# Toward more Objective Teaching Learning and Teaching

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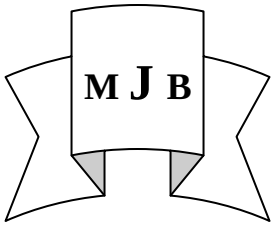
**Review Article**




## Introduction

Is affected by the total state of the learner A training program must be organized so that students can acquire their professional skills under conditions similar to those in which they will later practice.
Teaching requires interactions between teacher and student under the teacher`s responsibility in order to bring about expected changes in the student`**s** behavior.

### Conditions to facilitate learning

- ✓ Encourages people to be **active**
- ✓ Accepts that **difference** is desirable
- ✓ Recognizes people`s **right** to make mistakes
- ✓ Tolerates **imperfection**
- ✓ Encourages **openness** of **mind** and **trust** in **self**
- ✓ Makes people feel **respected** and **accepted**
- ✓ Facilitates **discovery**
- ✓ Puts emphasis on **self-evaluation** in **cooperation**
- ✓ Permits **confrontation** of ideas

### Some principles of learning

- ➢ Learning is individual
- ➢ Motivation is the key
- ➢ Relevance of learning experience should be clear to the student *
- ➢ " feedback" to learner is important
- ➢ For many years readiness has been recognized as very important prerequisite for learning. A student is ready when he understands and accepts the value and objectives involved.

### The characteristics of learning

- ↳ Producing a behavioral change in the learner
- ↳ Leading to a relatively permanent change that is also gradual, adaptable and selective
- ↳ Resulting from practice, repetitions and experience

### Teaching approaches

- ❖ Talk **to** students
- ❖ Talk **with** students
- ❖ Have them talk **together**
- ❖ Show students **how**
- ❖ **Supervise** them
- ❖ Provide opportunities for **practice**

### Purpose of teaching

To help students to

- ⌦ Acquire, retain and be able to use knowledge
- ⌦ Understand, analyze, synthetize and evaluate

- Achieve skills
- Establish habits
- Develop attitudes

**The purpose of teaching is to facilitate learning**

The literature on the philosophy of education is rich in theories, which tell a story of timid steps forward, backward, leaps and rediscoveries. It would be very gratifying to have a reliable general theory, firmly seated on a scientific basis and making proper allowance, which could serve as a guide for every teacher and enable him to resolve the "real" problems of teaching the health professions.

Systematic approach suggested hypotheses can be formulated regarding the process of acquiring a satisfactory level of performance that can be evaluated empirically and the choice of learning activities facilitated, the contemporary trend is to stress the "teaching – learning system" as opposed to the preponderance previously given teaching alone. There is a tendency to be interested less in teaching than in learning, less in what the teacher presents and more in what the student learns, it was assumes that the information transmitted to the student is always learned. doubtless this is obviously fallacious, and known to be so when it is expressed so crudely, but discussions of teaching methods are often still inspired by it and it has even been carried over into the initial stages of research into new methods. Much of this research, by concentrating on problems of the presentation of stimulating materials and utilizing some of the more rudimentary concepts of communications theory, Understandably, this approach led to a passive attitude towards students response; the student was seen in a dependent situation, relying upon information directed at him, whether through modern audiovisual communication techniques or the more traditional forms of the lecture and the text book.

Learning, however, is a dynamic and interactive process in which the behavior and experience of the student are vital components; the student must not only receive but also contribute; his perception of what is happening is just as important as the perception of his teachers and the assessment be makes of the value of a learning activity may be more relevant that of his examiners.

The rigid style imposed by large numbers, timetable requirements and the availability of teaching space, by the conventional practices in designing courses and by teaching conforming to an accepted academic discipline, have led to the " teaching " aspect.

We can consider what experiences will motivate the student and enable him to learn, in what ways knowledge can best be structured for a given student or group of students, what sequence and in what from the material can be presented most **effectively**, how we can gradually lead a student to give less thought to extrinsic rewards than to the personal satisfaction of having achieved a desired degree of skill, the body of knowledge possessed by a group of teachers, is the fruit of intense intellectual activity. Teaching a so-called basic science is not a matter of getting the student to memorise it, but rather of helping him to participate in a process that renders the acquisition of a body of knowledge possible. To get the student to think for himself in accordance with the laws of physics, to consider problems from the same as the biologist and to assimilate the process of acquiring knowledge. Knowing is a process, not a product.

If the revision and renewal of the program is regarded as part of the teaching – learning process, a change must also occur in the roles and interrelationships of teachers, students and others who are concerned.

The teacher becomes a learner himself, and the learner undertakes some part of the

teaching role. This is because the teacher learns more about teaching and the student begins to assume a greater responsibility for his own progress.

