

Delivery of Environmental Education Through Distance Mode

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Introduction

Environment is that which surrounds, which exists around us. Environment has been playing an important role since times immemorial. It affects human life from all sides. Nature has provided abundant resources on earth. But man is destroying natural resources (advertently and inadvertently) without realising its consequences. The wide spread application of science and technology in urbanisation and industrial development is creating problems of pollution in the atmosphere, hydrosphere, lithosphere and biosphere. Environmental problems have been a matter of concern for all in one way or the other. The solution of all major environmental issues and problems our world is facing requires the full understanding and commitment of all of us. When every facet of human life is directly influenced by and in turn influences environment, it is utmost necessary to meet the growing demand for better environmental quality.

Present status of our environment i.e., pollution has reached at such an alarming levels that it is now threatening the very existence of several species, including the man on this planet. It has, therefore, become imperative to study the complex processes and mechanisms that are at work in nature and finally to find out solutions to the problems confronting the environment in the light of the understanding developed by the approach of this study.

Man is considered to be the chief and central agent to bring change in the environment. Therefore, to change any tradition, temperament or activities of man, it is essential to bring change in human thinking and only education can bring that change. Environmental education is one of the important way to bring man closure to the nature. It is a way of creating knowledge, understanding values, attitudes, skills, abilities and awareness among individuals and society towards the environment and its protection. To ensure comprehensive and far reaching programmes for sustainable development and to ensure better delivery of educational programmes including training and awareness of environmental education to the community and to ensure better reach of these programmes for every citizen, we need to have more consciousness on environmental education programme.

Environmental education is a broad, multidimensional and well discussed issue in recent times. Every community whether belonging to urban or rural, elite or

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deprived group wants to understand and appreciate the complex nature of the environment as well as the role played by a properly managed environment in the economic development. Environmentalists have increasingly felt the importance of developing individuals who behave responsibly towards the environment. (Stapp, 1969; Hendee, 1972; Childress & Wert, 1976). The development of environmentally responsible and active citizens has become the ultimate goal of environmental education. (Stapp, 1969; Roth, 1970; Hungerford & Peyton, 1976).

Schools, Colleges and Universities are playing an important role in generating public awareness of the need to protect the environment and in promoting sustainable development. But the environmental education in conventional methods cannot be delivered with perfection because of inadequate availability of infrastructure facilities, limitation of finances and lack of properly trained teachers. Moreover, the interdisciplinary nature of environmental education is also very complex. Under such circumstances, distance mode can help us. As the awareness about appreciation regarding environmental protection need to be spread geographically to the masses, distance mode of education seems to be the most appropriate delivery system. Sufficient number of teachers can cover countrywide teaching through electronic media without spending additional money for infrastructure, without putting any bar on number of enrolment and without making admission procedures difficult. This distance education mode can play an impressive and important role in meeting environmental challenges. Adoption of electronic education technology in distance mode is the most rational approach for such programmes.

Development of Instructional Material

In distance mode, instructional material development is a basic requirement for effective environmental education delivery. The first generation technology in distance education started with using mailable materials. Black board with chalkmarker with few sketches, charts, posters, quiz and slogan writing were the first generation tools used by the teachers. With improved scientific inventions, classroom deliberations were performed with the help of audio-visual aids like cinema projectors, slideprojectors, epidiascope, overhead projectors. Education through these tools was referred to as second generation aids. All these conventional methods have several limitations in respect of communication and perfectness of delivery. But with the evolution of satellite transmission teleconferencing, e-mail, internet etc. the world has become a global village. 'Globalization' of economy and culture is now a living reality.

Thus, in distance mode of education delivery, we can overcome several limitations of the conventional methods and transmit the environmental education by writing texts in module with easy language and rich illustrations. Every aspect of our environment

can be covered by developing new instructional material.

In the beginning, the learner will be made aware of the objective, contents, duration, nature of evaluation and assignments of the programme. Individual subject is called course. In each course book, there will be several units comprising few lessons in it. Every lesson begins with certain objectives and is correlated to the time required. Here the learners with their adaptation of self-instruction become autonomous learners. It is because of the difference between this kind of learning and the traditional kind in which they listen to lectures and read books.

