

## **Teaching Learning Methods in Medical Profession**

**Dr. S. M. Yadav (Surgery & Homeopathic Therapeutics)**

The variety of teaching and learning methods which is used within a course is an important ingredient in creating a course with interest to students. A course with a large proportion of its teaching taking place in lectures will need to have a high level of intrinsic interest to students to keep them engaged. Over the past few years, a wide range of different teaching and learning methods have been introduced and tested, often with the aim of developing skills which more didactic methods are poorly adapted to do.

**Definition:** Teaching/Learning media are the means of communicating educational information. It has been observed that retention to memory is approximately:

20% of what is only heard

40% of what is only seen and

70% of what is seen and heard

Due to the limitations of oral communication, a variety of T/L media have developed to facilitate teaching and learning.

Classification: T/L media are classified as shown below:

1. Non projected visual aids
  - a. Chalkboard
  - b. Display boards, cards and charts
2. Projected Visual aids
  - a. Overhead projector
  - b. Slide projector
  - c. Episcopes and micro projector
3. Audio aids
  - a. Public address system
  - b. Audio tape system
4. Written aids
5. Patients and real objects
6. Three-dimensional representation
  - a. Models
  - b. Simulators
7. Simulation and role play
8. Audio –visual aids
  - a. Videotape system
  - b. Tape-slide system and cine films
  - c. Computer & CD systems.

9. Mass communication

- a. Radio
- b. Television

**Brief Outline On Various Teaching Methods**

**1. Large Group Teaching**

(Learner group consisting of 30 or more persons)

**LECTURE**

This is a careful presentation of facts with organized thoughts and ideas by a qualified person (please refer to the hand-out- on 'Lecture-method').

**1.1 SYMPOSIUM**

**a) Definition:**

A symposium is a series of prepared speeches given by a few experts (2 to 5) or spokesmen on many aspects of a topic or a problem under a chair-person. The talk should be short and to the point (10 to 25 minutes). There is no discussion between speakers. The audience is passive except at question time towards the end.

**b) Advantages:**

- i) Concise and logical presentation of (new) ideas.
- ii) Fair analysis of different aspects of a controversial issue.
- iii) Short speeches and change of speakers maintain interest and help keep the audience alert.

**c) Disadvantages:**

- i) Formal atmosphere
- ii) Passive audience

**d) Scope as a T/L method:**

When an expert overview of many aspects of a new subject or a controversial topic has to be conveyed to a large group, symposium is effective.

**1.2 The Panel**

a) A group of four or more persons under a moderator who have special knowledge of the topic sits at a table in front of an audience; they hold an orderly and logical conversation on an assigned topic. Each member makes an opening remark (for 3-5 minutes) before exchanging ideas.

**b) Advantages:**

- i) Panel identifies and explores a problem or issue.
- ii) Audience can understand various aspects of the problem or issue.
- iii) Frequent change of speaker and viewpoint maintain attention and interest of the audience.
- iv) Establishes informal contact with the audience.

**c) Limitations:**

- i) The panelists may not cover all aspects of problem and may overemphasise only certain aspects of it.
- ii) Skilled moderator is necessary to ensure logical and balanced coverage by the panel.

iii) Audience is passive (unless some question-time is permitted).

**d) Scope as a T/L. method;**

Essentially similar to symposium. When interaction between the experts is deemed desirable then panel method is preferred to symposium.

**2. SMALL GROUP TEACHING**

(Learner group consisting of less than 30 members)

**2.1 GROUP DISCUSSION**

**a) Definition:**

Group discussion may be defined as a face to face interaction between members of a relatively small group (usually 5 to 20 persons). The group interaction as a method and a structure but it can still be informal and democratic. To be more than just a random unstructured conversation, the group members should have a common concern regarding a problem to be solved, a decision to be made or a desire for information.

**b) Advantages:**

- i) This a democratic and demands activity on the part of the learner.
- ii) Learner discovers his strength and weakness in comparison to fellow-learners and gains new insight.
- iii) Provides opportunity for synthesis of varied T/L experiences and data (e.g., from lectures, laboratory clinical, bed side teaching and text-book reading).

