

BOOK REVIEWS

Essentials of Educational Technology Innovation in Teaching-learning second edition, by J.C Agarwal, Former Deputy Director of Education, Delhi Administration, Vikash Publishing House Pvt. Ltd. and Distributors UBS Distributors Pvt. Ltd., 2007, ISBN 978-81-259-2293-3, ` 300/-

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The book is the revised edition with the latest syllabus for B.Ed and B.A (Education) formulated by the UGC. The book has been thoroughly revised underlying the clear distinction between "Technology of Education" and "Technology in Education". The author tries to bring out the role of the latest innovations and technology in Education. The author J. C. Agarwal started his career as a lecturer in a teacher training college in 1954 and thereafter worked in different positions in the Delhi Administration. He retired as a Deputy Director of Education /Executive Director of Delhi Bureau of Teachers.

The 1st Chapter deals with the Meaning, Scope and Uses of Educational Technology. Broadly speaking Educational Technology connotes three meaning. The first view which refers to the application of physical science and engineering technology to provide mechanical or electromechanical tools, instrumentation and hardware which can be used for instructional purposes. The second view refers to the application of scientific principles to instruction. The third and the modern view incorporates both the above meanings through application of a system approach to education and training. The scope of technology is as wide as education itself. There are major areas in education in which its scope is very wide. These are (1) Technology related to general educational administration and management (2) Technology related to general educational testing (3) Technology related to the instructional process. The author also brings out the uses and the significance of hardware and software approach in making teaching learning attractive, inspirational and effective.

In 2nd 3rd and 4th Chapters the author deals with Teaching technology, Learning and Teaching Learning Process. Teaching Technology deals with the mechanism of instructional process in the classroom situation, levels of teaching and theories of teaching. Teaching technology comprises of four main components (i) Manpower (ii) Methods (iii) Materials and (iii) Media. The author highlights, the major types of learning and goals in learning. Learning theories and their implication classical conditioning suggested by Pavlov and Watson. Theory of reinforcement by Thorndike and Skinner for behavior modification. Teaching learning Process: A three way communication i.e., interaction between teacher, learner and the evaluation. 5, 6 and 7 Chapters deal with the Principles of Teaching. Teaching objectives with special reference to Bloom's Taxonomy and Teaching Strategy. The hierarchy of taxonomy has been depicted in the following manner. Knowledge.... Comprehension... Application... Analysis.. Synthesis.. Evaluation. The author also explains the four major steps in managing the Teaching Strategy. They are (a)Planning (b) Organizing (c) Leading and (d) Controlling. However a successful

teacher always keeps in mind the learning theories and their implications, he does not depend on any one method. He remains aware of the fact that the teaching strategies must be dynamic and in accordance with the learner comprehension and the stages of development.

Chapter 9 deals with the Programmed Instruction, an important innovation in technological revolution in education. Programmed Instruction is a part and not the whole of educational technology. It is a strategy of teaching learning and self instructional texts or audio tutors. It may be treated as a software approach for instructional technology. The essence of programme lies in writing in such a way that every student will eventually be able to complete it without a mistake. The key to the programme is to ensure that the student tries the correct answer. Programme Instruction is still in its infancy in India. Programme instruction as an elective Paper has been included at the B. Ed / M. Ed level in a few universities in India. Chapters 12 and 14 deals with Micro Teaching as one of the most recent innovations in teacher education/training programme. It is a process of subjecting samples of human behavior to 5R's Video Tape Recording, Reviewing, Responding, Refining and Redoing. Phases of Micro teaching are (i) Knowledge acquisition phase (ii) Skill acquisition phase and (iii) Transfer phase. Difference between Micro and Macro Teaching. Its critical evaluation and Simulated Teaching as major tools of learning for trainee teachers.

In Chapter 16 and 17 the author brings out the importance of audio visual aids and Mass Media in Education. The importance of Radio's School Broadcast, Flow chart of educational films, and suggestions for making the optimum use of educational films which must be relevant and purposeful. Educational Television (ETV) or Instructional Television (ITV) which permits the use of best available teacher to teach a subject for a large number of student viewers. It preserves the expert teaching skills of such teachers on video tape or film for future use. Chapter 18 deals with the importance of Communication and Information Technology with special emphasis on Classroom communication model i.e. from sender through a medium to the receiver. Types of Classroom Communication: Verbal and nonverbal. Barriers of Classroom Communication; the role of Computer in Education, The age of computer is dawning in schools. It is taking over the world swiftly and surely. It is quite a jump from traditional teaching reliance on textbooks to the computer use of EBooks. The computers serve a dual purpose. They expose student to modern technology while inculcating in them a new scientific approach to learning.

Chapters 19 and 20 deal with the educational technology with a brief review on SITE, INSAT, ETV, Class Project, Adult Education, Distance Education and Open Education. These chapters bring out the distinction between technology of education and technology in education. Incorporation of new educational technologies like Artificial Intelligence, Dial access, Email. Teleconferencing, Telelecture, Video Conferencing, Virtual University, Internet etc finds place in the book. It shows how they are revolutionizing the education system and what promise they hold for future. Chapter 22 deals separately with EDUSAT (Educational Satellite). In the words of former president Dr APJ Abdul Kalam "Democratisation of knowledge indicates knowledge for everyone, anytime any place. EDUSAT will be extremely useful in making the shift possible and decreasing the digital divide." According to Prof. M. Mukhopadhyay EDUSAT provides at least the following channels (i) virtual classroom through two way video conferencing (ii) Educational Broadcast with or without interactive facility (iii) Virtual

classrooms through Computers conferencing both real time as well as asynchronous (iv) Internet supported interactive learning. EDUSAT has to be a joint venture of several ministries and departments of the government of India, particularly MHRD, Ministry of Information Technology and Department of Space.

In Chapter 23 the author brings out the initiatives taken by institutions like Gyan Jyoti, IGNOU, C-DAC, UGC, NIOS etc furthering their objectives using technology. The greatest impact of technology in the field of distance learning is its ability to help several people learn simultaneously from different locations. Technology allows group based learning with distance learners through online communication, live chat rooms and bulletin board.

Educational technology is the need of the day. The role of technology in the field of education is manifold. It is included as a part of curriculum, and as an instructional delivery system. Knowledge of core content is necessary but no longer sufficient for success in a competitive world. 21st century value people, who can use their knowledge to communicate, collaborate, analyze, create, innovate and solve problems. Used comprehensively technology in education helps students develop proficiency in 21st century skills. Therefore the book fully meets the need of the students. The book has been specially designed as a student text for teacher training colleges and for the students preparing for B.A Education. The book is essentially "student centered" and "examination oriented". The book provides a comprehensive treatment of all topics on which questions are usually asked. All topics are dealt in a very cogent and lucid manner so as to enable the students not only to have a complete grasp but also score optimum marks in examination. Wherever needed the text is supplemented by suitable diagrams and tables. The book is very handy and the readers will find it a trustworthy friend philosopher and guide. The book brings out the role of new technologies and innovations in teaching learning and shows how these innovations have revolutionized the whole system of education and what promise they hold for future.