Use of Technology for Environmental Education Through Distance Mode

As we approach the 21st century, it is becoming increasingly clear that ability to cope with the environmental management and conservation of resources will be of prime concern for environmentalists. Modern technology has opened up new possibilities for environmentalist. The use of new technology and media in the learning of environmental education must be planned and designed in such a way that it is transparent and unobtrusive to the learner.

To supplement the word of mouth : besides print, other wide range of media like teleconferencing, e-mail, computers, CD-ROMS, Internet etc. could be used for dissemination of knowledge related to environmental education. Infact, these technologies will definitely result in the speedy access to information. We will be in a position to impart information, knowledge and training within lesser time to a large number of people. This third generation of technological adoption in distance education is computer based education using software packages CD-ROM and internet. CD-ROM is an interactive way of learning through audio-visual mode. Besides, knowing the appropriate responses one is also exposed to the critical analysis of the issues. In other words not only it teaches but also help in diagnosing and remedial teaching.

In environmental education, technologies which facilitate two-way person-to-person dialogue delivery are broadcasting, telecommunications and computer. In broadcasting, the most common forms are radio. Television for imparting instruction is also used in narrow cast system via satellite. A very specific frequency band of satellite communication made this audio-video medium most useful for academic purposes. Telecommunication systems commonly support teleconferencing using voice, image and data components singly. Computers which are networked or connected together provide a platform to support communication.

With the introduction of internet services in India by Videsh Sanchar Nigam Limited (VSNL), informations regarding environmental education can be shared by everybody anywhere irrespective of geographical barriers. Learners can reach with in seconds to

the latest deliveries and informations, from the eminent environmentalists of the world. In such communication, learners can participate in conversation with expert anywhere to get reply properly and precisely through internet. Of course, this is a new dimension in the field of environmental education. Through internet, learners can access any of the unlimited branches of knowledge any time at their convenience. The latest scenerio on environmental health can be shown with motion pictures depicting direct bearing environmental pollution has on human health, animal and plant life by simply pushing of few buttons. Technology and inventions are adding new information everyday. Internet communications are being utilised in sharing latest research informations related to pollution control and eco-pollution or eco-development most efficiently, effectively and economically without any delay or deviations.

Another important mode of environmental education delivery in modern societies is audio-video conferencing. It is contiguous two-way communication between researchers and learners. What we see in conventional method, we observe learner-teacher, learner modules, learner-learner interactions are at the primitive stage with limited exposure and even quality can not be ensured because of no set standard rules everywhere. But in video-conferencing, the exposure and access can be ensured for a quite large number of people from anywhere in the world. The discussions are lively to the point and specific. For this reason, it is considered as one of the most important medium for delivering environmental education.

The online instruction has the great potential to provide immense interactivity at both inter-student and student-tutor levels through e-mails. These levels of two-tier inter activity were unimaginable in conventional face-to-face (F2F) tutoring era. In effect, these 'flexible access' technologies such as audio-teleconferencing, video-conferencing, computer mediated communication. (Taylor, 1992) allow the student to turn "the teacher" on or off, at will as their life style permits.

Conclusions

Demand for better environmental quality is rising with the industrialization of society. Infact, environment and development axis has been the most important underlying them these days. Union Ministry of Environment and Forests feels that the development should be based on the principle of sustainability and also on repairing the damage already done. Speedy access to information can help us in this direction by protecting environmental degradation. Awareness regarding environmental appreciation should be spread through radio-talks and T.V. telecast. Experts, Politicians, Bureaucrats, Students, Teachers, Labourers, etc. can be offered capsule courses by distance education institutions. Distance education system is one in which we can

impart skills for dealing in ideas with people. This system through its modern audio-visual methods can give the latest knowledge in reducing pollution and in the use of agricultural and industrial techniques so that harmony between man and environment is preserved. So computer, internet, education T.V. and satellite media can prove a boon for effective delivery of environmental education.

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