

TECHNOLOGICAL REQUIREMENTS FOR A TEACHER OF OPEN LEARNING

Dr. G. Subrmonia Pillay

Professor and Head

Department of Education

Madurai Kamaraj University

Madurai-625021, INDIA

OPEN LEARNING

The conception of instruction in open learning differs slightly from that of formal education. Open learning satisfies a target population of learners who do not register for the regular, face to face classroom teaching system. The methodologies and strategies followed in the face to face teaching is not helping the open learner. A teacher of open learning, therefore, needs to equip himself with suitable skills and talents in order to be successful in his profession.

Technology is a problem solving device. Adopting the technology is always economical in terms of money, energy and time. A teacher of open learning, when he is aware of the various technological input available to him and adopts them, he can prove to be more efficient in his job.

TRAINING IN LATEST TECHNOLOGIES

Concerning educational technology, earlier the stress was on the hardware aspect of technology. It was mainly a technicians job. Now it is software development. A teacher of open learning must be aware of this development with regard to technology application and suitably equip himself for it. A teacher of open learning is to be considered mainly as a studio teacher. It may be a TV or video or audio studio. He has to play extra roles compared to the class room teacher. For that he needs to be aware of the problems and limitations of the open learner. The role of mass media acquiring the skills involved in the preparation, production and evaluation of mass media programmes and comprehend the unique features of radio and TV programmes for different target population are very vital for him. Moreover face to face classroom communication has got its own techniques and tactics to be adopted by the teacher. On the other hand, public relations, advertisements, media usage etc are the new areas in communication, which a teacher of open learning needs to master, besides the traditional techniques.

Reaching the memory, understanding and reflective levels of the learners is common for both face to face teaching and open instruction, irrespective of the levels of the learners. Individual and group learning situations are also common for both types of learning. Yet planning for effective open teaching requires some other talents. In contact seminars, it is the presentation of condensed version of the content. It means that even for the face to face teaching, the methodology needs to be entirely different here.

The skills required for handling the hardware are essential for him. It may be a OBP, slide projector, VCR, VCP, reprographic equipments, or computer. In order to display the software available and to get the best impact of the presentation, one should have a thorough working knowledge and practice in handling the above equipments. Similarly training in introducing interactive techniques in software preparation and practice in giving demonstrations with appropriate technology like interactive video, projector TV, computer based projections etc are essential. Training in telecommunication system is also needed for a teacher of open learning because, this is going to be the medium of learning for the learners soon. The latest information technologies using satellite services like FAX, Email, tele teaching, tele conferencing, internet etc are going to be used very much in the open learning system. Thanks to information technology, now it is virtual classroom, virtual education and virtual University in developed countries. Virtual classroom is the electronic meeting place of teachers and learners for achieving their instructional objectives. Open learning is moving towards a new changing era of academic globalisation. Launched in 1989 the virtual University of the Monterrey Institute of Technology in Mexico is a consortium of collaborating Universities, including 13 outside Mexico. Courses are delivered through a combination of printed texts and both live and pre recorded television broadcasts, with communication between faculty and students facilitated by computers. (Michael and Joanny 1988) A teacher of open learning shall have a vision on all these developments.

UNDERSTANDING THE LATEST CONCEPTS IN LEARNING

Apart from the latest electronic, interactive technologies, a good understanding of the recent concepts in learning, derived from research findings helps the teacher of the open learning in the planning and the presentation of his lessons or software. Concepts like mastery learning, self pacing, meaningful incremental way of presentation, participation in learning, giving immediate feedback, criterion testing, etc are remunerative for the teacher and a software developer.

DEVELOPING INSTRUCTIONAL SOFTWARE

Among the different type of software available for instruction, learning modules are popular. Considering the factors of cost, efficiency and feasibility of production, it is the learning modules which are preferred all over the world. A module is a short unit of instruction dealing with a single conceptual unit of subject matter. Each course can be built upon a bank of number of modules and each module is designed around a list of objectives and student projects. It is a well structured material and the learner can identify the objectives he wants to achieve, select the appropriate material following a learning sequence from a variety of methods of presentation and evaluate his own accomplishments. This provides a strategy for the teacher and the learner to mutually share the responsibility for learning. The teacher of the open learning shall be well versed in the components of a learning module, its preparation and its use for the open learner. Besides developing modules in his own subject, the teacher is supposed to help others in the module development process.

In software production for educational uses, irrespective of the type of materials, they have to be edited, reviewed and validated. A teacher of the open learning needs to be thorough with the different procedures to be followed in this process. Editing has to be done with reference to accuracy and relevance of the material, style, vocabulary, density of presenting the facts and content interest. Then the material is to be tried out. It may be at three levels. (i) Individual tryout (ii) Group tryout, and (iii) Mass tryout. Each tryout has a purpose. While error rates and density of ideas are checked up during group tryouts, under individual tryouts, understanding of the content by the learner, classification, remarks, questions asked, if any are verified and suitable modifications and refinement done. For a high validity the material must be field tryout. It is also necessary to note that when a material is validated, it is suitable only for similar target learners and not for others. A material validated on gifted learners is not relevant for use by the slow learners of the same level and vice versa. The validation processes need to be undertaken at the pre production, production and post production levels of the software preparation. Besides the teachers need to know the different presentation techniques of the software in order to save them for long use.

