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English

BLENDED LEARNING CONCEPTS: NEED OF THE HOUR

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ABSTRACT

The world wide web or W3 is the present day 'Information Superhighway', wherein the interlinked hypertext documents can be accessed via the internet. The web-based technologies have become a rich source o information and educational tools which promote constructive learning and faster the development of technology literacy. Online learning and web based learning are fast gaining grounds. In near future E-learning can replace the conventional methods of learning and teaching. In the present paper an attempt has been made to discuss the importance and objectives of technology based learning (TBL) which includes web learning techniques, web conferences, online forums etc. The concept and role of E-learning and m-learning will also be explored as one of the important and convenient informal means of learning in the present era.

http://www.E-Learning.M-Learning@Blended Learning Concepts

The advent of internet ushered a new era of digital world dissolving boundaries across the world. Globally communication and Information Technology is dominated by computers. Internet has provided lot of facilities and has opened new vistas of opportunities. In almost every sphere of life computers are used progressively excelling human mind as a source of knowledge and information. Computer and internet are ubiquitous and an essential part of our daily life. They are being used by individuals and societies to make their life easier and are often used for communication and learning in almost all spheres of life.

The idea of connecting large number of computers using a network system led to the establishment of a complicated web of computers which thus paved way for the inception of World Wide Web. The origin of the internet can be traced back to just three decades ago when the Advanced Research Projects Agency Network (APARNET) was started. It forced a change from then prevalent Network Control Protocol to the Transmission Control Protocol/Internet Protocol (TCP/IP). The main objective of the TCP/IP was to ensure that various computers could communicate with each other, and the networked system could link government and scientific organizations across the US (The Tribune). The computers had to be physically linked with each other and this restricted networking possibilities. ARPANET had military objectives, and it is to the credit of the US government that it was opened up to the world. In the present scenario the World Wide Web has become the major content provider with billions of pages and content of all kinds in most of the languages of the world. The World Wide Web started as a browser developed by Sir Timothy John "Tim" Berners- Lee in 1990. Also known as TimBL, he is an English computer scientist and the inventor of the World Wide Web. He made a proposal for an information management system in March 1989, and he implemented the first successfulcommunication between a Hypertext Transfer Protocol client and server via the internet sometime around mid November in the year 1989. It enabled the civilian access through graphical browsers, predominantly Netscape, and its rival, the Internet Explorer. Since then Internet has evolved into a medium that consists of texts, graphics, audio, animation video, et

The World Wide Web is an information system of interlinked hypertext documents that are accessed via the internet and built on top of the Domain Name System. It is commonly known as web, and individual document pages on the WWW are called web pages and are accessed with a software application running on the user's computer. Web pages may contain text, images, videos, and other multimedia components, as well as various navigation features consisting of hyperlinks.

The World Wide Web Consortium, W3C is the main international standard organization for the World Wide Web which was founded by Tim Berner-Lee. The consortium is made up of member organizations which maintain full-time staff for the purpose of working and development of standards for the World Wide Web. As of 10 April, 2015, the World Wide Web Consortium has 397 members.

The word 'internet' was coined from the words 'interconnection' and 'network' Internet therefore refers to the internet working of hundreds of connecting networks made up of different types of computers all over the world that can share messages and information with each other. Internet means within network. It is also used for culling information using a wide range of tools and techniques. The internet transmits data such as pictures, text, sound and videos via fiber optics phone lines, satellite links and other media. Internet explorer is one of the tools for finding and displaying the hypermedia resources on the World Wide Web. HTTP as defined in the Oxford online English Dictionary refers toHypertext Transport (or Transfer) Protocol or the data transfer protocol used on the World Wide Web. Hypertext is text which is not constrained to be linear and contains links to other texts. Hypertext is structured text that uses logical links between nodes containing text. The term 'hypertext' was coined by Ted Nelson around 1965. Hyper Media on the other hand can include graphics, video and sound. The Hypertext Transfer Protocol is an application protocol for distributed, collaborative and hypermedia information systems. HTTP is the foundation of data communication for the World Wide Web. In the present times Internet is evolving as a hyper source of information and offer services like business computers, multimedia, education, home shopping, net banking, entertainment, etc. in the 2010 the World Wide Web's tariff registered an annual growth rate of 984,000%. A computer user connected to the internet can visit websites, and can see the world compressed into the window of the computer.

