A Comparative Study between Traditional Learning and E-Learning

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Abstract

This paper presents a comparative study between Traditional and E-learning. Traditional learning involves a physical place where students and teacher can interact whereas E-learning is pursued in an e-space where a server and internet browsing interface is to be there. Due to a constant trend of growing student numbers across the world traditional learning will be expensive. The reason behind is the physical engagement of a teacher in this method which involves payment to the teacher for his service and other required support assets. E-learning can be a method which can ensure reduced cost while enhancing the outcome in the learning system. It is based on wireless communication networks which are widely and rapidly used due to the flexibility, freedom to use that it promotes an effective learning system. The wireless communication allows learner to receive the learning materials and lectures from anywhere as long as they are connected to the internet. Classroom education may not always succeed for online learning, when the instructor is not around which need to stimulate motivation and continual learning progress. In this paper we also discuss the merits and demerits of both the methods with the help of statistical data analysis.

Introduction

Learning is an act, process or experience of acquiring knowledge or skill. Learning process starts when a baby is born and it continues to be there in some form or the other as per the learning techniques available. There are many classifications to categorize the ways or methods of learning. But, learning can be broadly categorized into two different parts considering the way how they are being pursued. They are Traditional and Distance learning. Traditional learning is based on physical interaction between learner and teacher whereas distance learning eliminates the necessity of physical presence of a teacher through some alternatives. These two techniques recursively modified after invention of new techniques. For example distance learning traveled or transformed from correspondence to E-learning. However traditional learning dominates and cannot be fully replaced by other methods like E-learning even though the later is having a wide reach to the learners. The conventional Class room teaching is a leading method of traditional learning and has been accepted and adopted in different universities, college, schools for centuries.

Since past decade, the new developments in Information Communication Technology (ICT) changed the way people acquire knowledge. Boom in the use of ICT for education and training across the world developed the term “E-learning” and it was touted as the technology, which has the potential to revolutionise the way we teach and how we learn in college/universities (Department for Education and Skills, 2003).

We have discussed and compared the traditional and E-learning focusing mainly on the advantages and disadvantages of both the systems in this paper which gives an idea whether our conventional Chalk and Talk method can be replaced with the technology based E-learning..The s paper is structured as follows: section 1 explains traditional learning followed by E-learning in section 2.

Comparative study and conclusion will be discussed in section 3 and 4 respectively. Conclusion and future works is described in last section.

Traditional Learning

Definition

Traditional Learning is defined as a learning process where learners and experts are present physically in same place at same time. Most famous traditional way of imparting education since it has started is the chalk and talk method.

Figure 1 shows the main kind of traditional learning. Class room teaching is a best adopted method among available for traditional learning. We are taking example of class room teaching as a leading method of traditional learning throughout this paper.

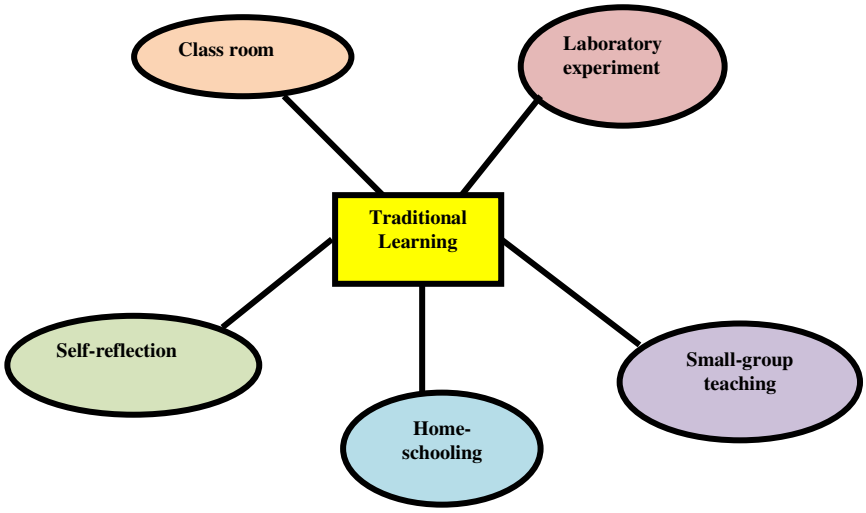

Figure 1: Main Kind of Traditional Learning

The classroom teaching or learning process involves a face to face interaction among the teacher and the learner. We can say there is a communication system inside a learning process. The teacher here is the sender and the learner is the receiver. The best way to interact and fix the problem is a face to face interaction. In this way the learner spending a few years in the school, college, universities or any other educational institutes to get the qualification is able to know the problems arising out of the learning system and develop a skill of fixing it through the guidance of the teacher. While, in E-learning the sender's messages can be misinterpreted causing a communication noise or failure.