SYSTEMS TECHNOLOGY AND INSTRUCTIONAL DESIGNING

Systems approach is another technology much useful to a teacher of open learning. It is a design methodology where new models of problem solving designs are tried out. It is for increasing the quality and quantity of the output of the system. Education is a man made system for the welfare of the society. In order to have maximum utilisation of personnel and resources involved, better training and developmental plans, control and co-ordination etc. are needed. Therefore a rationale analysis of the functioning of the system and making it useful to the optimum level is inevitable. A clear understanding of the system, a close observation of the components, input-process-output variables including the system environment helps an analyst to come out with a new model or design to improve the system functioning. A good system design shall have certain characteristics and a teacher of the open learning shall be conversant with them. Any teacher has to analyse the specific deficiencies and difficulties that the learners are facing. In many cases, the purpose for which a particular lesson is taught is not known to the teacher as well as the learner. They are unaware of the anticipated learning outcomes. If both of them are aware of it, they can try to achieve them. Besides the teachers understanding of the objectives of the lesson, they should help their learners also to comprehend them. Most of the problems that have arisen in the attempts to implement new technologies have been derived from the fact that no agreed strategy for implementation exists in education. The different teaching strategies adopted and the instructional materials used will help the learners to get varied learning situations, otherwise known as learning experiences. The effect of learning is directly related to the learning experiences provided based on the objectives of the lessons. A teacher therefore should try to present as many learning experiences as possible to his learners.

The task of instructional design is to organise the people, materials and procedures in such a way that students' learning is achieved most efficiently. A learning system is organised in combination of different elements. There is an intentional arrangement of men, materials and procedures. These elements are inter dependent. The learning system has got a goal for which it has to be designed. Instructional designing is concerned with the application of modern skills and techniques for the requirement of learning. The teacher is a designer and he takes decisions on the basis of whether or not they facilitate achieve goals of the particular instruction. He has to search for the cause and effect relationship and look for ways for optimistic interaction of the elements stated above.

DOING TASK ANALYSIS

As pointed out, making aware of the specific objectives of a lesson is very vital. But another approach useful to certain type of learning is task analysis. In shaping the behaviour of the learner, identifying the abilities and skills to be learnt are important which is made explicit by doing the task analysis. Instructional designing begins with job or task description and analysing it. A careful description of the task, provides the basis for the design of instruction. Task description is a simple straight forward account of how a task is performed in general. But task analysis is an examination of the task description with regard to the learners' entry behaviour, types of learning involved, effects of unusual conditions or constraints on the performance of the task. The tasks may be (i) action tasks, (ii) cognitive tasks or (iii) creative tasks.

COMPUTER ASSISTED INSTRUCTION

A few research attempts have been undertaken to find out the impact of training of teachers in different aspects of computer technology. Davis conducted a survey on information technology in UK during 1982-92. It was found that new technology had enormous potential to improve teaching and learning. Peterson (1989) assessed the status of the integration of minor computers into teacher education programme for elementary education major in five eastern states of USA He found 74 percent of the programme had computer labs and half said they had enough software and hardware. Arie (1990) identified the computer literacy skills needed by pre service secondary maths teachers. The perception, knowledge and skills, curriculum were investigated. Since it was found that teachers in general in the developing countries had inadequate knowledge and skill in the use of computers (CAI), a teacher of open learning needs to have sufficient orientation to integrate computers. The collection of computer software for the use of students should include for drill and practices, problem solving, simulations, games and graphics. Staff development is needed in the study centres for using this. Besides the teachers should know how to use a variety of computer software and hardware tools to enhance their performance. At the time of contact seminars and at study centres they should demonstrate them to their learners.

A teacher of open learning needs to know the difference between the methods of teaching and the strategies of instructions. The first is traditional more relevant for the face to face teaching and based on mono approach, but the second one is modern and relevant for learning under any situation which is again based on task oriented approach.

With the impact of learning psychology, a number of new techniques of teaching and learning have been emerged. They were based on the learning styles of the learners and the demands of the situation. Simulation, role play, brain storming, symposium, seminar etc. are some of the interactive techniques that can be introduced through software for open learners. Teaching tactics are the ways of implementing the teaching strategy. It is an unit of teacher behaviour, which is helpful for a classroom teacher as well as a studio teacher. Reinforcing, shaping one's responses, giving birds eye view of the chain, developing rapport etc will improve the efficiency of the presentation.

Orientation in all the above aspects of technology needs to be given to a teacher of open learning. Unfortunately, many teachers of open learning lack the expertise needed to produce high quality materials and support structures. Considerable time and experience are required to produce quality programmes, and countries with limited resources may put programmes together that are inadequate.