



Education in New Era: Job of a Teacher Redefined

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Abstract:

Educators face several challenges in education nowadays. Ranging from attracting youngsters to high school (especially in rural areas) to providing competent workforce to our instructional establishments. With limitation of funding to use competent workforce we tend to be certain a heavy challenge. With acceleration of e-technology and mass media, we will use technology effectively to beat each the issues, that of quantity and quality.

E-learning/virtual room experiments are already ongoing. If suitably combined, television together with net using techniques of e teaching and learning will become a good blessing for mass education in a country like Republic of India. Though media/virtual school rooms is also able to substitute role of academicians to some extent, it should not be effective without teacher taking part in active role. But media would certainly facilitate cut back burden of an educator and at an equivalent time facilitate in saving recurring expenditure on education. At an equivalent time this incorporate redefining the role of an educator. Constructivism is a well-known idea in education that has been found helpful and is with success adopted by the researcher at undergraduate teaching. During this paper researcher wishes to present how media are often combined effectively with academics enjoying constructivist role making the method far more effective.

Keywords:- Education, E-learning, Teacher's role

1.1 Current Problems in education:

Some of the issues usually faced by academicians presently in Indian education particularly in Gujarat state of India are:

- Making school rooms engaging enough for school students to look forward to it daily.
- Not having qualified and competent Academicians.
- High price of education.
- Quality of education imparted and quality of output (students) passing out of the system that is still disappointing.

Some of the easy reasons researchers thinking of are:

- Rote memory oriented examination.
 - Obsession (of students, parents, society forcing students for taking admissions for higher studies) for marks scored. This can be in spite of the actual fact that almost all examinations are memorization memory oriented .
 - Classrooms full of large number of students. High price of education is one among the explanations for this. In a very opposite reasons is that an educator outlay thirty to forty minutes in a room of eighty to one hundred twenty students finally ends up creating entire method of teaching-learning merely mechanical.
 - Not having uniform standard across the country, for education at completely different stages.
 - Political management of education.
- The list is by no means that complete.

2 Solutions to the above mention problem?

In this article, the researchers had made an attempt to suggest a possible solution to many of these problems. With rapid growth of communication systems including internet and power of computer, which at presently are used primarily for commercial gain and entertainment only, this technology is certainly under utilized. In what follows we elaborate effective use of this technology for the biggest gain of humankind, i.e., education. There are three important entities that researchers discuss here.

- E-learning
- Virtual classroom
- Role of a teacher in new scheme

2.1 E-Learning:

Presently this term is restricted only to following areas:

- Create lecture notes, visual textbooks, study material, learning activities, applications, assessments, others
- For assessment the academicians can use:
 - Multiple choice questions,
 - Sequencing/Matching Questions,

- Fill in the blank questions,
- Drop Down List Questions,
- True False Questions
- Interactive tutorials, interactive software simulations, animations, virtual lab etc...

2.2 Virtual Classroom:

Typically in a traditional classroom a teacher merely reproduces same sessions many times (year after year) or some times in many divisions. In general this work is a labour job and can be replaced by a video recording, which can be shown to a large group of students or can be made available to them at their convenient hours through CDs or through Internet sites. Such an attempt has been tried by UGC.

However these are very average and primitive techniques and the attempts made by UGC have not been much popular.

Replacing an ordinary lecture session by a virtual classroom can become a very powerful tool if we can bring fair amount of sophistication. The following are suggestive improvements, which are possible.

- Use of software, multimedia and animations.
- Preparations of such sessions with involvement of experts.
- Improvement and standardization of virtual classroom and lab sessions over the period of time with experience and evaluation of their effectiveness.

A clear advantage would be the fact that even in the remotest village, student will learn from a session that is prepared and influenced by the top expert. This of course would not suffice although will be of much better quality than present quality standards of teaching and learning.

A big question here is that what would a teacher do with this new techniques of E-learning, virtual classroom and laboratories. Certainly as mentioned, these are far superior option to what we have today in our education system, if we want the education to remain confined to feeding collection of information (and call it knowledge) and testing rote memorization.

2.3 Role of Academicians:

It is right time, as society is awakened to these issues and HRD ministry has geared to take necessary steps to solve problems of education beyond funding level. In fact above-mentioned methods will certainly cater to vision of National Curriculum at all levels of traditional education. It appears Academicians role in this scheme is going to remain confined to entity responsible for preparation of study material, its revision and up gradation from time to time. Yet the issue of students' learning and its quality is not addressed with technology driven education.

We propose much superior role for Academicians at this stage, compared to their traditional one. This role, we call constructivist following Piaget(1972) and Vygotsky(1978) who coined these terms.

