

## Potentials of e-learning in Bangladesh: An Analysis

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### Abstract

*This paper is an attempt to analyze the potentialities of e-learning in Bangladesh. In this digital era, Internet is updating day by day. People also want to get the proper blessing of Internet or Information and Communication Technology (ICT). For this, the best use of Internet is using it for education or learning purpose. Simply, we can call it e-learning. It can also be called Web-Based Learning (WBL), Web-Based Instruction (WBI), Web-Based Training (WBT), Internet-Based Training (IBT), Distributed Learning (DL), Advanced Distributed Learning (ADL), Distance Learning, Online Learning (OL), Virtual Learning, Mobile Learning (or m-Learning) or Nomadic Learning, Remote Learning, Off-site Learning, a Learning (anytime, anyplace, anywhere learning), etc. Like a developing country like Bangladesh has also initiated several projects of e-learning. In this paper, we have tried to show the initiatives, problems, and recommendations for Bangladesh towards e-learning so that our country can survive in the competitive modern age.*

**Keywords:** e-learning, problems, strategies, advantages, recommendation.

### 1. Introduction

The term 'e-learning' means 'electronic learning' that encompasses all forms of technology enhanced learning, it is the use of technology to enable people to learn anytime and anywhere. It is a great blessing of a digital era. It is suited for distance education. e-learning can include training, education, and the delivery of just-in-time information and guidance from experts. These services are delivered, enabled or mediated by ICT (Information & Communication Technology) for the purposes of delivering education. It is an instruction delivered through purely digital technology such as CD-ROMs, the internet or private networks. (Laudon & Laudon, 2004).

E-learning is a broadly inclusive term that describes educational technology that electronically or technologically supports learning and teaching. Bernard Luskin, a pioneer of e-learning, advocates that the "e" should be interpreted to mean "exciting, energetic,

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enthusiastic, emotional, extended, excellent, and educational" in addition to "electronic." In practice, as technology has advanced, the particular "narrowly defined" aspect that was initially emphasized has blended into "e-learning." In 1960, the University of Illinois initiated a classroom system based in linked computer terminals where students could access informational resources on a particular course while listening to the lectures that were recorded via some form of remotely-linked device like television or audio device. In 1963, Bernard Luskin installed the first computer in a community college for instruction, working with Stanford and others, developed computer assisted instruction. With the advent of World Wide Web in the 1990s, teachers embarked on the method using emerging technologies to employ multi-object oriented sites, which are text-based online virtual reality system, to create course websites along with simple sets instructions for its students. With the drastic shift of Internet functionality, multimedia began introducing new schemes of communication; through the invention of webcams, educators can simply record lessons live and upload them on the website page.

The emergence of e-learning is arguably one of the most powerful tools available to the growing need for education. The need to improve access to education opportunities allowed students who desire to pursue their education but are constricted due to the distance of the institution to achieve education through "virtual connection" newly available to them. Bangladesh is also initiating to step toward the same path with vision of integrating ICT into its education system. Though Bangladesh has initiated different projects for promoting e-learning, still it is facing several problems like speed, bad infrastructure, high cost etc. So, Bangladesh requires special attention to develop e-learning with IT Infrastructure Development to enjoy the new era of education.

### **Objectives**

The major objectives of the study are as follows:

1. To explore the current situation of e-learning in Bangladesh comparing with world situation.
2. To find out the problems in ICT in Bangladesh.
3. To find out some strategies and techniques of e-learning to improve the new field of education.
4. To identify the e-learning advantages, disadvantages and challenges in the context of Bangladesh.
5. To suggest some possible ways to solve those problems.

### **Methodology**

This paper is based on primary and secondary data. Primary data obtained through discussions from the ICT experts. The sources of secondary data include different books, journals, articles, newspapers and different publication of websites.

### **Limitations of the study**

The study has some limitations. The study mainly based on secondary data enough literature regarding the context of Bangladesh is not so enough.

