of and are generally non-biodegradable, having an increased impact on the environment.
- When writing on a vertical surface, most people incline markers upwards; however this impedes the flow of ink which is dependent on gravity.

5.2 Charts, posters, maps, graphs and models

There are many non-projected teaching aids such as Charts, posters, maps, graphs and models. The detail of each is given below;

5.2.1 Charts:

A chart is a combination of pictorial, graphic, numerical or vertical material which presents a clear visual summary. *Edgar Dale defines* charts as, “a visual symbol summarizing or comparing or contrasting or performing other helpful services in explaining subject-matter”. The main function of the chart is always to show relationships such as comparisons, relative amounts, developments, processes, classification and organization.

Characteristics:

1. Charts can be carefully stored and preserved for use in the future.
2. They have an educational value.
3. Usually the charts are teacher made.
4. Charts can be of any size.
5. Charts display specific information.
6. Easy to carry.

Types of charts:

- Picture charts
- Time charts
- Table charts
- Graphic charts
- Flow or organization charts
- Tree charts
- Pie charts

Uses of charts:

1. Motivates the students
2. Shows continuity in the process
3. Shows relationships by means of facts, figures and statistics
4. Presents matter symbolically
5. Presents abstract ideas in visual form
6. Summarizes information
7. Shows the development of structures
8. Creates problems and stimulates thinking

9. Encourages utilization of other media of communication

Limitations of charts:

1. If the selection of material for preparing the charts is not good they will not last long.
2. Takes up the time of the teacher if she has to prepare the chart.
3. Charts only emphasize the key points. This leaves the students in doubt, if the clarification is not clear.
4. Charts lose their charm, if it contains too much matter on it.
5. Poor use of color combination, improper spacing and margins creates confusion in the minds of the students.

5.2.2 Posters:

S.L.Ahulwalia's view: "A poster is a pictorial device designed to attract attention and communicate a story, a fact, an idea, or an image rapidly and clearly." *Good's Dictionary of Education:* A poster is a "placard, usually pictorial or decorative, utilizing an emotional appeal to convey a message aimed at reinforcing an attitude or urging a course of action".

The poster can be defined as a graphic representation of some strong emotional appeal that is carried through a combination of graphic aids like pictures, cartoons lettering and other visual arts on a placard. It aims for conveying the specific message, teaching a particular thing, giving a general idea etc. Posters exert a great influence on the observer.

Characteristics:

1. Brevity: Use of minimum words, i.e., four or five.
2. Idea: Idea or a feeling should be put in original form.
3. Simplicity of lay-out: It refers to the arrangement of the elements of the poster.
4. Efficient use of colors: (i) Use bold illustrations, (ii) Avoid fancy lettering style, (iii) Proper use of color,
5. Makes the poster more attractive.

Uses of posters:

1. Presents a single idea or a subject forcefully.
2. Publicizes important school and community events and projects.
3. Adds atmosphere to the class-room.
4. Captures attention by some attractive feature and thus convey the message attractively and quickly.
5. Motivates the class.
6. Strong lasting impression.
7. Satisfies the viewer emotionally and aesthetically.

Limitations of Posters:

1. Because of its impressive presentation, a poster captivates the eye, regardless of the message and is capable of being comprehended.

2. Poster is a simple and dynamic medium at a glance of presenting a message in a compact form.
3. Poster tells the story vividly with the desired effect.
4. Poster conveys a single theme.
5. The lettering if not attractive and accurate, makes the poster illegible.
6. If smudge marks makes the posters unattractive and futile.

Suggestions for preparing Posters:

1. Decide the theme.
2. Decide the most suitable words to provide a title or a slogan.
3. Sketch some layouts and decide on the best.
4. Gather all needed material to prepare the poster.
5. Prepare the lettering.
6. Add desired objectives.
7. Give the finishing touches and erase the smudge marks.

5.2.3 Maps

Maps constitute an indispensable aid in teaching many subjects like geography, history, economics and social studies. The learning of these subjects becomes unreal, inadequate and incomplete without map media. A resourceful teacher will turn the fear of map into the genuine love by motivating the students. This, however, presupposes the invariable uses of maps at every possible opportunity by the teacher in the class-room, and the possession of individual atlases (a combination of maps) by the students. Every student should also know certain elementary aspects of map preparation such as copying, enlarging and reducing, symbolizing, coloring, and preparation of key. Many students develop aversion for maps because they do not know skills relating to map preparation.

