

INTEGRATION OF INNOVATIVE TEACHING AND LEARNING PROCESS

Dr.Nagendra.M.P

Assistant Professor of Sociology, Government Arts College, Dr.B.R.Ambedkar Veedhi, Bangalore-01

ABSTRACT

In the instant article, under integration of innovative teaching and learning practices, an attempt is made to bring out the viability. Under co-operative teaching and learning process, which is both an art and science, leaving behind the modes of traditional teaching method, giving emphasize to practical real life experiences, giving way to learn innovatively. Which includes autonomous and co-operative learning? Where the methods of self learning, critical thinking skills deals with the earlier and, were the later relates to team work, in any given assignment. Further lecture method can be turned up into interactive, by introducing various activities by breaking the instruction and making students, participate in an activity. Reflective teaching and learning, is solely a problem solving or insightful learning, where students attempt to find solutions. Essentially teachers need to assess strength and weaknesses of a budding student, where various diagnostic and prescriptive methods are adopted. Therefore, the dealt trend is viable and practical to improve the present status in teaching and learning. All the methods need to be integrated, to benefit the prospective and experienced teachers, who may find pleasure in the conformation of teaching and learning techniques, they undoubtedly been using.

Key words: Learning, teaching, methodology and self learning.

INTRODUCTION

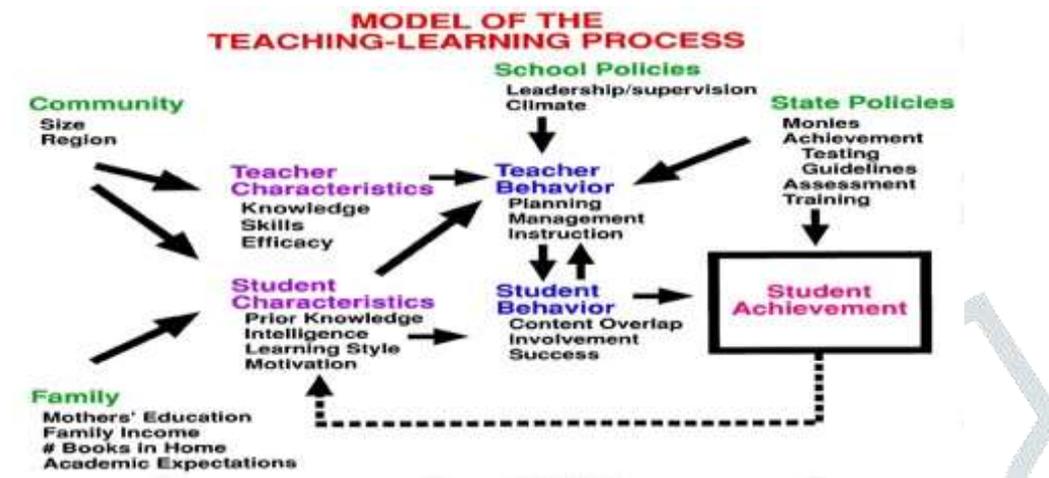
Education is a light that shows the mankind the right direction to surge upward. The purpose of education is not just making a student literate but adds rationale thinking in him. When there is a willingness to change, there is scope for progress in any field. Creativity can be developed and innovation benefits both students and teachers.

Basically teaching must include two major components, imparting and receiving information. Ultimately, a teacher tries his best to impart acquired knowledge. So, any communication methods that serve this purpose without destroying the objective could be considered as innovative methods of teaching. Its use, in educational institutions has the potential not only to improve education, but also to empower people, strengthen governance and galvanize the effort to achieve the desired results. Education is an engine, for the

growth and progress of any society. It not only imparts knowledge, skills but also inculcates values, but helps

