LearnNet:

VSAT-based interactive distance learning network to upgrade distance education in India

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Abstract: In the Indian context, where the majority of people are still surrounded by superstitions, conventional beliefs and orthodox traditions, the most meaningful way of ushering in the 21st century would be to widen awareness by means of upgrading distance education through different modes of communication including the latest information technology. Distance education through the LearnNet System is the most modern tool of education. It is a satellite-based distance education system which facilitates students in any number of locations, especially in areas where there are no alternative ways. LearnNet provides flexibility, versatility and cost-effectiveness and will help in the eradication of illiteracy.

Key words: LearnNet, distance education, information technology

1. INTRODUCTION

From a merely agriculture-based society in the early forties, India rates amongst the biggest industrial nations. Information technology (IT) is seen as a promising avenue for maintaining quality of science, medical education, arts, commerce, engineering, technology, management, finance, humanities and social sciences, in this present period. With the rapid expansion of industry and the requirement of these for well-qualified personnel, it becomes necessary to impart this latest expertise to students. Owing to financial problems being faced by the central and many state governments, universities and institutions, it has become difficult to procure standard books, journals and other related research material. The learning required of students and its need to cover remote and rural areas of hill states of India is

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posing serious challenges to the various state governments. Also opening up new learning centres like colleges, institutes and universities is not economically viable, as students in such areas who will opt for higher studies are few in number. Financial constraints prevent new initiatives and programmes being launched. With the soaring cost of maintaining the conventional educational infrastructure, it is difficult to even maintain present on-going programmes. Recent market trends require professional personnel with a flexible and modular approach to the design of interdisciplinary programmes and courses. The education system should be dynamic and capable of responding to changes in socio-economic conditions of the country and national goals. Realisation of the vision of upgrading of all the institutes according to present needs is not possible due to financial and other difficulties. Therefore distance education learning utilising IT could be highly beneficial. IT could make us act locally and think globally.

2. LEARNNET

Teaching and training is an 'interactive process'. The interaction of students with the teacher is an integral part of the process. Teaching and training involves teaching to a 'group of students' as well as involving 'individual' study.

In addition to the flow of information between the teacher and trainee, it is also essential to allow students to interact among themselves, to exchange information and to experience and to work as a team.

Education is being considered as a main-stay of development in any country. In a country like India, where rural and remote populations contribute to more than a half of the total population, and with limited sources available, providing education in these areas becomes difficult and impossible. During the last decade considerable development has occurred in the area of distance education. In the present scenario distance education is considered to be the best method to impart education to these remote and geographically dispersed areas.

Distance education through the LearnNet System uses the most modern tool of education. LearnNet is a satellite-based distance education system which facilitates students in any number of locations, anywhere. The basic concept behind LearnNet is that it provides all of the following benefits:

- Ability to deliver the best lesson to all.
- Ability to use the best teacher for any given topic to all.
- Provide specialised training according to productive sector demands.
- Improving the efficiency, quality and relevance of education.

- Providing the most cost-effective tool to develop education sector programmes.
- Ability to reach people wherever they are and to provide them with access to high quality education.
- Dissemination of knowledge, information and experience nationwide.
- Increase coverage and strengthen education services in rural areas.
- Improve rural schools' education and administration.
- Provide equal access to knowledge, information and expertise to all.

With LearnNet, a classroom is no longer one room in which an instructor and students reside. The new age 'classroom' is now expanded to unlimited remote locations as students in these multiple locations interact in real time with the instructor, who controls the lesson from a central 'teaching studio' and with each other. LearnNet allows students to enjoy all the benefits of group instruction and interaction while eliminating the need to physically assemble everyone in one classroom.

LearnNet is a fully integrated instructional system comprising the following three levels:

- Learn Network Level.
- Application Level.
- Content Level.

Each interactive distance learning system is based on these three levels. Effective and economical implementation of a specific system depends on the specific integration of various components in each of these levels.

3. CONCLUSION

LearnNet is an open system with unlimited growth potential, enabling the addition of classes and individual students at any time, for a fraction of the cost of any alternative teaching tool. The prime motivation for LearnNet is a desire to teach people, wherever they are. Instead of bringing students to the instructor, the best instructors are brought to the students. In an Indian context, where the majority of people are still surrounded by superstitions, conventional beliefs and orthodox traditions, the most meaningful way of ushering in the 21st century would be to widen mass awareness by means of upgrading distance education through different modes of communication including the latest forms of IT. Thus IT would provide educational provision that had flexibility, versatility and cost-effectiveness, and will help in the eradication of illiteracy.

BIOGRAPHIES

Mathura Thapliyal is working as assistant professor in the department of computer science, HNB Garhwal University, Srinagar (Garhwal), Uttarakhand, India. His major research interests are in the field of new technologies and their use for educational purposes for improving teaching and learning processes. He has published more than 20 papers in international and national journals and seminars. Also he has been involved in the design and experimentation of educational software and on-line research in distance education using computer network technologies. **Manmohon Rauthan** holds an M.Tech. degree in computer science from the Indian Institute of Technology, Roorkee, Uttarakhand State, India and is working as professor and head of the department of computer science, HNB Garhwal University, Srinagar (Garhwal), India. He was awarded the President Gold Medal for his work in designing and developing census software for the Government of India. His research interests have focused on educational issues in software engineering.

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