

# E- Education and its Tools: A Necessity of Higher Education System.

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## **Abstract**

Information technology opens up the whole world of knowledge and allows teaching and learning to take place beyond the traditional boundaries and resources of the school. The paper discusses e-education: a necessity of prospect generation. Though information technology is at its great speed still some steps and efforts needed at various levels for providing e-education. The global scenario shows the invading role of information and communication technologies into education sector so it is necessary to adopt technologies for education in India also. The paper pictures a model for e-education and highlights Tools for e-education, significance of e-education. Also mentions advantages of e-education. Paper concludes with the golden idea of e-education.

## **Introduction to e-education:**

Commonly referred to as online education, e-education is the process of learning online. Whether you're a high school student or a graduate college student, a person looking to expand technical skills or a retiree who simply wants to learn more, Internet learning provides a boundary-free way to broaden your horizons. This wide variety of schools offers a range of programs from Master of Business Administration to graphic design. Depending on the program you select, you can complete it entirely online, or combine it with a traditional "in-person" learning setting. The flexibility of online learning is particularly helpful for working professionals who want to return to school, but need to remain employed to support their families. However, the kind of focus the educators in on-line business are keeping would indicate that these issues are well taken care of. Moreover, even in the traditional setup, these issues are very much prevalent and create difficulties in learning and teaching. As per Steven Crown, executive director, North Central Association of Colleges and Schools, "We also acknowledge that on-line institutions create special concerns about the quality of instruction, usually related to the lack of physical connection between faculty members and students, and among students. Those who believe that high-quality education requires face-to-face interaction will always question the performance of virtual institutions. However, many faculty members and students say on-line programs actually enhance interaction. Their positive, firsthand experiences undercut simplistic denials of the effectiveness of distance education." (S M Nafay Kumail, 2000)

The information and communications technology witnessed a remarkable growth in the second half of the past century and in recent years the delivery of education has seen a rapid transformation on impact of this technology. Higher learning used to be a field reserved for a few who got access to the high towers. These have been gradually thrown open with unlimited possibilities and immense potential for imparting uniform and high quality education for everyone. The teachers as well as the taught have gained access to a wide range of media-print, radio, television, audio, video, audio/video conferencing and the tools like-computers, CD-ROMs, e-mail and internet. It expanded the reach of teaching/learning process to such an extent that education at a distance became not only possible but enriching too. If fact, it has facilitated the transfer of focus from the teacher to the learner and the institution of instruction to the study room of the learner. Education, being an accepted resource for social and economic development, has become an easier and simple prospect, is really a significant development. The revolutionary developments in information technology has now enabled the practitioners of learning to take the classroom and campus initiatives on the cyberspace. The teacher-learner interaction, which is

essential for effective learning process, has become possible at a distance through distance education. It seems to be the “wave of the future”. Everyone is expected to side this wave and benefit from this omnipresent educational system. With the cyber network expanding throughout the length and breath of country, this dream can be a reality in near future, to create informed and educated citizens.

With the advent of information technology and the internet the concept of distance has been significantly modified. A learner anywhere, at any far off place in a distant island in a vast ocean or a next-door neighbor, can be taught in equal terms through the internet, provided he has, of course, an access to it. Then there is a range of telecommunications media, like computer conferencing, audio-graphics, video conferencing which are provided to the distance educators. Besides, the communication media like computer-based text, interactive video and CD-ROM can be used in which the learner interacts with textual information.

Media can be synchronous and asynchronous. In an asynchronous medium like computer conferencing, both learners and tutors get time to think over their respective responses and prepare messages to be put into their machine at their convenience for the conference. One can read and re-read messages at one's convenience, rather than set at a time. Further, messages go on filing up every day from various corners and one gets time to read, reflect upon and respond. The conferencing remains alive through this process, though anyone individual member may not have contributed to this for days together. However, asynchronous communication, especially for distance learning, has at times been boring since issues take much longer period of discussion to be finally resolved. In synchronous communication, on the other hand, there is use of voice and vision, and both learners and teachers need to respond there and then. Those who like to think it over or lack command over language or do not feel comfortable with spontaneous communication, and would like to read more references before formulating an opinion, find it hard to cope up with this form of communication.