## Conclusion

In fact, the ecology of a teaching institution changes once its primary institution changes once its primary function is redefined, namely, namely to facilitate the acquirement of competence the student.

**Advantages and disadvantages of certain teaching methods and of different education medical**

| Advantages | Disadvantages |
|---|---|
| 1. lectures | |
| 1- Apparent saving of time (for the teacher) and resources.<br>2- Presence of the teacher (Showmanship).<br>3- Govers a large group of students.<br>4- Gives a feeling of security. | 1- Keeps the student in a passive situation.<br>2- Does not facilitate how to solve problems.<br>3- Offers hardly any possibility of checking learning progress.<br>4- Does not allow for individual pace of learning.<br>5- Low receptivity. |
| 2. Small group activities | |
| 1- Permits a teacher/student dialogue (thanks to the availability of the teacher).<br>2- Facilitates evaluation. | 1- High costs in personnel and time (Unless peer-teaching is used). |
| 3. Practical work 4. Bedside teaching 5.field work | |
| 1- Puts the student in an active situation.<br>2- Covers a limited group of students.<br>3- Permits evaluation of degree to which educational objectives (Practical and communication skills) have been attained.<br>4- Develops qualities of observation and decision – taking.<br>5- Ensures closer contact with reality (professional, health situation of country , colleagues and teachers).<br>6- Permits comparison between practice and theory.<br>7- Enables student to develop self-confidence.<br>8- Increases variability. | 1- High personnel transport and material costs.<br>2- Sometimes puts the patient in a difficult situation.<br>3- Poor standardization.<br>4- Narrow limits of utilization, therefore requiring careful planning . |
| 6. Real objects and specimens | |
| 1- Present reality, not substitutes.<br>2- Three dimensional. | 1- May not be easily obtainable.<br>2- Inconvenience of size – danger in use . |

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| 3- Permit use of all senses in study. | 3- Costly or not expendable .<br>4- Usually only usable in small groups.<br>5- Sometimes easily damaged.<br>6- Problems in storage. |
| 7. Models and simulation devices | |
| 1- Three dimensional and concept of reality.<br>2- Size allows close examination.<br>3- Good for magnified situation. (e.g.middle ear mechanism).<br>4- Can be used to demonstrate function as well as construction.<br>5- Can permit learning and practice of different technique.<br>6- Some can be made with local material. | 1- Craftsmanship required for local construction.<br>2- Simulation models often expensive.<br>3- Usable for small groups.<br>4- Models often easily damaged.<br>5- Never same as performing technique on a patient. Beware of faulty learning. |
| 8. Blackboard or flipchart | |
| 1- Inexpensive, can be made locally.<br>2- Usable for wide range of graphic re – presentation .<br>3- Allows step – by – step build up , or organ –isation of structure or concept . | 1- Back to audience .<br>2- Audience limited to 50 or so.<br>3- Careful drawings erased erased , not preserved for future use , except in the case of flip – charts .<br>4- Considerable skill required for effective use ( rarely taught to teachers ) . |
| 9. Still pictures – Opaque projection ( epidiascope ) | |
| 1- Enlargement of drawn or printed materials for large audiences.<br>2- Obviate need for producing slides and transparencies.<br>3- Enlarged image may be transferred to chart or blackboard for copying.<br>4- Small objects and specimens nay be projected. | 1- Demands total darkness for clear projection (except with very expensive models).<br>2- Bulky machine, difficult to transport.<br>3- Electricity required. |
| 10-Transparencies for overhead projection | |
| 1- Projectable in full daylight to large audiences.<br>2- Presented facing audience.<br>3- Relatively easy to prepare with local materials.<br>4- Subjects can be drawn in advance or developed by stages with the group.<br>5- Can demonstrate movements, processes, etc. with transparent or coloured Perspex models. | 1- Electricity required.<br>2- Equipment and materials for making sophisticated transparencies expensive.<br>3- Not usually suitable for photographic material due to cost (although adaptor avail – able to take 35 mm slides ).<br>4- Usually restricted to teacher use, as it is not easy to adapt for the learner to use. |
| 11- Slides and filmstrips | |
| 1- Suitable for large audiences. | 1- Fixed order of frames in filmstrip |

