An Economic Impact of Innovation for Technologies in Educational Research in Tamil Nadu

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Education is a natural, harmonious and progressive development of man's innate powers. It is a medium through which the society transmits its heritage of past experiences and modifications, system of values and the modes or skill of acquiring it. It is a key ingredient in economic and social development. In the 21st century "Information Explosion" and "Population Explosion" are the major problems in the field of education. As per the world vision the experts from all fields, including education, business, and government agree that we have moved into the information age. As much as 97 per cent of the world's knowledge will be accumulated over one person's life time. Again, statistics like this, teaching students of a host of facts "just in case" they need them later on in life is a fruitless effort. The ability to find and use facts as they are needed becomes the skill that will enable students to become lifelong learners.

Keywords: Literacy, Library, Population and Educational Technology.

Introduction

Education is a natural, harmonious and progressive development of man's innate powers. It is a medium through which the society transmits its heritage of past experiences and modifications, system of values and the modes or skill of acquiring it. It is a key ingredient in economic and social development. In the 21st century "Information Explosion" and "Population Explosion" are the major problems in the field of education. Realizing the danger of this disastrous situation, India has embarked upon a great adventure; the adventure of putting to use modern information and communication technologies for the delivery of education services.

To satisfy the needs of the 21st century education must be harnessed with technology and the teachers and learners are to be made familiar with the new trends. Teaching is generally considered as an activity which is designed and performed for multiple objectives in terms of 2 changes in pupil behavior. Pupils on the other hand have multidimensional personalities having different styles. The common implication of both these facts is that the teacher should use different strategies of teaching which match the objectives of teaching on one hand and pupils learning styles and personality dimensions on the others.

The emerging trends in education technology have revolutionized the whole teaching and learning process by adapting to individual learning needs. While thus going through the history

of educational technology, it is also essential to note that the certain important events that helped for the development of educational technology. The Government of India had sent a proposal to establish a Centre for curriculum and media development under the United Nations Development and Programme Scheme (UNDP) and this proposal was approved in 1970 by Wilber Schramm. It was, therefore, felt by the Indian educationists to have a Centre for Educational Technology at Delhi and accordingly it was established at NCERT.

Then in 1973, another unit for educational technology in the Ministry of Education was also established. After this the Government of India wanted educational technology cells to be established in different states. Today, totally we have 43 technology cells in thirteen different states, among them being, Maharashtra, Gujarat, Orissa, Madhya Pradesh, Andhra Pradesh, Karnataka, Uttar Pradesh, Rajasthan and Tamil Nadu. Educational Technology cells have also been started at all the four Regional Colleges of Education, that is, at Bhopal, Ajmer, Mysore and Bhubaneswar.

Emerging Trends in Educational Technology

The two major trends that have developed in the process of educational technology are:

- Technology for mass instruction and
- Technology for individual instruction.

Included in the first type are instructional broadcasting, television filmed lectures, CCTV, motion pictures etc. Under technology for individual instruction, there are equipment's and materials designed for individual operation such as teaching machines, programmed instruction, auto-tutorial system, computer-assisted instruction, language laboratories, learning modules etc. Programmed Instruction in a fast-developing world, the teacher cannot and ought not to be left alone to depend upon his own resources and talents to disseminate the knowledge to the pupils. The classroom teacher should be supplied with reliable instructional material based upon the dependable findings of educational technology. This will help him to do his job with maximum perfection. Programmed learning is one such big step in this direction. In this the subject-matter or content of the course displays a few distinct characteristics such as:

- Juiueati Qnal Technology Its Nature and Scope
- A clear-cut statement of the objectives;
- The material to be learned is itemized and presented serially;
- Frequent and unambiguous responses from every student are required throughout the whole sequence. Unless the learner makes some responses, which are relevant to the learning task, no learning will occur;

Feedback of information about the correctness or otherwise of the responses is given to the pupil before the next frame or item is presented.

Modular Scheduling

A module is a short unit of instruction dealing with a single conceptual unit of subject matter. Each course is built in the & quot; bank & quot; of a number of modules and each module is designed around a list of objectives and student projects. A variety of learning activities centered around the learner and incorporating a multi-media approach is provided. The components of modules include modular 44 lecture unit, laboratory unit, programmed instruction unit, workshop unit, individual study unit, film unit, audio-tape unit, video-tape unit etc.

Multi-media Approach For effective and efficient learning, it is now accepted that there should be a multi-media approach. Edgar Dale (1969) through his & quot; Cone of Experience & quot; has demonstrated that in any learning situation, the more the senses are stimulated, the more the person learns and the longer he retains. Dale describes how the different types of aids, starting from verbal symbols up to direct purposeful experiences, are interrelated and effective in the learning process.

The different materials of the experiences presented in the cone may be classified into three:

- non-projected aids;
- projected aids; and
- activity aids.

The following are some specific applications of instructional technology in imparting formal education:

- Use films, television, slide-tape presentation and so forth as an alternative to a lecture for presentation of information.
- Buy, borrow or produce 2 & quot; x 2 & quot; colour slides, showing the steps in a process to be demonstrated.
- Use an opaque projection to show a printed diagram.
- Make a transparency from a cartoon or drawing in a few seconds on a thermo graphic copier and show it to the class using an overhead projector (OHP).
- Draw chalkboard diagrams once on transparency masters; then project the transparencies made from these masters on OHP, thus saving the time wasted in re-wording them each year Record questions, problems, exercises and background information on different subject or at different levels of difficulty on tape for use by individuals or small groups with cassette play back units. While some students are interacting with the recorded material, the teaching faculty will be free to work intensively with the others.

Conclusion

As per the world vision the experts from all fields, including education, business, and government agree that we have moved into the information age. As much as 97 per cent of the world’s knowledge will be accumulated over one person’s life time.

Again, statistics like this, teaching students of a host of facts “just in case” they need them later on in life is a fruitless effort. The ability to find and use facts as they are needed becomes the

skill that will enable students to become lifelong learners. The role of education is no longer to provide educational opportunities through early adulthood, but to provide the scaffolding necessary to support individuals and families from all walks of life, throughout their entire lives.

In order to prevent a further widening between the upper and lower classes, it will become increasingly important for educational institutions to provide this support by providing weeknight and weekend adult classes focused on emerging technologies. It is important that educators have a sense of where the world is headed. Only then will they be able to adequately prepare current and future students to thrive in this ever- changing world.

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