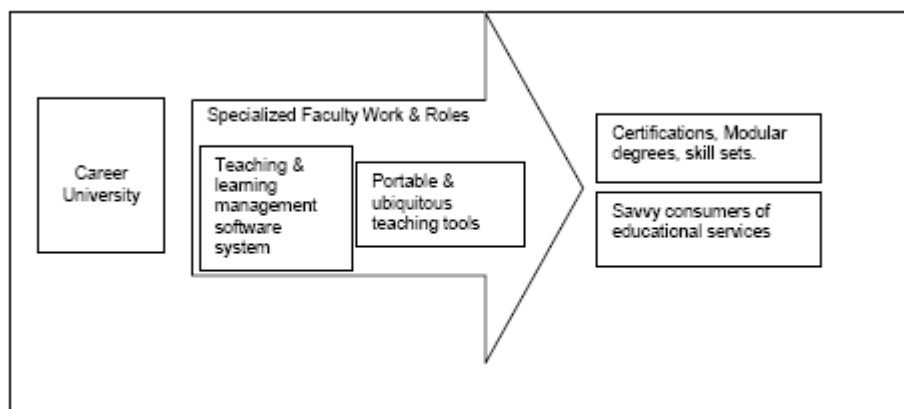
As such, the use of telecommunications media in the Distance Education has created a new world in teaching/learning process. The learner is free to connect himself to the system anytime through his telephone and computer or from a shared machine and a telephone line at any workplace. Through distance education, a wide variety of higher level courses, professional courses and the course on IT are being offered through telecommunications.

Since a great variety of resource materials are available on the net and the discourses and learning experiences have greatly enriched by the contributions of the learners throughout the world, the learning has, as such, become much more universal and according to the needs of latest standards. The handicapped and physically challenged learners have been greatly benefited by the system as they challenged learners have been greatly benefited by the system as they can easily respond and interact with their tutors and other students making use of their own language through their own PCs.

There is, unfortunately, some rigidity, in times of admission and contact due to the usage of the media within the traditional campuses and it has limited the practice of open learning. However, there is no doubt, that the use of these technologies has opened enormous vistas of learning and the delivering quality education. The quality of campus education has also improved by the use of there technologies. The students on campus use computer conferencing for greater interaction with tutors and students and for global experiences through the use of Internet. The concept of isolated studentship, depending on printed texts and postal communications, in distance education has been removed and these technologies have increased the level and extent of communication far ahead of those possible in face to face situation. In the developing countries like India, there is limited access to internet, compared to the developed countries, but it is poised for a rapid expansion like the television and radio, in these countries including India. Also, those getting education through resources over the internet would soon the more acceptable to the employers.