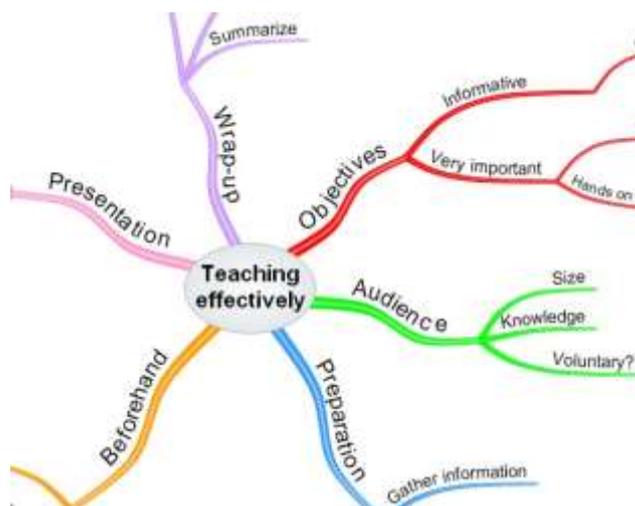
build human capital, which breeds, drives, and sets technological innovation and economic growth.

TEACHING LEARNING PROCESS



TEACHING IS BOTH AN ART AND A SCIENCE

In art it comprises of a set of skills. In science it has its foundations in the psychological and pedagogical principles of learning. The transformational process, which gives desired learning is brought about and often termed as, the teaching-learning process, central to all teaching and learning. Teachers and students effort, being the inputs, teaching-learning process results in behaviour modification, in learner.



Teaching–learning must be both effective and efficient. Effectiveness refers to, the extent the teaching brings about, the desirable behavioural modifications in the students. It is related to student achievement. It does create the desirable learning, irrespective of factors, such as time, cost, and effort, these factors leads to the concept of efficiency. In essence efficiency refers output in relation comparatively.

Traditional Teaching Method

In the pre-technology education context, the teacher is the source, the educational material is publication and the student is the bestowed. In terms of the delivery medium, the educator can deliver the message, via the “chalk-and- talk” method and overhead projector (OHP) transparencies. This directed instruction model, has its root in the behavioral learning perspective (Skinner, 1938), and a popular technique, which is in use for decades as strategy, in institutions of learning.

Basically, the teacher controls the instructional process, the content is delivered to the entire class, and the teacher tends to emphasize, factual knowledge. In other words the students receive the delivered lecture. Thus, the learning mode tends to be passive and the learner’s play little part in the process (Orlich et al.,1998). Often students and teachers find limited effectiveness in conventional lecture, in both teaching and learning. Students tend to be passive and their concentration fades off, after 15-20 minutes.

By providing stimulus variation attention can be increased to an hour. Psychological research reveals, attention can be sustained by following modes.

1. Intensity of sound and light.
2. Contrast of audio and visuals.
3. Movement, actual or animation.
4. Self activity i.e. doing something.



Absence of student's participation leads to teacher controlled and information centered and teacher acts as a sole resource. But this lecture method can be made interactive, by encouraging the students to take notes during the lesson, and after the lesson, students can be given some time for asking questions and answer their queries without any hesitation. Thus **Socratic Method** i.e. **question-answer** can be adopted to make lecture an interactive method, while using this method teacher should take utmost care to put only such questions, which help him in keeping up the interest of the students.

Slowly it leads to the use of different techniques, to minimize the monotony. Multimedia, is the combination of various digital media types, such as text, images, audio and video, into an integrated multi-sensory interactive application or presentation, to convey information to an audience. Traditional educational approaches have resulted. This paved the way to the need of the real experience.

REAL –LIFE EXPERIENCES-(REALIA)

Oral description and two dimensional sketches, are often inadequate to provide, the desired perception to the learner. Addition of audio-visual aids over-head projection, slides, films and video programmes, may well enhance the learning experience but none of them permit the learner, to get a real life feel of the object, to use the sense of touch and to operate it or to do something with it, if necessary.

Three dimensional teaching objects are therefore necessary to provide a feeling of reality.

