

## E- EDUCATION

\*Er.Princy Narula, \*\*Priya Narula, \*\*\*Er. Sapandeep Kaur

\*Ludhiana College of Engineering & Technology/CSE

\*\*Jai Enterprises/Accounts Manager, Ludhiana

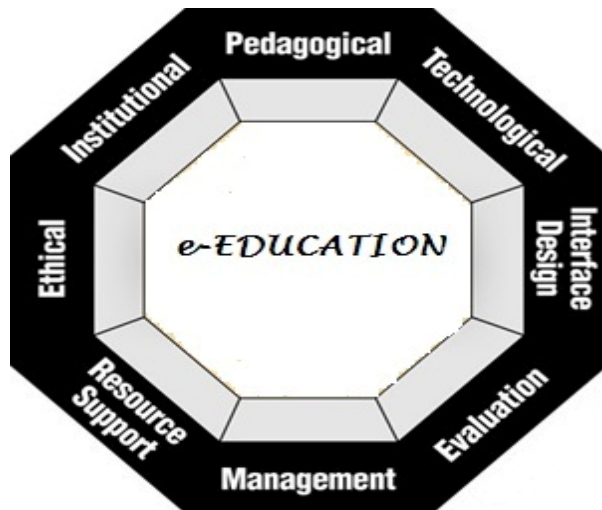
\*\*\*Ludhiana College of Engineering & Technology/IT

### ABSTRACT

E-education is a broad term that generally refers to any kind of learning done with a computer and Internet connection or CD-ROM. It is used by individuals, educational institutions and businesses. The quality of e-learning has improved in recent years, as teachers and students have become more comfortable with the technology. E-education is an excellent option in education, particularly when there are hindrances to traditional learning situations. E-education can give you the freedom and flexibility to learn when and where you want, and at your own pace. E-education applications and processes include Web-based learning, computer-based learning, virtual education opportunities and digital collaboration. **KEYWORDS:** internet, technology, e-learning.

### INTRODUCTION

E-education is essentially the network-enabled transfer of skills and knowledge. E-education refers to using electronic applications and processes to learn. E-education applications and processes include Web-based learning, computer-based learning, virtual classrooms and digital collaboration. E-education is used to get education wherever and whenever we want. Online education has been able to provide efficient education and is not restricted by time and place. E-education refers to the delivery of learning experiences. With the advent of information technology and the internet the concept of online education has been significantly modified. A learner anywhere, at any far off place in a distant island in a vast ocean or a next-door neighbour, 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. IT has opened up the world of education. It provides new tools for teachers and the students. And it opens up the whole world of knowledge and allows teaching and learning to take place beyond the traditional boundaries and resources of the school. Through online education, we can familiarize ourselves with new technologies at Internet speed; speed up the process of sharing new ideas and adapt to the culture and spirit of the global economy. 24/7 accessibility makes scheduling easy and allows a greater number of people to attend classes. With the help of e-education, travel time and associated costs are reduced.



## TOOLS FOR E-EDUCATION

### A. e-MEETING:

An e-meeting is any meeting that takes place over an electronic medium. All e-meeting software platforms allow meeting participants to speak to one another in real-time through the use of Voice over Internet Protocol.

### B. E-LEARNING:

E-learning is essentially the network-enabled transfer of skills and knowledge. e-learning refers to using electronic applications and processes to learn. E-learning is commonly referred to the intentional use of networked information and communications technology in teaching and learning. E-learning applications and processes include Web-based learning, computer based learning, virtual classrooms and digital collaboration. Content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM.

### C. e-MAIL:

It is a system for sending and receiving messages electronically between e-students and e-tutors in an e-education system.