## Model for E-Education

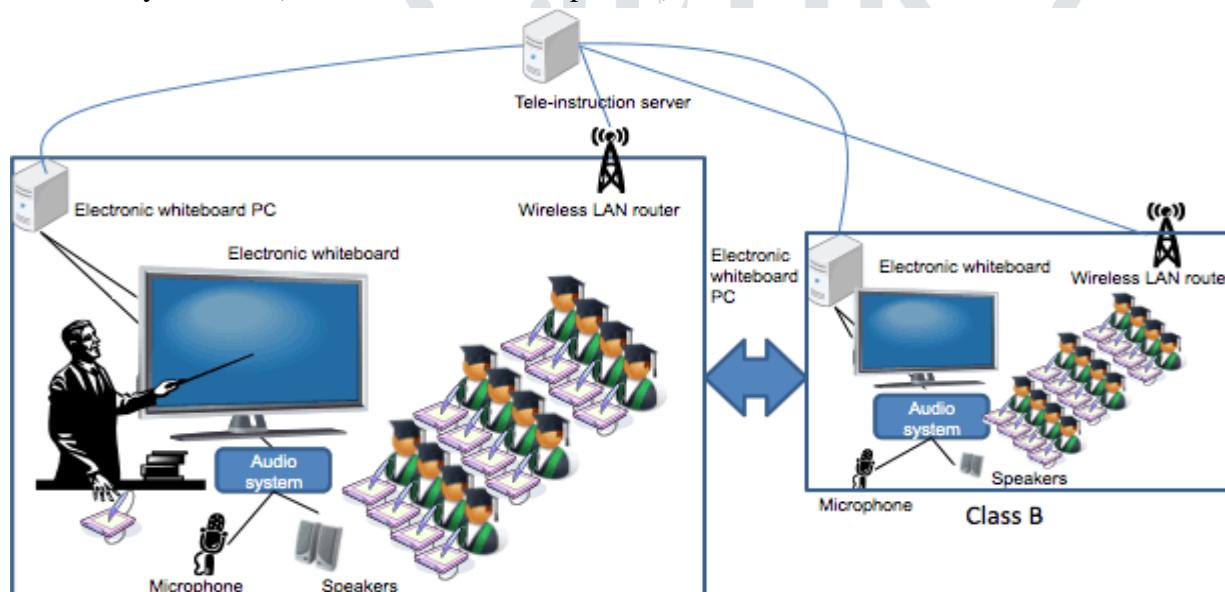
Figure 1: Model for E-Education



### E-Education System

#### Conceptual Illustration of the E-Education System to Be Used in the Proof-of-Concept Trial

Class A attends a course (instructor is teaching class in normal fashion). The same course instruction can also be received by Class B (where no instructor is present).



#### Class A

Figure 2: Remote E-Education Proof-of-Concept System Configuration

Teaching materials on the electronic whiteboard of Class A, plus the audio and annotations from the instructor's presentation, are shared on the electronic whiteboard of Class B located at a distant site, and are also displayed on the e-textbook terminals of the students.