Various characteristics of constructive teaching and learning are listed by Snehi (2008) as follows:

- Academicians serve in the role of guides, monitors, coaches, tutors and facilitators.
- Multiple perspectives and representations of concepts and content are presented and encouraged.
- Learning situations, environments, skills, content and tasks are relevant, realistic, and authentic and represent the natural complexities of the 'real world'.
- Goals and objective are derived by the students or in negotiation with the teacher or system.
- Activities, opportunities, tools and environments are provided to encourage metacognition, self-analysis, –regulation, -reflection and awareness.
- Problem-solving, higher order thinking skills and deep understanding are emphasized.
- The student plays a central role in mediating and controlling learning.
- Primary sources of data are used in order to ensure authenticity and real-world complexity.
- Knowledge construction and not reproduction is emphasized. It takes place in individual contexts and through social negotiation, collaboration and experience.
- The learner's previous knowledge constructions, beliefs and attitudes are considered in the knowledge construction process.
- Errors provide the opportunity for insight into student's previous knowledge constructions.
- Collaborative and cooperative learning are favoured in order to expose the learner to alternative viewpoints.
- Exploration is a favoured approach in order to encourage students to seek knowledge independently and to manage the pursuit of their goals.
- Learners are provided with the opportunity for apprenticeship learning in which there is an increasing complexity of tasks, skills and knowledge acquisition.
- Knowledge complexity is reflected in an emphasis on conceptual interrelatedness and interdisciplinary learning.
- Scaffolding is facilitated to help students perform just beyond the limits of their ability.
- Assessment is authentic and interwoven with teaching.

Researchers had carried out an experiment of teaching Accountancy to undergraduate students in a college setup using constructivism through problem solving. This method improved students' enthusiasm and motivational level to pursue the subject further. The method was found to be successful in building their capacity.

It is a well-known fact that activity based learning is found to be most effective method. Thus now as constructivist, Academicians' role will be to lead such an activity based effort. This would mean different things in different disciplines.

A teacher now in addition to leading facilitating activity may contribute in a way, some of which are as follows.

- By creating more innovative (for effective learning) activities.
- By improving and establishing better assessment methods. Some of these assessments may be carried out while students are in the process of learning-constructing their knowledge.
- By improving virtual classroom and laboratory sessions. This may also include their contributing to E-learning materials.
- There by increasing his/her effectiveness in one or more of the above mentioned ways or any other ways not mentioned above.

This e-learning methodology would have following benefits.

- The traditional sessions prepared with the involvement of experts (as Academicians and subject knowledge) in virtual class room and E-learning will certainly lift the standard as mentioned earlier.
- As now Academicians will be free of burden of mechanical teaching work, they can use extra available time to upgrade their knowledge and qualification, which is an essential element in a knowledge driven society.
- As less man-hour are needed, we can reduce student to teacher ratio significantly.
- This would not only improve quality of education but also of Academicians in their new role.

3. Feasibility

In a country like India where mass education is to be taken care of this will prove to be the most effective strategy. With possibility of sending message across entire country simultaneously in different languages it will be possible to establish uniform quality standard of education. Financially mass production of hardware will make the technology available very cheaply and over the period of time this will be much more economical than existing system.

Above all, the achieving quality we are craving for will be the foremost advantage. This will be possible in the light of Academicians playing constructivist role. Although in this scheme lots of details are needed, it is not possible at this stage to present them. They are better filled in only while implementing.

4. Conclusion:

With improvement in power of technology it is possible to tap its power in favour of enhancement in content and improvement of quality of education. However

it is possible that focus may shift to content rather than teaching and learning leaving learner in isolation (Brown and Duguid 1996). This requires us to focus methodology of active learning and on learning outcome. The skills and knowledge assessed must reflect the process the students have experienced and preferably assessment should be integral part of students' learning (Stiles and Orsmond 2003). Although education may be differently structured and delivered, as compared to present (traditional), there will always be a need for Academicians, although they may be fulfilling different roles, that of a constructivist and may also have to become learner.

Most importantly it is Academicians in their new role as constructivist would be instrumental in bringing quality change. They will have to be ready to create activities to facilitate students construct their own knowledge. Classroom processes will be the most important as they would be essential to support students and will also be used for assessment of their learning. Teacher here will use cognitive conflicts, guided interventions and at time on the spot generation of activities to guide students in planned activities and overcome their difficulties which may be student specific, to help students progress in constructing their own knowledge. Their role will have to be based on need of an individual students and hence very much learner centric although it may take place in a group environment. This would also require teacher him/herself to be learner and constructor of new methodologies of teaching and assessment and his/her own subject to make entire education process effective.

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