The learner in a traditional learning system is not only getting a qualification or degree but also acquiring experience and skill which is very helpful in all aspects of life especially in today's globalized world. Students develop verbal communication skills when interacting with lecturers and friends who are from all over the world and with different backgrounds, cultures and religions. Students learn to respect different opinions when they have discussions or group study. Students develop time management skills by attending classes scheduled at fixed time and location. Students learn how to cope with peer pressure. The instructors in traditional learning may use some of the contact hours to motivate students while sharing life experience. When students go to the class, they may not only learn the materials in their courses but also learn other important aspects of life from their instructors. They may learn from their instructors how to choose a career, how to overcome problems in their studies, and how to overcome problems in their life in general as their instructors can be their role models besides their parents.

The few years learner spent in the educational institute make him involved in many social activities such as fun with friends, sports and many more which not only develops their personal social character but also helpful in making their professional development and career building. It is an opportunity for some learners who live away from home and family to be in a new environment and new friends. They learn to be independent, learn to feed and shop for themselves and so on.

E-learning

Definition
Distance Learning is defined as a learning process where learners and experts are not physically present at the same time in a same place. E-learning is a best adopted economical method and which consumes less time as compared to the traditional learning. In this paper we are considering E-learning as an example of distance learning.

The word E-learning has come from a combination of "E" and learning where "E" is the abbreviation for the word electronic. E-learning can be defined as "pedagogy empowered by digital technology" (Nichols, 2008) with ICT supported learning where the medium of instruction is through computer-based technologies and it is user friendly. According to Waits & Lewis (2003), E-learning can be defined as the process of extending learning or delivering instructional materials to remote sites via the Internet, intranet/extranet, audio, video, satellite broadcast, interactive TV, and CD-ROM.

E-learning options vary widely, ranging from trivial online discussion to self-study in higher education institutions. E-learning is a part of distance learning and can also effectively complement traditional learning. E-Learning lessons are generally designed to guide students through information or to help students perform in specific tasks and these students in E-learning processes generally appear to be at least as satisfied as they are with traditional ones (Allen and Seaman, 2007).

Due to potential benefits associated with E-learning such as improvement in access, effectiveness, efficiency and competition, it was widely adopted by higher education institutions. The percentage of higher education institutions offering E-learning courses has increase from 78% in 1997-98 to 89% in 2000-01. The number of students enrolled in higher education institutions also roses from 1.3 million in 1997-1998 to 2.4 million in 2000-2001 (Lee-Post, 2009). By 2006, nearly 3.5 million students were participating in E-learning at institutions of higher education in the United States and the number of profit-oriented higher education institutions offering E-learning classes is the double of non-profit schools (Allen and Seaman, 2007). The worldwide E-learning industry is now estimated to be worth over thirty-eight billion Euros according to conservative estimates (EC, 2000). Figure 2 shows the distribution of students in higher education institutions from US.

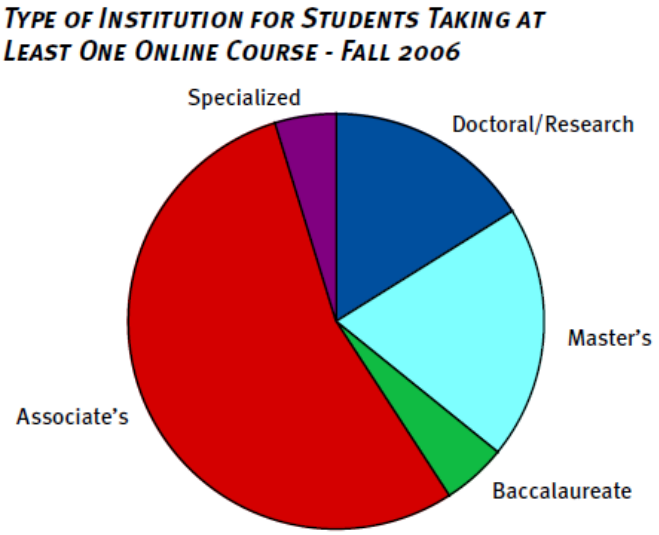

Figure 2: Source: Allen and Seaman (2007)

Following are the three bottom lines of E-Learning:
The success of E-learning in western countries is closely tied to the availability of ICT service to the learner. According to the survey conducted by European Union to 20000 school heads from European countries, at least 90% of the schools have access to internet (Korte and Hüsing, 2007) while all schools have internet access in US.

Environmental impact: E-learning allows us to learn from home in paperless environment. This new environment leads us to reduction in carbon emission and paper production; thus, E-learning can be considered as environmentally friendly approach.

Economical impact: In E-learning processes, the highest caliber lecturers get the opportunity to share their knowledge to learners across the world. Barriers of knowledge acquiring in traditional learning such as physical, political, and economic boundaries become irrelevant in E-learning. The valuable knowledge can be transferred to anyone interested with cheaper cost and this will lead to the higher education more affordable.