It is desirable to show the real objects and real life situations called "REALIA" to students. Any number of models cannot replace the need to show a motor car, railway engine, aeroplane, building to students. Field

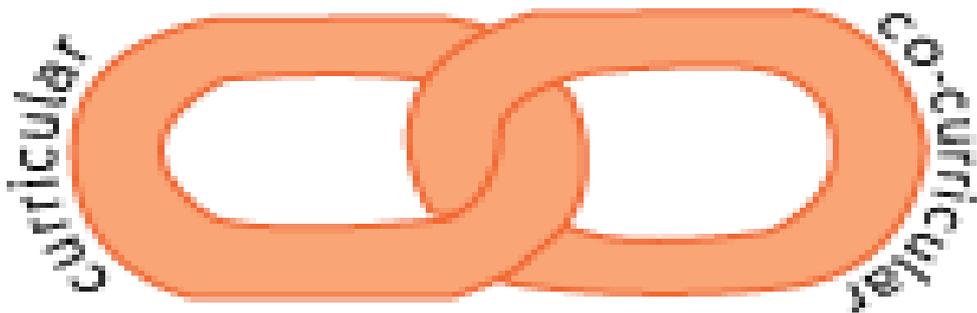
trips are arranged to change the activity of the day, by taking students out to show a number of real life situations. Example visit to a farm house to show “SOLAR HEATING AND SOLAR LIGHTING” systems is an experience of a different nature. Students not only see and study the equipment, but also get a feel of the life style of people, their environment, their attitude, and a number of other learning outcomes.

Currently, many institutions are moving towards problem-based learning, as a solution to producing graduates, who are creative and can think critically, analytically, and solve problems. Since knowledge is no longer an end but a means to creating better problem solvers, and encourage lifelong learning. Problem-based learning is becoming increasingly popular, in educational institutions, as a tool to address the inadequacies of traditional teaching. Since these traditional approaches do not encourage students to question, what they have learnt or to associate with previously acquired knowledge, (Teo & Wong, 2000), problem-based learning is seen as an innovative measure to encourage students to learn, how to learn via real-life problems.(Boud & Feletti, 1999).

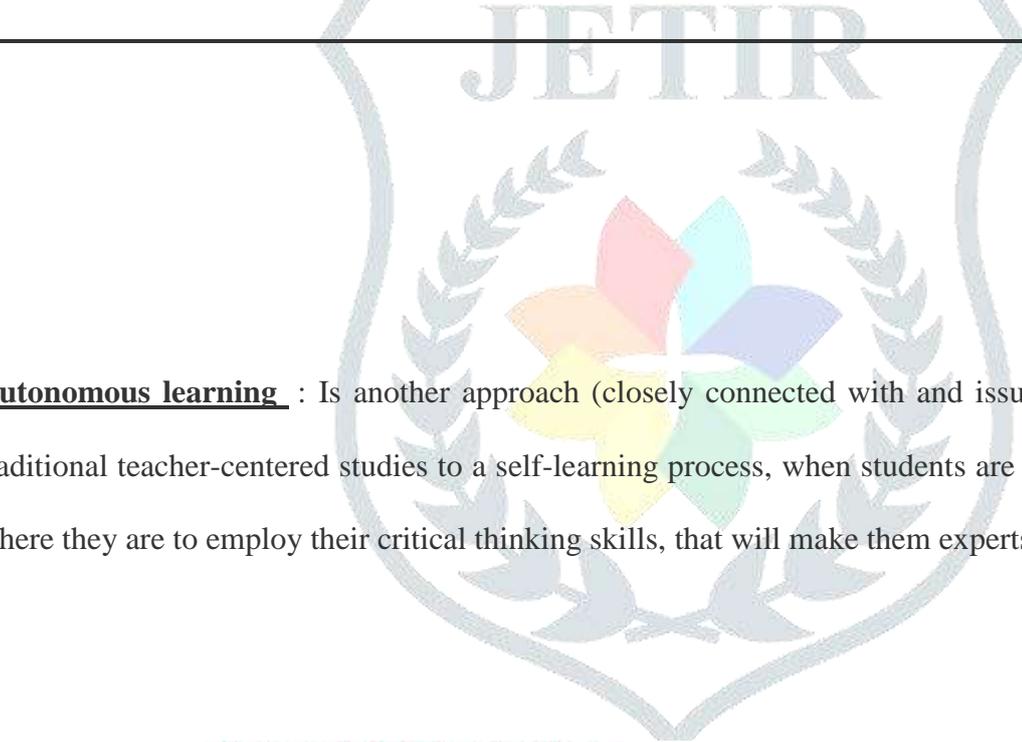
The teacher uses multimedia to modify the contents of the material. It will help the teacher to represent in a more meaningful way, using different media elements. These media elements can be converted into digital form, modified and customized for the final presentation. By incorporating digital media elements, into the project, the students are able to learn better, since they use multiple sensory modalities, which would make them more motivated, to pay more attention to the information presented, and retain the information better.

