THINK INDIA (Quarterly Journal)

ISSN:0971-1260

Vol-22-Issue-4-October-December-2019

Teaching With Blended Learning For Higher Educational Structures: An Experience With WebCT

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Abstract

The dynamicity of educational world has led to an immediate need of improving teaching quality, which has bought web tools into limelight. Modern multimedia tools include a wide range of technologies to improve on-line education. Several courses are now given in a digital teaching web, using state-of-the-art technologies. These new tools approach our students to a new environment, where they can obtain complementary material in the Internet that is not available in classroom. With the proliferation of Business Computer Science, several subjects are now being imparted at the university level like Introduction to Management Information Systems, Business Computer Science, Management Information Systems and Introduction to E-Organization.

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Introduction

A growing number of teaching professionals are now using modern multimedia tools to innovate traditional lectures, making them more graphical and didactic. Widespread access to personal computers and Internet has helped to create new work environments that improve students and teacher mobility. WWW is now being used to reinforce on-site education with continuous training, which is, essentially distance learning.

Within this framework the students and teachers can meet in a virtual environment. Solutions can now be provided in many different situations, ranging form long distance education, folders for different teaching material, evaluation tools, calendars, image and video database, communication tools (e-mail, forum) and self-evaluation tools (tests, exams, homework). In teaching methodology, we can see the net as two different frameworks, as an information distribution system or as an educational one. The focus is now on organizing the information and learning, avoiding designing a web-based distribution system that revolves around the site more than in the contents.

The efficiency of an on-line environment depends on the organization of contents and materials and the amount of proposed activities. E-learning is a strategy that encompasses and utilizes today's technologies to satisfy learning necessities. The web communication technology enables a teacher to move the acquisition of skills, knowledge and behaviors close to the uses, more quickly and with greater currency. In this respect e-learning is extremely powerful because it allows individuals to learn "anywhere, any time";minimizes workplace downtime, and allows content to be rapidly up-dated.

Today we have access to a plethora of learning methods, learning media and learning strategies. Methods include tutorial, heuristic (discovery) learning and role-play. Media encompasses computer-based training (CBT) including CD-ROM bases learning and web-based learning (WBL), video, simulators and emulators. The packaged content in e-learning evolved with the advent of WWW.Thanks to this environment, access to information is cheaper and easier. Blended learning has now become a necessity to impart practically viable aspects of management education; but the paradox from a teacher's perspective is that

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education based exclusively in web methods, will eventually lead to loss in the relation teacher- student and finally the teacher's role in teaching.

As higher education institutions and systems seek to widen access, the need to maintain quality standards is clear. However, what is potentially even more important is the opportunity to improve educational outcomes overall and to assess learning outcomes in innovative ways, through the widespread use of instructional technology - course management systems in particular.

Blended learning makes the learning procedure accountable. In the traditional classroom, there is limited data and metrics that can be used to measure quality or intervene with students having difficulties. Often no objective data is available until a mid-term grade. In comparison, some course management systems collect lots of data about how students interact with the system during the learning process (e.g. which pages of content, how much time, how often a self assessment was taken, etc.). This provides two opportunities for higher education to improve quality and student outcomes. First, instructors have the ability to track each of their students' learning activities so they are able to view if a student is falling behind or not keeping up with their reading material. This enables them to proactively intervene prior to students' achieving failing grades or dropping out. Utilizing this data at the instructor-student level should be promoted in training initiatives and rewarded in practice.

Second, and possibly more importantly, the collection of this learning activity data also gives institutions the opportunity to assess quality across the curriculum by aggregating the data for analyses by assessment and institutional researchers. Once there is a critical mass of learning activity taking place online, institutions will be able to analyze outcomes as well as activity patterns to better determine what leads to student success and use those insights to improve the overall quality of the educational offerings.

Assessment frameworks will take time and research to develop the appropriate and proven methodologies for using this data. As more and more students experience at least a portion of their learning through academic enterprise systems over time, this type of assessment should

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be planned for as part of the long-term quality assurance framework for higher education institutions and accreditation reviews.

As with all educational systems approaches, the effectiveness of a system is evaluated by its contribution to student learning. This means that assessment of student learning is always an important aspect to consider in the application of any instructional methodology. This article attempts to highlight the ability of blended learning and Web CT to better address varied learning styles is one proposed reason for it to be self -paced, highly interactive, and results in increased retention rates.

Present Scenario

Today's world is highly driven by technology. All organizations in various sectors: business, education, healthcare, banking and finance and others are influenced by the rapid pace of technological developments and innovations. The education sector, where student – centric learning is the core aspect to take into consideration, is highly influenced by technology. In fact, technology made it necessary for certain transformations to take place for the benefits promised by technology to be realized (Garrison & Kanuka, 2004). This technology effect presented itself in various forms, ranging from using instructional technologies inside the classroom to running the whole course away from classroom boundaries (i.e., open learning or distance education), thus offering students with the chance of having access to higher education regardless of place, time and constraint.

The usage of web based communication technologies has created an interactive digitally delivered content, network- based services and tutoring support – the essential elements of e-learning. E-learning is in fact any technologically mediated learning using computers whether from a distance or in face to face classroom setting (computer assisted learning), it is a shift from traditional education or training to ICT-based personalized, flexible, individual, self-organized, collaborative learning based on a community of learners, teachers, facilitators, experts etc. Broadening our view wider: cultural and social impacts are key defining characteristics. e-learning is a foundation of the globally networked and interdependent economy, which is advanced by ICT.