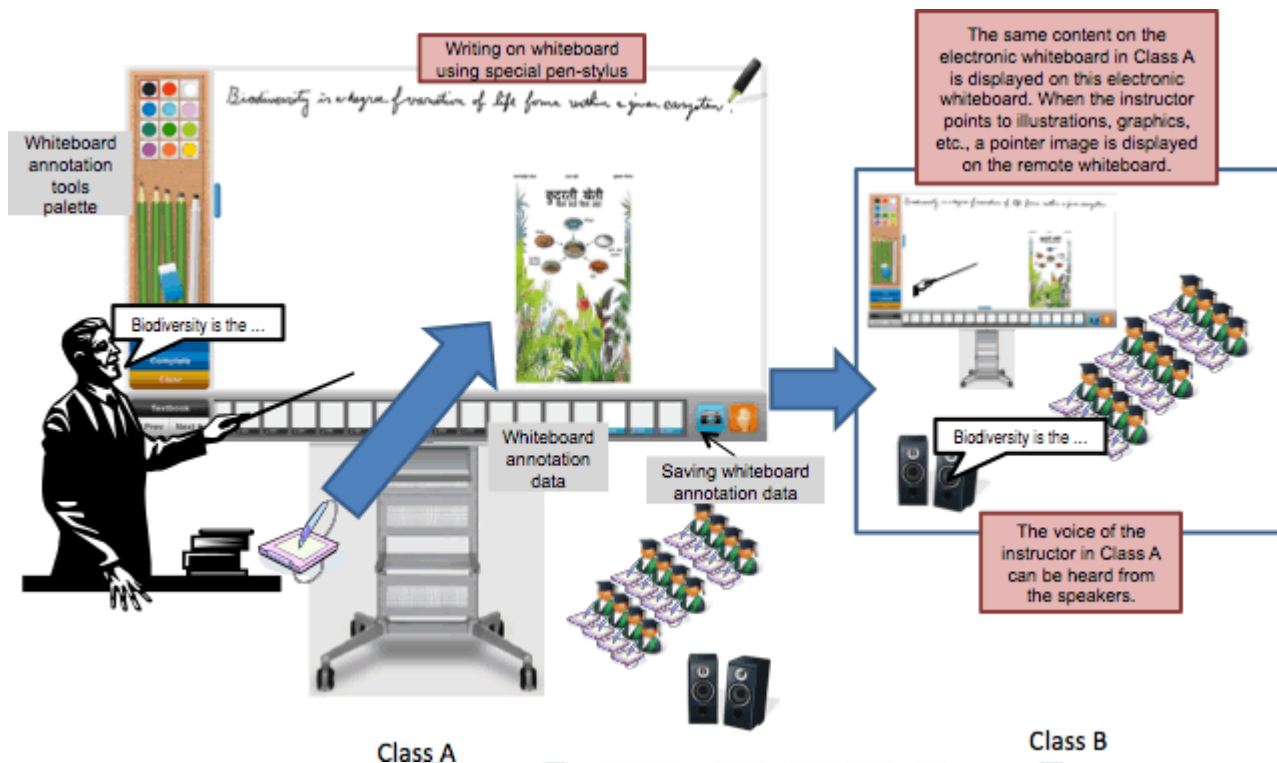


Figure 3: Remote E-Education Proof-of-Concept Trial Instruction Conceptual Image

### Tools for e-education

- Teaching and learning management software systems can be linked to their back office administrative systems
- Web course management tool
- Student tracking and collaboration tools
- An entire suite of learning aids, personal bots will emerge
- Personal digital assistants
- Summarizers, finders, connectors, learners
- The wide gulf between students and practitioners will be narrowed by education coming to the desktop and practicing experts made available for testimonials, examples, actual observation of behavior through broadband methods

### The significance of e-Education

New models of learning are radically changing our conception of education. Education for human development in the learning society requires collaborative learning and involves focusing on building knowledge. These changes arise from shifts in educational goals, and from new concepts in learning and knowledge creation.

The Department of Education believes that developments access to learning opportunities, redress inequalities, improve the quality of learning and teaching and deliver lifelong learning. E-Education can accommodate differences in learning styles and remove barriers to learning by providing expanded opportunities and individualised learning experiences.

Experience worldwide suggests that education does play a role in the transformation of education and training. E-Education can enhance educational reform by enabling teachers and learners to move away from traditional approaches to teaching and learning. In a transformed teaching and learning environment, there is a shift from teacher-centred, task-oriented, memory-based education (with technology at the periphery), to an inclusive and integrated practice where learners work collaboratively, develop shared practices, engage in meaningful contexts

and develop creative thinking and problem-solving skills. There is sufficient empirical evidence that investments yield positive results for learners and teachers. Studies have demonstrated improved learner achievement in:

- Application and production of knowledge for the real world;
- Ability of learners to manage learning;
- Ability to promote achievement for learners who experience barriers to learning; and
- Access to information that increases knowledge, inquiry and depth of investigation.

Furthermore, the use of computer has demonstrated improved inventive thinking skills, such as creativity, problem solving, higher-order thinking skills and sound reasoning, along with improved effective communication. Improvements in interpersonal skills, such as writing, public speaking, teamwork and collaboration, and improved productivity skills, including creating high-quality products, have also been reported.

### **The Interactive Advantage**

The Internet not only provides inquiry-based learning where questions are answered by the most proficient people of the field, it also gives an enormous scope for discussions, exchange of views, resulting into multi-dimensional research on the subject. If on the one hand teachers and students can come together, study and collaborate with the rest of the world, it also gives teaching community the opportunity to share learning technologies and strategies that can be integrated across curricula.

Teaching and learning have become self-paced and the Internet has dramatically increased the speed of learning. Internet-based pedagogy is different from the traditional classroom variety. The combination of text, sound, and images produces much better result than the education through communication technologies. It has resulted in the emergence of new breed of educators who call themselves “Instructional Technologist”. This community is focusing a great deal on how to deliver education through the Web. The two main theories of education “objectivism” and “constructivism” are aptly handled by Internet-based education since Internet and WWW have most of the infrastructure a school needs, and are capable of using them in a better fashion.