CO-OPERATIVE TEACHING AND LEARNING

applying learner-centered



teaching practices



Autonomous learning : Is another approach (closely connected with and issuing from the switch from traditional teacher-centered studies to a self-learning process, when students are placed in such conditions, where they are to employ their critical thinking skills, that will make them experts on a subject studied.

Cooperative Learning Strategy



CO-OPERATIVE LEARNING: Another back-up method that supports the above mentioned methods is “**cooperative learning**” directed towards focusing on student’s team work, while doing their project assignments.

Cooperative learning, as well as the necessity to develop students’ creative skills and academic potential, result in the necessity of introducing the “**task-based approach**” to learning, which requires using learning situations and tasks, that do not make students merely reproduce the knowledge acquired, but also stimulate their creativity, in order to find new original answers to unconventional task.

Cooperative learning is a successful teaching strategy in which, small teams, each with students of different levels of ability, use a 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 learn, thus creating an atmosphere of achievement. Students work through the assignment, until all group members successfully understand and complete it.

Cooperative efforts result in participants striving for mutual benefit so that all group members:

- Gain from each other's efforts. (Your success benefits me and my success benefits you.)
- Recognize that all group members share a common fate. (We all sink or swim together here.)
- Know that one's performance is mutually caused by oneself and one's team members.
- Feel proud and jointly celebrate when a group member is recognized for achievement. (We all congratulate you on your accomplishment!).

LECTURE AS AN INTERACTIVE METHOD

Interactive lectures are classes in which the instructor breaks the lecture at least once per class, to have all of the students participate in an activity that lets them work directly, with the material. These activities allow students to apply what they have learnt earlier or give them a context for upcoming lecture material.

Types of Interactive Activities

Lecturers can use a variety of interactive activities to engage their students. Such activities include having students,

- observe and features of images
- interpret graphs
- make calculation and estimates
- brainstorm
- handouts-

TYPES :

1. **COMPLETION TYPE**: To enable the students to complete the information during the progress of a lecture.

- A. In blank space.
- B. On unlabelled or semi-drawn sketches.
- C. IN response to some questions.

2. **ASSIGNMENT TYPE**: To assign work, home task, library work or field jobs.

3. **WORK SHEETS**: To state a problem and to give some hints to enable the student to start off and to complete a numerical, design or an analysis.

Many of these activities not only involve the students in the material, they can also promote critical thinking, develop quantitative skills, and allow for, informal assessment of student understanding.

Ask the students a question and have each of them turn to a neighbor and discuss, it before resolving on a final answer. This is a great way to motivate students and promote higher-level thinking. Open-ended questions promote discussion. Include time to discuss as a class, as well as time for student pairs, to address the question. A think-pair-share can take as little as three minutes or can be longer, depending on the question or task and the class size. Students work on the questions individually. These questions can be used to promote some kinds of higher-level thinking, but as they tend to be quick (often about 60 seconds), this is limited. As these questions take little time, you can ask several, in a class period. They provide a

quick objective assessment of students' prior knowledge, or of how much of the class understood your lecture.

The question of the day is a short project dealing with the lecture material that requires the student to think actively about it. It takes a few minutes at the start of class and requires a written response that the student turns in for a participation grade. These are not multiple-choice but require short explanations, annotations, calculations, or drawings that develop communication skills, as well as higher-level thinking.



Students come to class expecting to do one of these every day, and start the class as active, rather than passive learners. Some longer activities typically require time for the instructor to develop the materials and plan the activity. These activities are useful for getting students to tackle more complex problems.