The Internet is growing rapidly and has given rise to new opportunities in every field. There is an increasing dependence on computers in relation to all facets of life, we trade online, communicate, and obtain various services through internet. The societal structure is so changed that computers are indispensable in today's world and web based technologies have widened the growth opportunities and has brought about a revolution in education sector. Working with web technologies one can make connectors, extensions and integrate various educational techniques like e-learning and m-learning.

Learning is the process of absorbing information and retaining it in order to increase skills and abilities and to make use of it under a variety of contents Learning is all about

equipping a person to tackle today's issues and simultaneously preparing oneself to non-specific and unexpected situations in future.E-learning allows students to learn virtually from anywhere by using a computer or mobile device and internet connection. Learning in the education sector focuses on knowledge transfer and we mainly strive to learn things with a global scope and perspective. The word education means to gain general theoretical knowledge and this may or may not involve learning how to do any specific practical work, tasks or skills. In the present scenario there is a convergence of web based methods adapted by corporate e-learning professionals as they can learn from academic e-learning initiatives and vice versa, "... the academic space is starting to gravitate towards incorporating corporate methods in the classroom on how certain topics are taught." (Bersin J., 109).

In the corporate learning there is a paradigm shift in the way various technologies are utilized that support the traditional classroom teaching methods with regards to blended technologies. Mobile learning is a recent example of blended learning which is becoming popular with learners having mobile devices in their possession. These learners have access to the internet and social networks via mobile devices. When all the technologies required to gather information are at disposal they create content and communicate with other people thereby creating an environment conducive to learning.

E-learning is the use of electronic educational technology in learning and teaching. The present day educational technology uses modern tools such as computers, digital technology and electronic media, to facilitate learning. This digitization approach has brought a phenomenal change and a revolution in the learning and teaching methodology.

The term e-learning came into existence in the year 1999, when the word was training first utilized at a CBT (i.e. Computer Based Training) systems seminar, along with terms like "online learning" & "Virtual learning". Evidenceseven show that early forms of e-learning existed as far back as the 19th century. In the 1840's Isaac Pitman taught his pupils, shorthand via correspondence. The idea behind this form of symbolic writing was to improve writing speed and was popular amongst secretaries, journalists and other individuals who did a great deal of note taking or writing. Completed assignments were mailed to him and using the same system more such work was done.

In 1924, the first testing machine was invented which allowed students to test themselves. It was in the year 1954 that BF Skinner, a Harvard professor invented the teaching machine, which enabled schools to administer programmed instruction to their students. It was until 1960 that the first computer based training program was introduced to the world. This CBT program was known as PLATO- Programmed Logic for Automated Teaching Operations. E-learning became more interactive and effective during the 70's. The open universities in Britain took advantage of e-learning and the education system started correspondence with tutors via mail. With the advent of internet, education experiences adopted web-based technologies for imparting education. With the introduction of the computer and internet in the late 20th century, e-learning tools and delivery methods expanded. In the 1980's the desktop personal computers MAC (The Macintosh or Mac is a series of personal computers designed developed and marketed by Apple) eased the task of learning. In the following decade virtual learning environments came into existence.

People gained easy access to information in e-learning opportunities cutting across the geographical barriers and time constraints, by the early 90's several schools had been set up which offered online courses. Thus, web-based technologies ushered a new era of learning where distance learning gained popularity and success.Not only in education sector but in the business sector as well e-learning gained momentum and by 2000 e-learning methods were adopted by people to train their employees as well. Workers and employees had the opportunity to improve upon their industrial knowledge base and expand their skill sets. At home individuals gained access to various programs that offered them the ability to earn online degrees and enrich their lives through expanded knowledge.