Social impact: The E-learning materials are available all the time and the students have total freedom to choose when they want to learn. The learning rate of students can also be adjusted to their convenience in E-learning. Therefore, the flexibility of E-learning has positive impact on our social life.

Comparison

Although the benefits of E-learning are impressive, a big investment is needed for ICT equipments and networking infrastructure development. This can be considered as a major drawback for a small size learning center which is with limited profit to run the center. That is why it is difficult to introduce E-learning straight away into the educational institutes (no matter in what form) in the developing world where educational system is nurtured through the traditional way of teaching for centuries and producing most talented educationalist or teachers coming from this part of the world to serve the whole world.
However E-learning systems need to be carefully crafted as inadequately equipped systems can result in frustration, confusion, and reduced learner interest (Hara and Kling, 2000, Maki, Patterson and Whittaker, 2000). For example, it is very time consuming and ineffective to locate a particular segment of a two-hour video delivered through the Internet. Sometimes students may also want to ask

question and get an immediate answer while watching the video. A high-bandwidth network is a must in E-learning system. Thus, E-learning designers have the challenge to design interactive software rich with multimedia content and at the same time with low network delay.

The instructor's preparation time for the E-learning is significantly higher compared to traditional learning (Zhang, Zhao, Zhou and Nunamaker, 2004). Instructors need to prepare lecture slides supplemented by full lecture notes, video and audio presentations, assignments, practice questions and solutions. In order to provide immediate feedback as in traditional learning, instructor for E-learning needs to prepare many *search-able* frequently-asked questions with answers and link for more information. All these will take considerable amount of time to prepare.

E-learning requires more maturity and self-discipline from students than traditional classroom education, which may explain the higher dropout rates in E-learning programs compared to conventional programs (Hiltz and Wellman, 1997, Kumar, Kumar and Basu, 2001). Students who just completed high schools are not suitable for E-learning as they still need guidance from parents or instructors. E-learning is more suitable to working adults or house-wives who would like to upgrade their qualifications either part of career development or personal ambition.

Traditional learning has some advantages but, it is very difficult to have those in E-learning environment and same is true for the other way of learning i.e, E-learning. Again to build up E-learning Environment we need well trained people who obviously have practically learnt the things to implement. So, the controversy arises from here that whether E-learning can actually replace traditional learning. Both method of learning have merits and demerits. Table-1 shows the main advantage and disadvantage of traditional and E-learning (Zhang, Zhao, Zhou and Nunamaker, 2004).

Table 1

	Traditional Learning	**E-Learning**
Advantage	• Knowledge Exchange • Skill development • Interaction between learner and teacher • Socialization • Immediate Feedback • Motivating Leaner • Being familiar to both instructors and students	• Knowledge Sharing • Providing any time accessibility to course materials • Adds pedagogical benefits • Cost effective for leaner • Available to global audience • Unlimited access to knowledge • Helpful for instructors
Disadvantage	• Class room size • Student teacher ratio • Accessibility • Expensive to deliver • Instructor-Centered • Time and location constrains	• Costly to produce • New skills needed • Affordability • Minimal social interaction • Lack of immediate feedback

Conclusion and Scope for Future Work

A comparative study between Traditional and E-learning is presented in this paper. Due to the merits and demerits of both methods it's very difficult to replace each other. The main deciding factor for the use of any one is based on individual interest. If someone at higher age with maturity and stability to learn by himself and have experienced or part of the classroom learning before, then he/she will be successful with a flexible environment and personal motivation for E-learning . But, new learners especially at a younger age with no background of the learning area would not accept E-leaning as they may find it difficult with no interaction with the teacher to clarify their ambiguity. As people learn from friends, society and groups, it is also very difficult for them to learn alone without practically being involved in the process.

Around 40% or above population of the world is not having access to electricity or the equipments needed for the E-learning system. Worldwide, two billion people are still without electricity (U.S. Department of Energy, 2009) and for them developing infrastructure for E-learning is a time consuming exercise. Looking at the statistics given by U.S. Department of Energy 2009 it will be quite interesting to analyze the data that out of 9154 universities/college in the world (4International College and Universities, 2009) how many universities is using class room learning or E-learning or both in the world.

If we go wider to give a wide definition to the process of learning, we cannot certainly replace a mother with an e-system (at least till now) which can help babies to learn from the day they born till they get the understanding of life they would later lead independently. So, for the time being we found out that it is very hard to replace traditional chalk and talk system with E-learning .But, E-learning used in a traditional method can enhance learner's knowledge and interest in a broader perspective.
Our future research will be focused on the availability, access and real use of E-learning systems in universities worldwide.

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