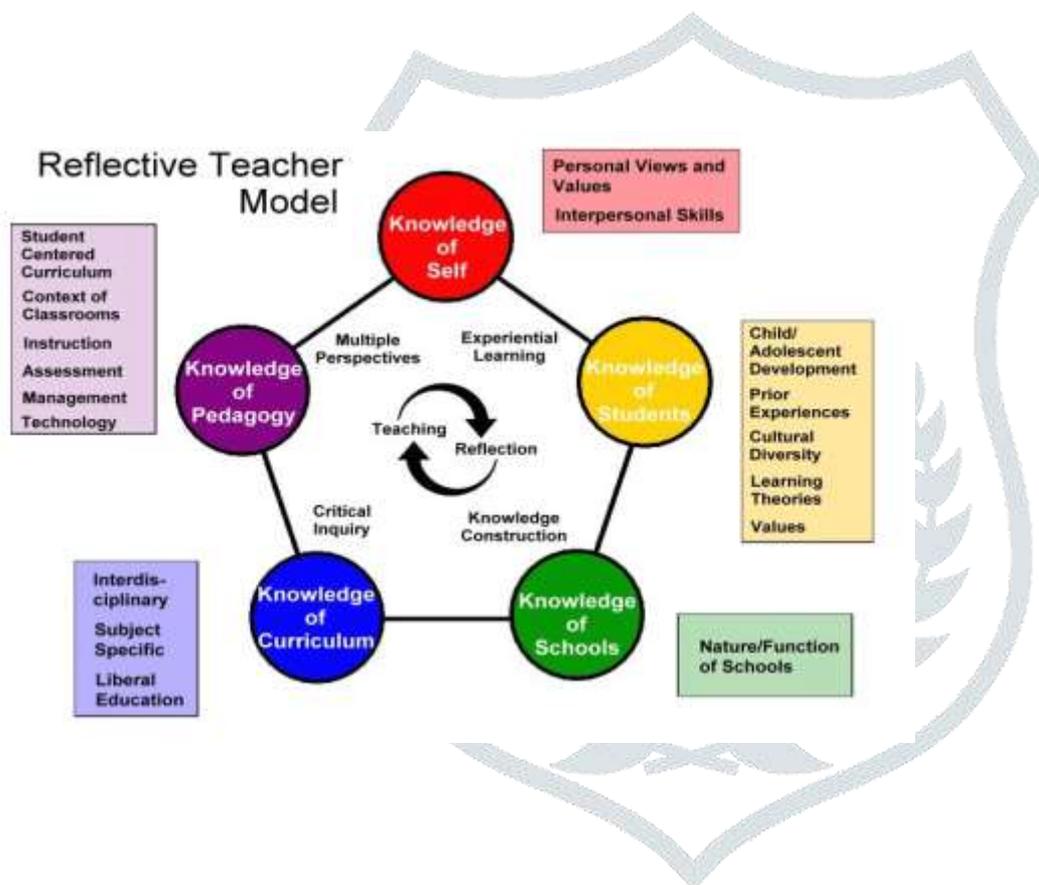
These types of activities provide **feedback** on what students have learned, enabling you to either discuss a particular concept in more detail, or move on with confidence, that students have mastered that concept.

Some instructors **structure the class period** using a combination of different kinds of activities to serve a variety of purposes in their classes. For example, one could use a few quick individual Concept tests, primarily for assessment, to see if the students understand and can apply the lecture material to simple problems, and then get them working in groups on a more complicated problem, that has them synthesize the current material within the content of previous lessons.

REFLECTIVE TEACHING AND LEARNING

Is an accessible guide for both student teachers and current practitioners to help them understand the components of the learning and teaching process....The accessible and easy-to-understand tone used by the authors, enables, a gentle yet thorough development, for the student'.

Reflective practice and understanding requires time to develop. For the beginners student teacher reflection can be difficult, both in being critical towards our own practice, but also in translating in to future teaching and learning.



Classroom management covers many aspects of the days working with detailed planning. The lesson starts, with behaviour management i.e., the physical space by the teacher, and the various pedagogical approaches the teacher intends to use.

A practitioner not only makes great dedication and commitment to the profession. In order to understand this, the teacher must reflect upon and evaluate his or her own performance in order to assist the pupils to fulfill their potential. Enables a gentle yet thorough development for the student, making it clear from the outset.

Reflective learning occurs only in a problematic situation. The classroom teaching at this level requires students, active participation, critical thinking, creativeness and imagination. Cooperative work is necessary to find out the solution. Students at this level develop curiosity, interest, inquisitive persistence to find a solution.