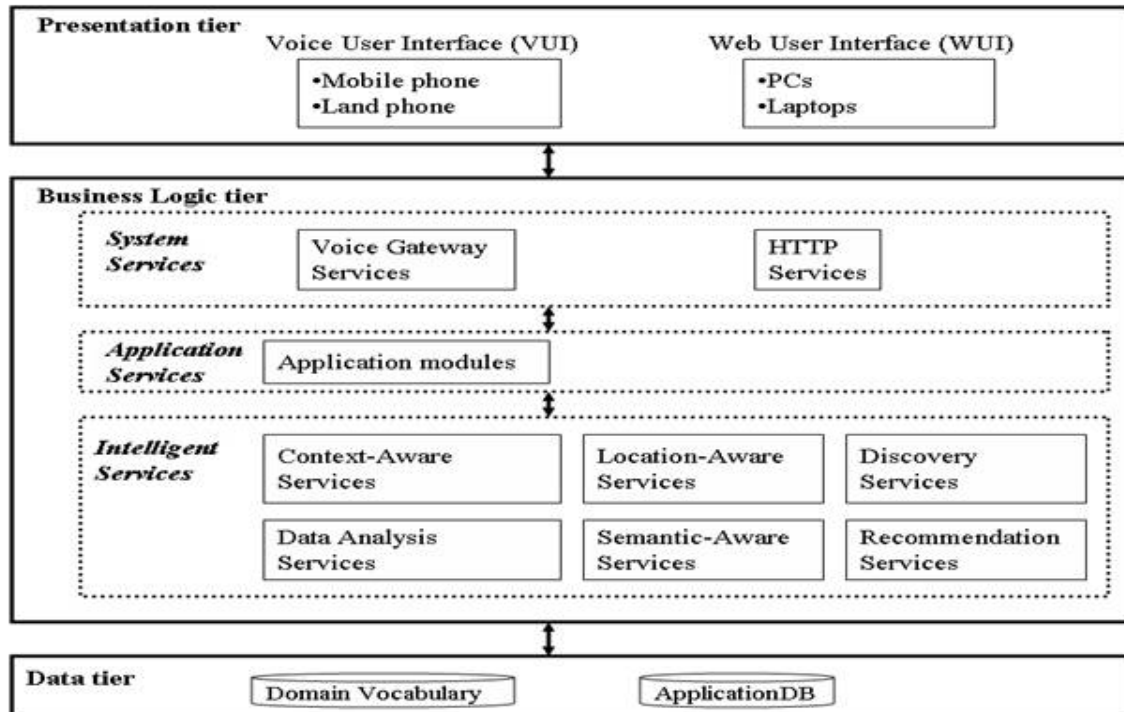
## FRAMEWORK FOR E-EDUCATION SYSTEM

The framework consists of the presentation tier, business logic tier (made up of system, intelligent and application services), and database tier. The architecture shows the locations of each of the component services in the system. The proposed framework for intelligent voice-enabled e-Education systems is shown in Figure 1.

A. PRESENTATION TIER: The presentation tier provides client access to the system. The client do not store or process any form of data. They only provide an interface for the system through the VUI and WUI. In the case of VUI, data or files or voice browsers are not stored on the client due to resource constraints associated with telephone and hand-held devices. The VUI allows voice browsers (running in the voice gateway) to be used as interface. The information from the database is presented in a compatible form to the VUI client through text to speech translation. The voice browser simply receives any call into the application and submits to the voice gateway for further processing. The WUI provide access to the application through an Internet browser.

B. BUSINESS LOGIC TIER: The business logic tier comprises system, intelligent and application services. The presentation tier communicates with the business logic tier through the voice gateway services. The system services sub tier contains the voice gateway and Hypertext Transmission Protocol (HTTP) services. A telephone user access the application through the VUI from various mobile and land line phone in real-time. Once a telephone user has been authenticated, the user's query is translated by the voice gateway services and passed to the application services for further processing. A user can only access the module for which he or she is authorized. The client application engages the VUI and WUI to connect with the business logic tier using the voice gateway and the HTTP services respectively. The application services contain all the application modules for the system.

C. DATA TIER: The data tier provides data services and data base management system functions. The data tier is responsible for changing, adding, or deleting information in the database within the system. Any relational database such as MySQL, MS SQL Server, MS Access, etc, may be used for the implementation of the data tier.