Benefits and Drawback of Online Learning
Online learning with all its benefits has its drawbacks too. Whether in the teaching profession or in a corporate sector Along with locational restrictions time constraints cannot be overlooked. In the case of conventional face to face learning, the location or geographical factors affect and limit the presence of a specific group of learners who have the ability to participate in the area. In the case of time, it limits the crowd to those who can attend at a specific time E- learning on the other hand, facilitates learning without having to organize when and where everyone who is interested in a course can be present.

(a) Enhances the attention span
The use of multimedia or more recently developed methods of gamification makes a designed course of study more effective and interactive. This enhances the attention span and the engagement factor.

(b) Cost Effective
Be it a teacher or learner, one has to pay exorbitant amount of money to acquire updated versions of text books for school or college. While text books often become obsolete after a certain period of time, the need to constantly acquire now editions is not present in e-learning.

(C) A Necessity
The use of the internet becomes a necessity as companies and organizations adopt new web-based technologies to improve the efficiency of day-to-day operations. With the growth and expansion of multinational companies across the globe, and chances of working with people from other countries increases and training all those together is an issue that e-learning successfully addresses. In the educational sector-e-learning plays an important role. As for instance in an effort to enhance the credibility of a course material, oftentimes a professor will invite a subject expert to deliver a lecture on the relevant topic at hand. In the traditional model of education, the professor would have to invite the expert and incur the expenses of his travelling, stay and training. With e-learning the professor can host a guest lecture without having to spend much money.

Using web-based technology in educational spheres the professor can arrange for a guest lecture at nominal charges. It can be done virtually, by installing cameras and microphones in order to record the lecture delivered. The lecture can be replayed later to incur more benefits out of it.

The recording can be viewed later to enhance, understand and revise the concepts. But one cannot deny the drawbacks of e-learning as well. The practical skills require hands on experience and therefore e-learning cannot be so effective with practical learning skills.

With technological advancements e-learning becomes more effective when students can engage more actively with professors or other students. Using web- based tools like – videoconferencing, social media, online forums, e-mail and chats.

Learning virtually through computers promote procrastination and offer distractions
It is argued that computers promote procrastination and offer

distractions. Every individual responds differently to different teaching methods. Some learn with writing: some prefer to learn by themselves, while others need guidance by mentors: the extroverts feel comfortable talking and sharing information with people, while others are introverts and are afraid to communicate openly inside the classroom. E-learning responds to those different needs and requirement with the use of different technologies. For example, e-learning commonly offers audio visual content or interactive sessions and web-conferences which can be beneficial to young learners than traditional methods of learning using books.

Serendipity
E-learning in comparison with traditional learning saves upon time as it reduces the time needed to locate information one can have access to online resources, databases, periodicals, journals and other material which cannot be accessed from a library. If a student has trouble understanding part of a coursework, finding help on the matter couldn't be easier than having immediate access to supplementary, unlimited and plethora of information and material online. Such characteristics can potentially maximize the time spent actually learning rather than looking for information.

However, seeking information thus become a learning process in itself- the word serendipity describes exactly that, the accident of finding something good or useful even when not specifically searching for it.

E-Learning in Practice
E-Learning has empowered the educational institutions. Various universities already embrace the power and have adopted the concepts of e- learning to deliver content to students all over the world. Universities are combining technology with education in order to establish a strong student base worldwide. Harvard and MIT are among the pioneers who have launched programs focused on offering classes online. Harvard videotapes its lectures and puts them online, so even its own student body can view of review them in case they missed a lecture or need to review a section. One such example is Coursera.

Coursera is a hub for universities that choose to offer online classes through its platform for free. Coursera offers Massive Open Online Courses (MOOCs). As of March 26, 2015, Coursera has 12,088,380 users from 190 countries enrolled (Wikipedia). The online courses offered are well acknowledged and accredited by companies across the globe. Coursera certificates are given valid credits if the course had been completed at the university of origin. The course material is the same and the medium differs. Harvard University takes the online courses very seriously wherein live lectures are delivered online and are recorded for future requirements. The university has even launched a specially designed section within its campus, employing videographers and specialists to design and create the perfect content to be delivered through its online

Online practices that facilitate the e-learning process
(a) A strong sense of community:
The instructors, teachers and e-learning establishments should encourage a strong sense of community amongst their online students. This will help the students or learners to interact with one another and the instructors. By establishing such relation e-learning process will reach out to every individual learner.