| | |
|---|---|
| 2- Relatively easy production and (in black and white) reproduction.<br>3- Cheapest current forms of visual medium.<br>4- Easily adaptable to self-learning pack – ages.<br>5- Equipment available for viewing or projection without electricity source. | restrictive in use.<br>2- Need partial darkness for viewing unless rear screen or daylight screen used.<br>3- Duplication of colour slides expensive (even impossible in many countries). |
| 12- Open circuit television | |
| 1- Adaptable to large and small audiences in widely distributed area.<br>2- Capable of gaining and maintaining attention.<br>3- Can stimulate emotions, build attitudes and develop problems.<br>4- Can conserve resources of instructors by simultaneous broadcast to many classes. | 1- Program expensive to produce and demands highly skilled staff.<br>2- Receiving equipment expensive and difficult to maintain.<br>3- Electricity required.<br>4- No immediate interaction or feedback.<br>5- Learner must adapt to a set program with no possibility of repeats. |
| 13- Sound recordings | |
| 1- Adaptable to any size of audience.<br>2- Especially suited to individual and small group learning.<br>3- Because of stop and playback facile – ties of tape can be student paced.<br>4- Cheap, battery operated cassette players available, and cassettes relatively cheap.<br>5- Many uses – to provide sound for slide sequences, for micro – teaching, heart sounds, for posing problems, etc. | 1- Use for individual learning demands many playback units.<br>2- Good quality recording demands studio facilities. |

Over the last few years a consider body of evidence has accumulated which suggests that we need to become much more concerned with **how** our students learn.

That some of our students are having difficulties with their studies arising not just from lack of application or psychosocial problems, but from specific problems with the way they study and learn. We must also appreciate that some of these problems are directly attributable to the way we teach, organize courses and conduct assessment.

Students can be observed to use one of three broad approaches to learning surface, deep and strategic.

Surface approach is predominantly motivated by a concern to complete the course or by a fear of failure. They intend to fulfill the assessment requirements of the course by memorizing factual material. The process they use to achieve this is rote learning .the outcome is, at best, a knowledge of factual information and a superficial level of understanding

Deep approaches are motivated by an interest in the subject matter and its vocational relevance. Their intention is to reach an understanding of the material. The process of achieving this varies between

individual students and between students in different academic disciplines.

The operation learner uses a process which relies on a logical step-by-step approach with a cautious acceptance of generalizations only when based on evidence.

A deep level of understanding based on acknowledge of broad principles supported by a sound factual basis. Versatile learning when the need arises, as it frequently does in science – based courses, but the surface approach.

The strategic approach may be seen to use processes similar to both the deep and surface learner. The fundamental difference lies in their motivation and intention. Such students are motivated by the need to achieve high marks and to compete with others. The outcome is a variable level of understanding which depends on what is required by the course and the assessments.

There is some reason to believe that many of our teaching methods, curriculum structures and, particularly, our examining methods may be actively inhibiting the use of the deep approach and supporting the use of surface and strategic approaches.

**LEARNING MORE EFFECTIVE**

- Improving the learning environment

There may be little you can do about this,

The fragmentation of the curriculum into a large number of courses taught by different specialists may be counterproductive to the development of deep approaches.

It would seem to be important to introduce measures into courses which might encourage the use of the deep approach.

- Ensure that the course objectives specify more than just facts and technical skills by giving suitable emphasis to higher level intellectual skills
- Introduce teaching activities which require students to demonstrate a deep understanding of the subject matter or clinical problems.
- Reduce the time allocated to didactic teaching to allow more time for group-based teaching and self-directed learning.
- Decrease the amount of factual material that has to be memorized.
- Spend more contact time helping students understand and use basic principles. Get into the habit of expecting students to explain answers to questions.
- Review the assessment procedures. If the assessment, course content and methods do not match the course objectives, For example, an overreliance on multiple-choice tests will almost certainly Encourage the use of surface strategies . If you aim to have students understand the subject, then you must introduce forms of assessment which require them to demonstrate this understanding. This may mean the re-introduction of essays, project work, OSCE, OSPE , critical analysis of clinical problems and so. Students should be fully informed about the content and methods, with examples provided.

**Modifying teaching styles**

Teachers need to be aware that they have teaching style preferences for the same reasons that students have preferred learning styles.

It seems reasonable to suggest that teachers should develop skills which are likely to enhance the learning of all students, not just those with whom they have a natural affinity. In the lecture situation, for instance, teachers who prefer to present material in a very logical and structured way may be popular with students with a preference for

operation learning , but less so with students with a bent towards comprehension learning.

**Improving study skills**

There seems little doubt that good study skills contribute to academic success

However, it is clear that there is no correct way to study, which may be why the use of study manuals and courses in study methods has not been very successful. Special counselors may be valuable for students with very severe problems but there is a growing recognition that subject teachers should become more interested in helping students individually within the context of their own courses. An interview should make it possible to identify the problem area:-

- Social factors: too much time involved in extra-curricular activities; social motivation higher than academic.
- Psychological factors: undue anxiety; interpersonal problems.
- Specific study skill problems: poor scheduling of time; lack of study plan; inappropriate environment; inadequate preparation for examinations; poor examination techniques.

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