DIAGNOSTIC –PRESCRIPTIVE TEACHING LEARNING

DIAGNOSTIC : Essentially teacher should diagnose the entering behavior of the learner. This helps find the structure of writing the teaching objectives in behavioural terms. The teacher comes to know fully about the behavior of the learner and so he is able to proceed in his teaching work according to the requirement of the learners.

He finds out the individual variations in the learners and plans strategies in teaching and analyses the contents into elements and then they are taught in some easy ways. Thus teacher analyses the problems that he can foresee in teaching process and he thinks of their solutions.

Teacher can do this by conducting test which may be objective or short answer type based on their mental age. This also helps the learner to know his own speed of perceiving the subject matter and for how long he can retain, know about his language, comprehension, abilities, skills and expression.

A good diagnosis probes to try to find answers to these questions.

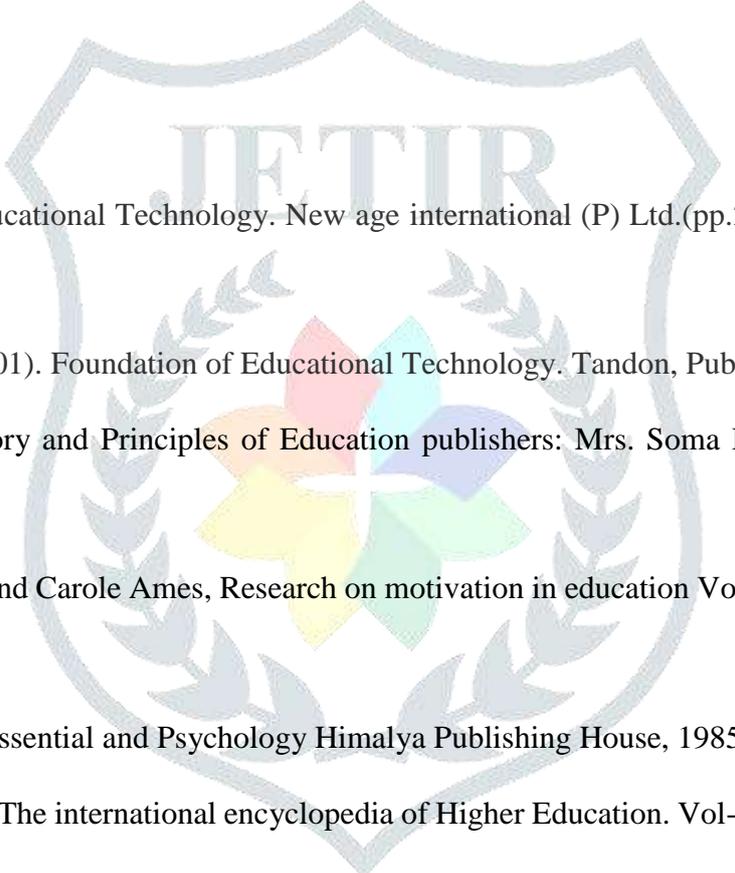
1. Does the learner have sufficient skill and knowledge to begin this unit?
2. How much of the unit does the learner already know?
3. What is the learner's preferred style of learning? Will he or she do better with more or less teacher direction with self paced or teacher paced instruction with an inductive or deductive process.
4. Which method and materials of learning can the student use most profitably?
5. Which recurring problems in previous learning continue to be present and will affect learning.

PRESCRIPTIVE: The teacher is privileged teaching certain things to the learner during teaching. Through diagnosis he assess the mental abilities, capabilities, dislikes, individual differences of the learner etc. And on the basis of all this information it is easy to prescribe the contents suitable to their requirement, the strategies adopted work good to have the desired goals.

CONCLUSION

All innovative teaching methods stipulated supra, the necessity of one more approach i.e. the intensification of the academic process and enhancement of students' motivation. This is achieved by using various forms of curricular and extra-curricular activities, including interactive lectures, presentations, individual assignments, independent and self-learning activities during practical classes and seminars, role plays and simulations, case-studies, individual and team projects, holding master-classes and workshops, the use of multimedia facilities, e-lectures and other visuals, supports as well, as the use of the Internet for academic purposes, both by the students and the faculty, etc.

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