**c) Disadvantages:**

- i) Necessity of an optimum teacher-student ratio
- ii) Poorly prepared or inexperienced group is ineffective in providing meaningful interactions.
- iii) Since learner-aptitude varies widely, some may find the proceedings too fast or too slow.
- iv) A subject may not be adequately covered to the satisfaction of the group – especially if time is pre-fixed and short.

Despite all these shortcomings, Bloom has opined that learning outcome from a badly conducted group discussion is still better than that from a good lecture.

**d) Scope as a T/L method is very wide provided the basic conditions (refer 'definition') are met.**

**e) Improving effectiveness:**

Group discussion can be improved if the group strives for it.

***I) Group Leader (Instructor):***

- must prepare well enough to guide the flow of comments, to clarify various doubts, to bring out controversies and explore the topic from various angles.
- Should know each member of the group. This – knowledge of their personalities – helps in following (and regulating, if needing) the group-dynamics.
- Should plan for a suitable environment.
- Should be experienced in leading group discussions.

**II) Regulating the group:**

- if the students are not forthcoming, one of them could lead the group, a second student could be the recorder and the teacher could continue to the role of subject-expert (resource-person).
- if discussion goes, astray, a student may be asked to summarise progress thus far. This helps group members to return back to the mainstream of discussion.

**OTHER METHODS RELATED TO GROUP DISCUSSION****2.1.1 CONTROLLED DISCUSSION:**

In this method, the general direction of discussion is strictly controlled by the teacher, i.e., it is not democratic like a group discussion.

**Scope:** Normally used at the end of presentation to a class (large group), to help in revision of facts, understanding and feedback.

**2.1.2. FREE GROUP DISCUSSION**

Here, the teacher acts as an observer and the student group controls the topic and discussion.

**Scope:** This method helps change in attitudes, feelings and human relations; improve observation, self awareness and willingness to receive and consider new ideas.

**2.1.3. BUZZ-GROUP**

Here, groups of 2-6 members discuss issues or problems for a brief period within a lesson.

**Scope:** Encourages group cohesion and reticent students; active learning progress; break from monotony of a long lecture – hence Buzz groups could be allowed within a lecture to help (1) consolidate memory, (2) learn new terminology by usage, and (3) gain arousal feedback.

**2.1.4. BRAIN STORMING**

This is an intensive group discussion where spontaneous ideas and solutions to a problem are received, **WITHOUT CRITICISM.**

**Scope:** Generates new ideas, helps problem-solving and decision making. Improves creative thinking.

a) Synetics is a special type of brain-storming where the group members are chosen from diverse fields to generate more ideas and help solve complex problems.

**2.1.5. SYNDICATE**

This method is a group activity where the class is divided into groups of about six members. They work on the same or related problems. Intermittent contact with teacher is allowed. A joint report is written in the end for the appraisal of the whole class.

**Scope:** Develops sensitivity in human relations; improves self-awareness.

**2.1.6. T-GROUP**

This a therapeutic group technique where group members discuss their relationships and their problems in human-relationships.

**Scope:** Develops sensitivity in human relations; improves self-awareness.

**2.2 SEMINAR**

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**a) Definition:**

This consists of a group of persons engaged in advanced study of a subject (or research in related fields) meet under the general direction of an expert staff member. This form of group discussion leads to an in-depth study. Usually there is no audience.

**b) Advantages:**

In addition to all the advantages of group-discussion method of learning, the availability of an authority on the subject enables (1) in-depth discussion, and (2) authoritative guidance.

**c) Disadvantages:**

- i) difficulty in getting a resource person.
- ii) Members may not spend enough time for an in depth pre-seminar preparation.
- iii) The authority, if dominant, may inhibit the participation by some members of the group.

**d) Scope:**

Whenever a suitable resource-person is available for the guidance of advanced learners (say, PG students, research scholars, etc.,) then seminar is an ideal method for an intensive in-depth learning of the subject.