Meaning

Maps are called as “Encyclopedia of Man’s Existence”. The map as a record of spatial concepts tells a story as nothing else can. A map is an accurate representation plane surface in the form of a diagram drawn to scale, the details of boundaries of whole of earth’s surface, continents, countries etc. Geographical details like location of mountains, rivers, altitude of a place, contours of the earth surface and important locations can also be represented, taught and learnt accurately. Maps depict the climatic conditions, natural conditions, location etc. of certain countries and continents.

Purpose or Uses of Maps

1. To depict geographical features of earth’s surface and to understand the position of earth in the universe.
2. To show relationship between places
3. To furnish information concerning distances, directions, shapes and sizes.
4. To clarify descriptive materials.
5. To reduce the scale of areas and distances and thus bring the abstract concepts of size, distance and directions into the region of reality.

6. To understand the lines-boundary lines, lines of communication, lines indication the rivers, contours, meridians and parallels.
7. To understand the colors, tints, shadows, symbols in a map or globe.
8. To understand the distinction between various types of maps such as relief, political, distribution maps.

Richard E. Servey states that maps can be used in a wide variety of ways to express many different statements which are listed below:-

1. With color as a basic symbol
2. Through the use of conventional or invented symbols
3. Rearranged maps
4. Three dimensional maps
5. Globe

Limitations of Maps

1. Maps should indicate accurate, well planned, well printed, wall mounted and durable.
2. Many of the maps are not visible to all the students in the class.
3. The teacher often does not take effort to teach map reading to the students.
4. Each type of map should have the relevant details.
5. If the lettering is not taken care of, it will prove futile.

5.2.4 Graphs

Graph is defined as a visual representation of numerical data. Graph is fundamentally a tool for expressing number relationships, which is much easier to visualize than can be done if the statement were made only in words and figures. It offers a judicious technique for analyzing, comparing and prophesying of facts which are vital to an intelligent study of a problem.

Characteristics of graphs:

1. Graphs are by nature a summarizing device.
2. Effective tool for comparisons and contrast or for presenting complicated facts.
3. Made according to exact specifications and depict specifically quantitative data for analysis, interpretation or comparison.
4. Graphs, being symbolic are abstract in character.
5. Self explanatory and simple.
6. Regarded as flat pictures which employ dots, lines or pictures to visualize numerical and statistical data to show statistics or relationships.

Kinds of graphs

- Line graph
- Bar graph
- Circle or pie graph
- Pictorial graph
- Flannel graph

Steps in Presenting Graphs, Maps, Diagrams

Graphs, maps, diagrams are potent spark plugs because they can be ignited at the crucial moments. To ensure success the following steps may be followed:

1. Prepare students
2. Present the aid
3. Apply information
4. Test students after the aid has been presented
5. Review or reshew the illustration if the previous step reveals misunderstanding

Uses of Graphs

1. **Awareness:** The teacher should be well aware of the method of drawing of graph in a neat and accurate manner.
2. **Neatness:** The graph should be neat, clean and artistic. It should be of good quality.
3. **Accuracy:** The scales and the measurement of the graph should be accurate and intelligible to the students.
4. **Drawing and paper:** The graph should be properly drawn. The graph paper should be good. The pencil that is used should also be good.
5. **Hints:** The hints should be properly explained. The marks on the graph should be such that the students may know them by themselves.
6. **Blackboard:** The teacher may draw a graph on the black board.

Limitations of Graphs

1. If the graph is not drawn neatly, it loses its purpose.
2. The teacher should be adept at drawing the graphs and presenting it properly to the students.
3. Graphs cannot be preserved for a long time if the quality of the paper is not good.
4. Graphs will not be self explanatory, if proper hints and scale are not given.

5.2.5 Models

Models can be particularly helpful in the case of buildings and other fixed structures. The construction of a poultry shed or grain store, for example, or the layout and dimensions of a fish pond, can be shown using a model, which can be assembled and taken to pieces in front of the audience.

Models of objects can be valuable additions to your presentation. When the object itself is too large or too small, a model of the object is an important substitute. Three dimensional items give the audience an easier opportunity to grasp exactly what you are talking about. They see the dimensions and other aspects firsthand instead of in their imagination.

5.3 Text books

Textbooks are books containing information about a particular subject, organized in a manner calculated to make presenting the information easier. Teachers can read a textbook to confirm or expand their personal knowledge and/or assign readings from a textbook for students to complete. Many textbooks also include quizzes or review questions to help assess how well students have comprehended what they have read. Publishing companies often release matched pairs of textbooks with workbooks (books full of worksheets) on the same subject matter.