### **Literature Review**

#### **Distance learning**

Distance education is the most renowned descriptor used when referencing distance learning. It often describes the effort of providing access to learning for those who are geographically distant. As computers became involved in the delivery of education, a proposed definition identified the delivery of instructional materials, using both print and electronic media (Moore, 1990). Keegan (1996) went by suggesting that the term distance education is an

“umbrella” term, and as such, has terms like correspondence education or correspondence study that may have once been synonymously used, being clearly identified as a potential offspring of distance education. The term then evolved to describe other forms of learning, e.g. online learning, e-Learning, technology, mediated learning, online collaborative learning, virtual learning, web-based learning, etc. (Conrad, 2006).

### **Online learning**

Online learning is described by most authors as access to learning experiences via the use of some technology (Benson, 2002; Carliner, 2004; Conrad, 2002). Both Benson (2002) and Conrad (2002) identify online learning as a more recent version of distance learning which improves access to educational opportunities for learners described as both nontraditional and disenfranchised. Other authors discuss not only the accessibility of online learning but also its connectivity, flexibility and ability to promote varied interactions (Ally, 2004; Hiltz & Turoff, 2005; Oblinger & Oblinger, 2005).

### **E-Learning**

In particular, Ellis (2004) disagrees with authors like Nichols (2003) who define e-Learning as strictly being accessible using technological tools that are either web-based, web-distributed, or web-capable. The belief that e-Learning not only covers content and instructional methods delivered via CD-ROM, the Internet or an Intranet (Benson et al., 2002; Clark, 2002) but also includes audio- and videotape, satellite broadcast and interactive TV is the one held by Ellis. As there is still the main struggle as to what technologies should be used so that the term can be referenced, some authors will provide either no clear definition or a very vague reference to other terms such as online course/learning, web-based learning, web-based training, learning objects or distance learning believing that the term can be used synonymously (Dringus & Cohen, 2005; Khan, 2001; Triacca et al., 2004; Wagner, 2001).

### **Current situation of E-learning in Bangladesh**

For understanding the current situation of e-learning in Bangladesh, it is very crucial to know the situation of world in case of e-learning. It is as follows-

#### **1. E-learning Worldwide**

The e-learning is widely used in most of the developed countries to promote distance education (DE) and lifelong learning. Applications and processes of e-learning include web-based learning, computer based learning, virtual classrooms, and digital collaboration, where contents is delivered *via* the internet, intranet/extranet, audio and/or video tape, satellite TV and CD-ROM (Islam 1997). The rapid and intensive use of ICTs in education in the developed countries facilitated to the establishment of 100% ICT-based universities called ‘virtual universities’. In addition, many world-leading conventional universities are now also offering some of their academic courses through various ICTs for their distant learners and established themselves as the ‘dual mode universities’. The historic launching of 700 courses from 33 academic disciplines as ‘Open courseware’s’ by <http://ocw.mit.edu/OcwWeb/Global/all-courses.htm> Massachusetts Institute of Technology (MIT) offers a tremendous resource for faculties, students and self-learners around the world. In contrast, the infrastructure of ICTs in the developing or the least developed countries is very weak and

thus, intensive use of e-learning in DE is still a dream for their universities and institutes. Recently, ICTs are rapidly expanding in some of the developing countries, and hence, it offers an opportunity to consider the use of ICTs in the promotion of DE. It offers students considerable benefits including increase access to learning, life-long learning opportunities, and convenience of time and place (Pierre 1998).

## 2. Current situation of E-learning in Bangladesh

Distance education is an important alternative for educating mass people in Bangladesh for many socio-economic reasons. Ironically, the opportunity for higher education is extremely limited as it is much more difficult to get admission into the universities due to limited capacity. This scenario is well reflecting in very high enrollment (approx. 400 thousands) of students at BOU, the first and only national distance learning university. Recently, ICTs are rapidly expanding in Bangladesh due to the deregulation of laws and policies by the Government. Therefore, introduction of more e-learning or ICTs may boost DE in Bangladesh. The e learning was first introduced in Bangladesh in 1956 by a radio broadcasting program, and later expanded much by the establishment of BOU in 1992. Government of Bangladesh initiated a pilot study of e-Learning of Math in Secondary Schools in Gazipur and Comilla from 2009 with the support of BRAC under TQI-SEP (Teaching Quality Improvement in Secondary Education Project). Ministry of Education formally inaugurated Mobile ICT Lab of TQI-SEP on 23rd February, 2010 in order to provide e-Learning for the underprivileged secondary students of rural Bangladesh. A total number 17 Mobile ICT Labs in 17 Cars (14 Microbuses & 3 Four Wheel Drive Pickups for hill tracks, haor areas and remote areas) will move all over the country to introduce e-Learning system with the teachers and students of one thousand schools by December, 2010. This initiative will ensure primary ICT knowledge as well as ICT based education for the students and also enhance the teaching capacity of the teachers.