(b) Compliance with Expectations:
An online learner should be aware of the kind of information and content of the course that he will receive from the virtual classroom instruction methods. The core curriculum and the method of communication should be clearly stated in the course content. A teacher may prefer to email assignments to students while another might choose to deliver it via the e-learning site instead. The specific time duration for a course should also be clearly conveyed.

(c) The interactive and virtual live courses:
The students can attend virtual live courses as well as complete coursework offline which enables them to delve into a specific subject or skill set. The learner who can be labeled as the e-learner should research the topic in depth by using brainstorming techniques and interactive activities.

(d) Using Web-Resources:
To enrich the e-learning experience both the teacher and the students should take advantage of the online resources that are available to have an access to information. Wikipedia as for example is the storehouse of information on any given topic. Even the instructors should grab the opportunity to enhance their content knowledge with online material and therefore can also redirect or guide the e-learner/ students to use and access information from various web-resources.

M-Learning
M-learning or mobile learning is another form of e-learning where m- learners can use mobile device educational technology in many locations at their time convenience. Mobile learning is defined as "learning across multiple contents, through social and content interactions, using personal electronic devices (Crompton, 3-14). M-learning technologies include handheld computers, notebooks, mobile phones, smart phones and tablets. The m-learning techniques focuses on the mobility of the learner wherein portable technology and mobile tools are used for creating learning aids and materials. M-learning is a convenient virtual method of learning which can be accessed from anywhere. Instantaneous content sharing leads to reception of instant feedback and tips. The m-learning concepts brings strong portability by replacing books with various mobile devices like handheld computers and smart phones.

TBL – Technology Based Learning
TBL i.e. Technology-based learning constitutes learning via electronic technology including the Internet, Intranets, satellite broadcasts, audio video conferencing, bulletin boards, chat rooms, webcasts, and CD-ROM. As an umbrella term TBL encompasses related terms, such as online learning and web- based learning where internet is used as the medium of learning and computer based-learning is restricted to learning through the use of computers E-learning is synonymous with TBL and has substantially transformed the way learning takes place. TBL fosters greater accessibility to learning by offering anytime and anywhere delivery. The TBL courses can be centrally developed and updated as and when required; therefore, the cost of replacing outdated course materials and retraining teachers and instructors drops significantly. TBL works on the pedagogy that emphasizes the merits of discovery learning. The E-learning methods offer greater comprehension and retention for complex materials. It also uses gamification which is the use of game-based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning and solve problems. In a study done by Traci Sitzmanr, an Assistant Professor of Management at the University of Colorado Denver Business School, found that:

"employees trained on video games learned more information, attained a higher skill level and retained information longer than workers who learned in less interactive environments."

TBL encompasses multiple modes and methods, which includes tutorials, web conferences online forums, simulations, and gaming. TBL is affected by various factors. Among the most important of these is the "digital divide",

which is caused by low computer literacy rates and lack of access to technology among some potential learners. "Social loafing" is another contributing factor thatgreatly affects the technology based learning. "Social loafing" is characterized by students who work less diligently, or who become frustrated by course material or technology because of the relative absence of instructor- learner and learner- learner interaction. (Twigg, 2003)

In today's e-learning environment the type of learning that takes place is generally divided into one of two categories: synchronous and asynchronous.

The E-learning can be synchronous where delivery occurs when instructors and learners meet at a specific time in a physical or virtual classroom, or it can be asynchronous when the learning does not occur at a pre-specified time and thus can be self-paced. Online chat and video conferencing are perfect examples of synchronous learning. Learning tools like instant messaging that allows students and teachers to ask and answer questions immediately is synchronous. In synchronous learning the learner can interact with other students and also with the instructors at the same time. Such type of learning techniques enable students to communicate with other students or learners throughout the learning process. Asynchronous learning on the other hand can be carried out even when the learner or the student and the teacher is offline. Coursework information of communication delivered via web email and messages posted on community forums are some examples of asynchronous e-learning. The internet is used as a support tool rather than venturing online solely for interactive classes. Ideally, for effective e-learning, courses, both synchronous and asynchronous learning activities which allows students and teachers to use of explore different delivery formats and preferred learning methods.