**Figure: 1**  
**A framework for intelligent voice-enabled e-Education systems**

## ADVANTAGES

### A. REDUCED COST:

It is the most influential factor in adopting e-education. The elimination of costs associated with instructor's salaries, meeting room rentals, and student travel, lodging, and meals are directly quantifiable.

### B. ON-DEMAND AVAILABILITY:

It enables students to complete training conveniently at off-hours or from home.

### C. EASE OF UPDATE:

Online e-learning sessions are especially easy to keep up-to-date because the updated materials are simply uploaded to a server.

### D. CONVENIENCE:

There are two kinds of convenience those e-education offers:

- Time flexibility: e-Education is available twenty-four hours a day, seven days a week.
- Place flexibility: e-Education is available any place that has a computer and Internet access, i.e. learning is not a constraint to a particular geographic location.

**E. CONSISTENCY:**

E-education offers consistent quality of education from group to group over time, unlike courses relying on several different instructors for different groups, even within the same class. In addition, material is consistent over the length of the course, and not susceptible to disruptions due to unexpected trainer turnover or illness.

**F. CROSS-PLATFORM SUPPORT:**

E-education is accessible by Web browsers on any platform: Windows, Mac, UNIX, OS/2, Amiga, etc. You can deliver your training program to any machine over the Internet or intranet without having to author a program specifically for each platform.

**G. SELF-PACED:**

Most of the courses offered by e-education are self-paced, catering to different learning speeds. This way, students who absorb material faster will not be bored and de-motivated by listening to the concepts they already know and understand. On the other hand, students who need more time to internalize these same concepts will have an opportunity to take that time, without feeling rushed or pressured.

**DISADVANTAGES****A. UP-FRONT INVESTMENT:**

The e-education systems require a huge investment due to development costs.

**B. TECHNOLOGY ISSUES:**

It includes whether the existing technology infrastructure can accomplish the training goals, whether additional tech expenditures can be justified, and whether compatibility of all software and hardware can be achieved.

**C. TECHNICAL PROBLEMS:** Although computer-based learning is the fastest growing educational approach, but both students and teachers have difficulties logging in, posting messages, uploading assignments, and giving and taking tests. Some of the specific examples are described below:

- Resizing the quiz window using AOL connection often causes all entered information to be lost. This obviously causes the user dissatisfaction, especially during the test or training crunch time.
- Blackboard.com operates very poorly on Netscape for Macintosh. This becomes quite a problem with Colleges and Universities, since over fifty five percent of them operate on Netscape for Macintosh because of slightly lower installation costs compared to other providers.
- Although theoretically Blackboard.com should work with almost any type of connection or PC, the practicality of situation is quite different. In order for a clip, test, or exercise to run smoothly, it needs a high-speed modem, as well as PC with a fast processing power. Therefore, many students end up using the University server, however in this case, the student obviously needs to be at the school which defeats the sole purpose of Blackboard.

**D. CONTROL:**

The issue of controlling the e-learning environment to uphold honest academic conduct is difficult. The following disadvantages are related to control:

- Attendance is not verifiable, thus it is easier for irresponsible student to skip the class.
- Identity of test-taker is not verifiably the same as the student who is enrolled.
- No control over when resources such as textbooks are used, if they're being used when they are not supposed to be used, or whether resources are appropriate and honest for the students use.

**E. INADEQUANCIES:**

Even though e-education is an excellent tool for training and understanding of certain skills, some subjects or abilities simply cannot be taught effectively through use of computer based training. The following are those inadequacies:

- For teaching physical or psychomotor skills.

- For times when an instructor is essential, i.e. for the benefit of role-play exercises and networking.
- For actively learning a foreign language through oral instruction.

## CONCLUSION

The central idea of this paper is to present e-education as a new method for teaching, and to get to know the main aspects of it. We found e-education very useful but with some problems to change the systems that work nowadays. The main problems appeared to be the old mentality and the lack of technology, but we also identified some others, together with the positive aspects. Despite all the disadvantages and problems we finally concluded that e-education should be promoted, because it offers a great amount of new possibilities which could complement the current system, with the only restriction of the needed money for achieving the project. The system can be achieved with government investments, good interfaces that make the system attractive.

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