From the last few years the computer and internet technologies in Bangladesh becoming cheaper and easy to access due to engagement of both the public and private organizations. The consumption of ICT in Bangladesh is rapidly increasing both in public and private sectors (A and J consultants 2004) that are shown in Table-1:

Land Phone (operated by BTTB) user	850,000
Mobile phone (operated by 4 companies) user	1.8 million
Total number of ISP	62
Internet user	2 million
Dial-up subscribers accounts	250,000
Broadband subscribers accounts	150,000
Number of universities offering ICT related courses	72*
IT training centre	>100
Total number of ICT related graduated from the universities every year	6000
Source: Grameen cybernet ( <a href="http://www.citecho.net">http://www.citecho.net</a> )	
*21 public and 51 private university	
BTTB: Bangladesh Telegraph and Telephone Board	
ISP: Internet Service Provider	

Moreover, In May 2006, Bangladesh inaugurated new submarine optic fiber connectivity as part of the 16 country consortium SEA-ME-WE 4 project. Since connecting to the SEA-ME-WE 4 cable in 2006, the country has seen Internet bandwidth prices drop significantly. In September, 2013, Govt. of Bangladesh has initiated a new technology that is third generation (3G) mobile network service, which is expected to offer faster internet access for millions of users.

### **Some Initiative of Bangladesh in case of e-learning**

1. Bangladesh Open University (BOU), a public sector university, has emerged as the first University in Bangladesh to introduce higher education through distance mode. Bangladesh Open University relies heavily on print materials, electronic media like radio-television and audio-video cassettes, and face to face tutorial services (Islam *et al.*, 2005)..
2. eSonarBangladesh is dedicated to creating and sharing connections between academic peers and experts in the Bangladeshi community. One can watch TV interviews, participate in workshops, submit article, and learn different things in a single website.
3. Srijonshil.com is a good initiative for reducing discrimination in the educational sector. Students can learn by themselves by watching tutorial videos, giving model tests and getting current news. It provides support to everyone from school to university.
4. English in Action (EIA) is a unique international development project led and managed by BMB Mott McDonald, The Open University (UK) and The British Broadcast Corporation (BBC) World Service Trust. EIA provided extensive materials to primary teachers on MP3 players and mobile phone to assist them in implementing communicative language teaching (CLT) practices with their students.
5. The Daily Star and Team Creative have jointly launched the country's first assessment website for school students called champs21.com to engage the Bangladeshi students in using the internet constructively and for education purposes. And Bangladesh Institute of Management (BIM) has started training of making an e-learning platform.
6. Recently, Wikimedia foundation has launched 'Wikipedia Zero Project' along with Mobile Phone Operator Banglalink that provides a free use of Wikipedia by using mobile.

### **Problems regarding ICT in Bangladesh**

Though Bangladesh has initiated different project to get the blessing of Information and Communication Technology (ICT), some problems are still remains. They are:

- There is a poor ICT infrastructure in Bangladesh,
  - High primary cost for infrastructural development,
  - Technology is still not reliable to everyone and cost of equipment is too high,
  - The rapid evolution of the technology is another source of concern for both e-learning providers and learners,
  - Today's best technology is not up to the level of new users' expectations. If keyboard literacy remains fundamental criterion for accessing e-learning, only a small part of humanity will be able to profit from it.
7. Because of the general state of technological and economic flux, planning the implementation of new systems and skills is a precarious exercise.

### E-learning Strategies & Techniques

To improve the new context of education, some strategies can be taken:

- At first, it is needed to improve our ICT infrastructure. If it improves, cost will reduce and anyone can get the opportunity to the digital world via internet.
- Design, develop and evaluate an enhanced, 'seamless' technical e-learning environment.
- Govt. should provide proper ICT based training to the mass people.
- More e-learning sites should be introduced for the betterment of the people.
- Teachers should be encouraged to use this new innovative technology to teach students.
- Improve the quantity and quality of technology-enabled learning spaces, and integrate, evaluate and promote the use of technology within and to extend the physical classroom.