Technologies used in e-learning
E-learning makes use of many communication technologies while there are many others developed specifically for it. The use of email, instant messaging, message forums and social networks are tools used for e-learning. Videoconferencing is used as a tool which allows to make reviews and with the help of screen-sharing allows someone to make a presentation while still making and input using the microphone. E-learning makes good use of database and CMS (Content Management System) technologies. They can be used to store a course content, test results and student records. The data is stored in the database and the CMS provides a user interface to add, update and delete data. Various other technologies are used to improve the quality of content. Softwares such as 'Flash' and 'Power Point' help in making the presentations interesting with high quality and graphically rich content. Word processing packages and HTML editors which are used in formatting the text of web pages, removing a lot of complexity.

Blended Learning
The online learning experience has shown educators and trainers that learning that is exclusively delivered via technology is not the panacea to teach students or train workers TBL is missing an important experiential component. For this season many educators and trainers have begun to consciously mix different elements of TBL and face-to-face learning into a blended learning model.

Blended learning which is also known as hybrid of integrated learning has recently become the dominant paradigm of TBL success among learners and trainers. Blended learning typically refers to a training approach that combines online and face-to-face methods of learning for better retention. Blending traditional methods with online activities has the potential of bringing the best of both worlds together in a single course. In its most basic form, blended learning combines a synchronous face-to-face lecture with some online follow-up activities, such as discussion forms or chats.

Blended learning is a combination of offline i.e. face-to-face, traditional learning, and online learning in such a way that the one compliments the others. There are two key principles commonly associated with blended learning: students who can share information and work with other students in acollaborative setting have more enriched learning experience. It has also been suggested that students who complete online coursework followed by interactive, face-to-face class activities gain richer educational experiences. Tools of platforms to that complement blended learning include LMS which stands for Learning Management System and is a global term for a computer system specifically developed for managing online courses, distributing course materials and allowing collaboration between students and teachers. LMS manages every aspect of a course, from the registration of students to the storing of test results, as well as accepting assignments digitally, paying course fees online via credit card, debit cards or e-registration. In essence, the LMS is the backbone of most e-learning activities. LMSs vary in the features they offer, but most systems have some or all of the following features:

1. GUI
Easy GUI stands for Graphic User Interface, Most LMSs offer customization options for the interface to allow the user to give a unique flavor to his learning platform by providing an aesthetically pleasing environment.

2. Customization
LMS oftentimes offer several options for customization to tailor the system to your needs. Language options, notification settings and other important features can be changed to suit the way you want your LMS to work for you according to your unique preferences.

3. Virtual Classroom
LMS may integrate with whiteboard systems for virtual classroom sessions and help to schedule sessions. It may offer the option to send invites or reminders for classroom sessions and integrate with an online calendar system.

4. Social Networking
LMS (Learning Management System) may integrate with social media so one can share content or news via Twitter or Facebook etc. at the click of a button. There are evidences which show that blended learning is more effective than non-blended approaches. In a controlled study, students who learned Excel tasks using blended approach showed a 30 percent improvement in accuracy and learned 40 percent faster than their control groups in a non-blended approach (Thomson, 2002). Successful blends use a course design that ensures that each element complements the other without any duplication. For example, and instructor might be available for online discussions between classes, post required reading on course websites, suggest further exploration with a list of links, archive answers to frequently asked questions and request that assignments be completed online.

The Future of e-learning
With the technological advancements and growing computer ownership e- learning has become increasingly viable and accessible. The internet offers multiple opportunities for multimedia training. The substantive improvement of mobile networks and the increase in telecommuting along with smart phones and other portable devices enhances e-learning and is transforming education constantly. E-learning can complement the way we learn making it more effective and measurable. The conventional or formal learning processes are now being replaced by informal elements and tools to create interactive courses.

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