**2.3 TUTORIAL****a) Definition:**

Here, a small group of learners are guided by a teacher to help clear doubts, improve understanding and enhance knowledge of the subject.

**b) Advantages:**

- i) Active learning situation.
- ii) Ideal teacher-student ratio.
- iii) opportunity to correct mistakes and to find out extent of learning are the advantages of this method.

**c) Disadvantages:**

- i) Authority-dependant relationship is maintained
- ii) Poor preparation make it less effective.

**2.3.1. GROUP TUTORIAL**

To reduce the formality of a tutorial, Group Tutorial could be organized. Here, the tutor confines to giving general directions but the conduct of discussion is left to the student group. This informal milieu may help thinking and understanding of the group members.

**2.4 DEMONSTRATION****a) Definition:**

This is a method where a teacher performs some operation to demonstrate a skill or a phenomenon while the students watch.

**b) Advantages:**

- i) Observation of skills
- ii) Knowledge of the principles and of the skills demonstrated.

**2.5 PRACTICALS/BEDSIDE TEACHING/FIELD WORK:**

Advantages:

- i) Active learning process
- ii) Limited group of learners
- iii) Permits evaluation of all three domains
- iv) Bridges the gap between theoretical knowledge and practical reality.
- iv) Develops qualities of SCIENTIFIC THOUGHT (Observation, problem solving and decision making)

Disadvantage:

- i) High personnel costs.
- ii) Poor standardization
- iv) Cases (Patient) may be put in difficult situation

## 2.6 ROLE PLAY

Acting out a situation. It enables a group to study the behaviour of role-players, develops empathy and self-awareness; works off tension; creates attitudinal change.

**Scope:** Role-play is effective in manipulating attitudes (affective domain).

## 2.7 WORKSHOP

a) Definition:

A meeting during which experienced persons in responsible positions come together with experts to find solutions to problems that have cropped up in the course of their work.

b) Advantages:

Active involvement by each participant who works and learns from PRACTICAL(Hands-on) EXPERIENCE.

c) Disadvantages:

A lot of ground work and initial preparation is needed to make workshop effective and successful.

## 3. INDIVIDUAL TEACHING/LEARNING

### 3.1 READING

Reading is an effective method of self-learning of facts, which are not too difficult to grasp without guidance. It develops thinking and ability to seek out and acquire information.

### 3.2 PROGRAMMED LEARNING

A method of self-learning using a programmed set of instructions (using a workbook, a mechanical or a microprocessor or device) to help the learner attain a specific level of performance.

a) Advantages:

- i) Provides instructions in small steps.
- ii) Provides instant feedback on learner responses, right or wrong.
- iii) Provides instant feedback on learner responses, right or wrong.

b) Disadvantages: Enormous time and effort are needed to write out an effective and interesting programmed module.

**3.3 PROJECT**

A significant practical unit of activity having educational value, aimed at one or more goals of understanding. It involves investigation of problems and formulation of solutions)

3.3 (a) **INDIVIDUAL TASK** is a minor version of a project; usually a problem to be worked out in a class but may be other activities performed individually.

**Scope:** Active learning; involves all learners; develops problem-solving ability.

3.4 (a) **COUNSELLING** is similar to conference except that students voluntarily consult the tutor regarding academic or personal difficulties.

**3.5 SIMULATION**

A teaching method in which a real situation is simulated by various means (on paper, using models, using live, mechanical or computerized simulators). The learner plays an appropriate role to tackle the situation. E.g., Cardiac-pulmonary resuscitator, a physician solving a patient-management problem, etc. (Note; unlike role-play, there are usually no observers in simulation.).

**Scope:** Simulation has a very varied scope depending on how it is put to use. It can develop psycho-motor skills, problem solving ability or bring about attitudinal change and self-awareness.

**Conclusion**

A perusal of various teaching methods and their scope makes it clear that there is no “single-ideal’ method for medical education. An effective teacher has to combine various methods to achieve the educational objectives in an optimum way.