### E-Learning Techniques

- **Asynchronous e-learning:** To get the proper e-learning environment, email based learning can be introduced in Bangladesh. In it, learners can communicate with their teachers, download files even they are in offline.
- **Synchronous e-learning:** *Direct* learning by video conferencing or chat between students and teachers can help students to get answers of all their questions in real time. It can also help them not to isolate from the study.
- **Blended e-learning:** It can also be used for the purpose of e-learning. This is a combination of any form of instructional technology (e.g., videotape, CD-ROM, web-based training, film) with face-to-face instructor-led training.
- **M-learning:** Mobile –Learning must include the ability to learn everywhere at every time without permanent physical connection to cable networks. This can be achieved by the use of mobile and portable devices such as PDA, cell phones, portable computers and Tablet PC.

### Advantages of e-Learning

Along with the increased retention, reduced learning time, and other aforementioned benefits to students, particular advantages of e-learning include:

- **On-demand availability** enables students to complete training conveniently at off-hours or from home.
- **Self-pacing** for slow or quick learners reduces stress and increases satisfaction.
- **Interactivity** engages users, pushing them rather than pulling them through training.
- **Consistency of self interest** gives students to learn materials that meet their level of knowledge and interest.
- **Flexibility** to join discussions in the bulletin board threaded discussion areas at any hour, or visit with classmates and instructors remotely in chat rooms.
- **Reduced overall cost** is the single most influential factor in adopting e-learning. The elimination of costs associated with instructor's salaries, meeting room rentals, and student travel, lodging, and meals are directly quantifiable. The reduction of time spent away from the job by employees may be the most positive offshoot.
- **Learning times reduced**, an average of 40 to 60 percent, as found by Brandon Hall (Web-based Training Cookbook, 1997, p. 108).

**Disadvantages of e-learning**

- Students may feel isolated from the instructor and classmates. Instructor may not always be available when students are studying or need help.
- The impersonality, suppression of communication mechanisms such as body language, and elimination of peer-to-peer learning that are part of this potential disadvantage are lessening with advances in communications technologies.
- Inappropriate content for e-learning may exist according to some experts, though are limited in number. Even the acquisition of skills that involve complex physical/motor or emotional components (for example, juggling or mediation) can be augmented with e-learning.
- Cultural acceptance is an issue in organizations where student demographics and psychographics may predispose them against using computers at all, let alone for e-learning.

**Challenges of e-Learning**

- **Computer literacy and access to equipment.** Any e-Learning system involves basic equipment and a minimum level of computer knowledge in order to perform the tasks required by the system. A student that does not possess these skills, or have access to these tools, cannot succeed in an e-Learning program.
- **Some topics are not appropriate for e-Learning.** Certain subjects that require physical exertion and practice, such as sports and public speaking, are not good candidates for e-Learning.
- **Students themselves can be a limitation to e-Learning.** The flexibility and student-centered nature of e-Learning requires a high level of student responsibility.

**Recommendations for e-learning**

Govt. should analyze the needs of the end users

It should recognize the benefits and take steps to grow confidence through success stories.

It should take the necessary steps to develop proper ICT infrastructure required for e-Learning.

It should give encouragement and proper incentive to participate in the training programs.

Educational institutions should provide improved and sustainable platform for e-Learning.

It can be introduced ICT as a tool for improved teaching and learning experience.

It can develop curriculum and content for e-Learning preferably in native language.

It can arrange training for teachers and instructors and design standard for evaluation of e-Learning systems.

**Conclusion**

To fight with the significant challenges with the rest of the world, it is high time to embrace with new technology to transform the population of Bangladesh into a productive force. The best solution is e-learning. It has the potential to help address these challenges. Bangladesh has several barriers in technological development. The barriers can be removed if the county establishes a strong ICT infrastructure and implements progressive laws that encourage open free markets. Bangladesh should start implementing e-learning solutions through the Ministry of Education-by creating market-based competition for the e-learning industry and the rule of law that would promote confidence in entrepreneurs seeking to employ new ventures relating to e-learning technology.





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