It is not very difficult to visualize a situation where a global curriculum could be developed and followed which answers the changing global needs. The Internet has changed the way distance-education can be delivered. It has added that magic of “interactivity” which was missing from the other media such as TV and radio. Flexibility is one of the most attractive elements of online learning, but the benefits don't stop there. In fact, many online students find their educational journey is particularly rewarding. Benefits include:

- Virtual classrooms that can be accessed from anywhere
- Well educated, professional instructors just like traditional education
- Diverse programs in a variety of disciplines
- Accredited programs to complete college degrees
- Technical programs that provide real-time training
- Freedom to enhance skills –and resume – while still working full-time
- Financial aid possibilities
- Real-life application of classroom materials
- Greater comfort with interactive technologies
- Work/life balance

## The Critics and the Advocates

The spread of Internet-based and on-line education has not gone without criticism. James Perley, chairman, and Denise Marie Tanguay, member, of the American Association of University Professors' Committee on the Accrediting of Colleges and Universities, argue, "the fundamental difficulty with institutions that rely heavily, or exclusively, on distance education is that they are characterized by a practice called 'unbundling'. In that practice, course materials are prepared by a 'content expert' and delivered by a 'faculty facilitator,' in a uniform manner, producing predictable and measurable 'outcomes' that fit uniform assessment tools. Such a process of turning education into modular units represents a basic change in an essential characteristic of higher education."

## Conclusion

All said and done, on-line education is here to stay. And the success of on-line education is critical since it will decide how another communication revolution in the form of satellite providers will impact education. The future has a lot in store. If this technology becomes economically viable, a new way of education and training will emerge. This has already started in some parts of the world. Yes, "the learning on demand or anytime anywhere learning" is not far away. E-education is not entirely new concepts but has grown as the WWW has developed in each country. E-education is taking roots for Indian students as well. But first, it is important to understand exactly what we mean by e-education and quite simply it is education and training delivered and accessed via the Internet. One of the major advantages of e-education is that one can access the best education in the world direct from the persons who wrote the courses for online study. The courses may range from technical, medical, academic to general interest subjects and the levels can be from beginner to higher advances. With over 800 courses to choose from, the individual should find the right course and level without difficulty. In the 21st Century, students may stay at home and take distance education (synchronous and asynchronous) in their homes across the world. Geographic comparative advantage will shrink and shrink and shrink. More importantly, excellent students who could not be accepted as onsite students in prestige universities (due to lack of financing and constraints as to how many can fit into onsite classrooms) face new opportunities to get a prestige degree in their own homes.

## References

- <http://news.indiainfo.com/2002/07/10/india-index.html>. Future of Simputer rests on govt's backing Wednesday, July 10 2002 08:30 Hrs (IST).
- <http://www.schoolnet.ca/>
- <http://www.ngfl.gov.uk/>
- <http://www.e-learningcentre.co.uk/>
- <http://www.ruv.itesm.mx>
- <http://www.westgov.org/wga/initiatives>
- <http://www.avu.org/>
- <http://mit.edu/>
- <http://www.netvarsity.com/netvarsity/nv000/frame.asp/>
- <http://www.pratham.org/>
- Vidya Vahini to bring IT to Govt. schools in State, Hindustan Times, 12 June 2003, p 2.
- When classrooms go hi-tech. Hindustan Times, HT Horizons. 11 June 2003, p 1.
- City leading the e-learning process. Hindustan Times, HT Live. 11 June 2003, p 3.
- <http://www.incg.org.in/CountryGateway/eGovernance/News/spend+200.htm>
- India's Net subscriber base stands at 35 lakh. Hindustan Times, HT Tech 4U, 2nd June 2003, p 11.

- IBM plans computer that understands Indian lingos. Hindustan Times, HT Tech 4U. 14 Oct. 2002, p11.
  - Royal Dutch seeks to launch e-education venture in India March 6 <http://www.hinduonnet.com/thehindu>
  - Edu-comp's Learning Mate to offer Blackboard e-education solutions in India [www.itpeopleindia.com/careers.html](http://www.itpeopleindia.com/careers.html)
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