5.4 Handouts

Handouts are sometimes used as visual aids. This is a mistake. Avoid handouts during your presentation if at all possible. You, the presenter, are the most important thing to focus on, and handouts are distractions from you. People look at it, flip through it, waiting for their copy, hand a friend a copy, point out some item to their neighbor, doodle on it, fold it, and wonder why it is taking you so long to cover so little information. They may also wonder why they have to sit and listen to you right now when they can take this information home and read it later. At times, handouts must be used, and we will discuss how best to use them later.

5.5 Projectors

By projected aids we mean those aids where a bright light is passed through a transparent picture, and by means of a lens, an enlarged picture is thrown or projected on the screen. Projected aids mainly fall into three groups, viz; opaque projections, transparent still projections and cine projections.

The Overhead projector has opened a new dimension in communication. It represents a lot of improvement over magic lantern, slide and film projectors.

The name ‘Overhead projector’ comes from the fact that the projected image is behind and over the head of the speaker/teacher. In overhead projection, a transparent visual is placed on a horizontal stage on top of light source. The light passes through this transparency and then is reflected at 90° angle on the screen at the back of the speaker. The overhead projector is the most used in all a.v. aids. It projects transparencies with brilliant screen images suitable for use in a lighted room. The teacher can write or draw diagrams on the transparency while he teaches; these are projected simultaneously on the screen by the OHP.

(i) During presentations:

- Keep the screen above the heads of the participants.
- Keep the screen in full view of participants.
- Make sure you are not blocking any one's view when presenting.
- Darken the room appropriately by blocking out sunshine and dimming nearby.
- Turn the screen off between slides if you are going to talk for more than two.
- Talk to the audience, not to the screen.

(ii) Purposes:

- To develop concepts and sequences in a subject matter area

- To make marginal notes on the transparencies for the use of the teacher that can carry without exposing them to the class.
- To test students performances, while other classmates observe
- To show relationships by means of transparent overlays in contrasting color
- To give the illusion of motion in the transparency

(iii) **Uses of Projectors:**

1. **Large image:** It projects a very large image on the screen from a minimum of projection distance.
2. **Face the class:** In this projector the image is projected over the shoulder of the teacher. Therefore, he can face the class at all times. He can maintain eye contact with the students. It helps the teacher to keep watch on the class as or indicates points of importance on the transparency.
3. **Lighted room:** O.H.P. can operate in an illuminated room. There is no need of darkening the room. It enables the teacher to develop a 'circuit of understanding' by watching expression of others.
4. **Bright image:** The lens and mirror arrangement in overhead projector makes it possible to have a bright image even in a well lighted room.
5. **Simple operation:** It is simple, easy and convenient to operate the overhead projector. It does not need separate projector operator or the instructor. It permits the teacher to face the class and at the same time operate the machine. Slides can be changed quite easily.
6. **Light weight:** The light weight of the equipment makes it portable.
7. **Class control:** The teacher can maintain complete class control and interest in a lesson by turning a switch on or off. He, while sitting on hi desk, can indicate specific items on the screen buy location them with his pencil on the slides.
8. **Process on the screen:** By putting a piece of ground glass over the slide space the teacher can draw a diagram sketch with pencil or wax pencil and the class can watch the process on the screen. He can also place sheets of transparent plastic over the slides for writing on them. Thus the overhead projector permits the teacher to use the screen as a blackboard.
9. **Large slide:** Due to largeness of its aperture it may allow the use of slides of the size 20 X 20 cms or 25 X 25 cms. It may facilitate the preparation of art work for slides.
10. **Use of pointer:** The teacher can use a pointer or pencil to point out important details of a slide. He has not to run about the machine to the wall to explain things to the students.
11. **Preparation and presentation of transparencies:** Transparencies can be prepared ahead of time, presented exactly when required and quickly remove, when they serve their purpose.
12. **Low cost:** Effective visuals can be made in a minimum of time and at low cost. Once a transparency is made, it is permanent. It need not be erased as in a blackboard. It can be stored for recall at any later time.
13. Easier to write on horizontal surface.
14. Permits the use of color.

(iv) Limitations:

1. Cannot be used for long time.
2. Writing by some types of writing pens get blotted out on plastic.
3. Transparencies create a storage problem.

(v) Advantages:

It permits the teacher to stand in front of the class while using the projector, thus enabling her to point out features appearing on the screen by pointing to the materials at the projector itself and at the same time, to observe the students reactions to her discussion. Gains attention of the student

5.6 Multimedia

Multimedia is a term frequently heard and discussed among educational technologists today. Unless clearly defined, the term can alternately mean a judicious mix of various mass media such as print, audio and video or it may mean the development of computer-based hardware and software packages produced on a mass scale and yet allow individualized use and learning. In essence, multimedia merges multiple levels of learning into an educational tool that allows for diversity in curricula presentation.

According Fenrich, 1997 Multimedia is the exciting combination of computer hardware and software that allows you to integrate video, animation, audio, graphics, and test resources to develop effective presentations on an affordable desktop computer.

Multimedia is characterized by the presence of text, pictures, sound, animation and video; some or all of which are organized into some coherent program. (Phillips, 1997).

Throughout the 1980s and 1990s, the concept of multimedia took on a new meaning, as the capabilities of satellites, computers, audio and video converged to create new media with enormous potential. Combined with the advances in hardware and software, these technologies were able to provide enhanced learning facility and with attention to the specific needs of individual users. A primary application of the interactive multimedia for instruction is in an instructional situation where the learner is given control so that he/she may review the material at his or her own pace and in keeping with his/her own individual interests, needs, and cognitive processes. The basic objective of interactive multimedia material is not so much to replace the teacher as to change the teacher's role entirely. As such multimedia must be extremely well designed and sophisticated enough to mimic the best teacher, by combining in its design the various elements of the cognitive processes and the best quality of the technology. With today's multimedia courseware, once a programme has been designed and built in with the appropriate responses, it should be flexible and permit change and alteration.

Today's multimedia is a carefully woven combination of text, graphic art, sound, animation, and video elements. When you allow an end user, i.e. the viewer of a multimedia project, to control 'what' and 'when' and 'how' of the elements that are delivered and presented, it becomes interactive multimedia.

Benefits to Learners

- Work at own pace and control their learning path
- Learn from an infinitely patient tutor
- Actively pursue learning and receive feedback

Benefits to Teachers

- Allows for creative work
- Saves time for more challenging topics
- Replaces ineffective learning activities
- Increases student contact time for discussion

Specific uses of multimedia include:

- Drill and practice to master basic skills
- The development of writing skills
- Problem solving
- Understanding abstract mathematics and science concepts
- Simulation in science and mathematics
- Manipulation of data
- Acquisition of computer Skills for general Purposes, and for business and vocational training
- Access and communication to understand populations and students
- Access for teachers and students in remote locations
- Individualized and cooperative learning
- Management and administration of classroom activities

For further details please visit these Internet links:

http://www.unesco.org/education/nfsunesco/pdf/LESTAG_E.PDF
http://www.ehow.com/about_5108016_types-audiovisual-aids-used-teaching.html
[http://vedyadhara.ignou.ac.in/wiki/images/8/83/ES-201\(Unit-7\).pdf](http://vedyadhara.ignou.ac.in/wiki/images/8/83/ES-201(Unit-7).pdf)

Conclusion:

The significance of Audio Visual aids are as under:

1. Inculcating scientific attitude.
2. Satisfy curricular needs.
3. Best attention compellers.
4. Economic in terms of time and verbalism.
5. Enhance effective learning.
6. Effective retaining of the content by the students.
7. Reduce meaningless and extra verbalism on the part of teacher.
8. Pupils get opportunity to correct misconceptions.
9. Bringing vivid reality into classroom.
10. Natural and easier way of learning.
11. Impart first-hand experiences to students.

12. Avoiding monotony.

6. ACTIVITIES

1. Write below a working definition of teaching tools.

2. Prepare a chart showing non-projected aids in teaching.

3. List below the latest technological based teaching aids.

4. Draw a diagram showing the preparation of audio visual activities.

5. Write below four advantages of the following:

Multimedia:

Charts:

Projectors:

Models:

7. EXERCISE

Hopefully you have studied the referred material, now please answer the following questions.

1. Explain the need and importance of teaching tools in education.
2. Offer a working definition of teaching aids.
3. “Teaching aids make the classroom live and active”. Discuss.
4. “Audio visual aids are those devices by the use of which communication of ideas between persons and groups in various teaching and training situations is helped” Discuss the statement of Edger Dale.
5. Highlight the problems in using projectors in the classrooms.

8. SELF ASSESSMENT QUESTIONS

- Q.1 Describe the purpose of teaching tools and how many types are there of teaching tools?
- Q.2 Discuss the use of different kinds of projected and non-projected aids during lecture.
- Q.3 Write down the advantages and disadvantages of multimedia.
- Q.4 Write short notes on:
 - a. Textbooks
 - b. Handouts
 - c. Charts
 - d. Models
 - e. Whiteboard
- Q.5 Critically examine the role of maps and posters in making lesson easy and interesting for the learner.
- Q.6 Which points may be kept in mind while selecting audio visual aids for teaching?
- Q.7 What steps are required for preparing effective audiovisual aids?

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