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What one might wonder about at this point is the effectiveness of each of each of the two forms i.e. face to face learning methodologies and online learning methodologies. While each of these two modes of instruction has its advantages and disadvantages, the need would be for a method that will combine the positive features of both, and would provide both the educational institution and the student with competitive and learning advantages respectively. This need is being satisfied with the emergence of a new wave of learning called "hybrid or blended learning".

Blended learning which is also called hybrid learning is a blend of both: classroom or face-to-face learning and online learning (Garrison & Kanuka, 2004). While face-to-face-learning is referred to as synchronous, online learning is termed as asynchronous (Schullman & Randi, 1999, Garrison & Kanuka, 2004, and Howard et al, 2006). As it is commonly known, classroom instruction-learning takes place inside the classroom, where students gather in a physical place (the classroom), listen to lectures, hand in homework assignments, and take scheduled examinations. On the other hand, in on-line learning, students complete their assignments on the Internet, post their questions and/or their comments on a discussion forum or electronic board, and meet with their instructor and their peers in an internet chat room. In other words, they learn more by performing than by listening and have more frequent assessment feedback (Tuckman, 2002).

The economy of information society is based on the creation, dissemination and exploitation of data, information and knowledge. This will be one of the dominant features of this century, and will play a fundamental role in generating a recovery in growth and an increase in employment. The extended use of the potential offered by web communication technologies (Web CT) will create new service markets; will speed-up administrative and decision-making procedures. Developments in the Web CT have also had a huge effect on the learning environments.

It was stated by many researchers that blended learning offers both students and universities with several advantages (for example, Picciano, 2006 and Ellis et al, 2006). As an example, blended learning can play an important role in enhancing the enrollment rate to universities and in providing means for more access to education (Picciano, 2006). Also, Singh

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emphasizes in his article that blended learning offers more choices to benefit educators and learners than either classroom based or web-based learning alone (Singh, 2003). According to him, blended learning can make use of the powerful Internet technology, and at the same time, provide the elements lacking in web-based instruction, such as engagement and social contact. Using Khan's Octagonal framework, Singh defines the major dimensions of blended learning, and concluded that blended learning offers more choices for instructors and learners, which makes it a preferred instruction method for many organizations. The dimensions available in Khan's Octagonal framework include: pedagogical, technological, interface design, evaluation, management, resource support, ethical, and institutional dimensions (Singh, 2003).

Moreover, Picciano suggests that blended learning can improve student retention in higher education. He reveals the fact that research on blended learning is not yet fully developed, but hopes that a research interest in the impact of blended learning on enrollment, access, and retention gets established (Picciano, 2006). In addition, others believe that hybrid learning enables the presentation of material in a broader context and in an integrated manner (Atiken, 2006). Furthermore, research about the value of a hybrid format shows that hybrid learning is effective in teaching important concepts (Katz, 2008).

Blended learning through Web CT is taking many forms as enumerated below :

1. Curriculum development: Quality curriculum and instruction are - as they have always been - the bedrock of education and the way to developing thoughtful and competent professionals. The curriculum should ensure that the learners gain knowledge as effectively and efficiently as possible.

2. e-Learning (the most comprehensible form) : To successfully disseminate the knowledge, it is essential to have an up-to-date learning environment. The development in information and communication technologies has been a welcome change as there have been lots of possibilities and tools to re-engineer the classical teaching methods. Because of e-Learning methods are expected to play an increasing

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role in professional education there is a growing need for knowledge transfer on this field.

3. Educational Management and Marketing: Knowledge dissemination is not only a methodological or technical problem. Institutes have to own the rights how the learning materials may be available for others, as well as taking commercial aspects into account.

Curriculum development, e-Learning methods and tools and Educational Management are strongly intertwined key issues for handling changes in professional education

One of the key issues in pedagogy is individualization: adaptation the teaching to the needs of individual learners. In most cases, however, IT supported education has so far focused mainly on transferring existing courses onto the web, just making traditional teaching even more widely available. The new web technologies :

- have potential regarding the creation of more intelligent e-Learning applications, providing individualization without a prohibitive increase in man-power,

- make models of each student, i.e., a profile showing her/his background, learning needs,
  preferences in terms of teaching methods, and constraints.

Blended learning is the ideal combination of traditional classroom teaching methods (face to face interaction) and any technologically mediated learning using computers whether from a distance or in face to face classroom setting (computer assisted learning), it is a shift from traditional education or training to web - based personalized, flexible, individual, self-organized, collaborative learning based on a community of learners, teachers, facilitators, experts etc. Thus, Blended learning is an integrated approach that applies a mix of e-Learning and traditional education.

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The usage of Web CT on an extensive basis for higher professional education is best suited in the Indian context due to its versatile nature as enumerated below :

- Information support and coaching: while learning is directed at enhancing individual capacity, this function focuses on building external resources.

- Knowledge management, which aims to collect documents, practices, and solutions in an organized way, and facilitates wide distribution.

- Interaction and collaboration: Web CT can be used to engage, blend, and stimulate learners.

- Guidance and tracking: new technology enables more and better guidance, assessment, tracking, and information. Learning management systems can guide individuals towards
  critical skills and assets to meet their needs.

Some of the most important features of web based learning or e-learning are listed below:

- Web based learning services are designed using learner-centered approaches, accommodate a variety of delivery methods and multiple learning styles.

- E-Learning cuts the costs, shorten product development cycles, less expensive to produce
  and maintain, reduces costs for the e-Learning service providers. Learning standards create interoperable objects that cut costs and development time. By developing jointly learning materials the expenses are relatively smaller. e-Learning programs can reduce the participation fees without negatively affecting the compensation for high quality presenters. Overall costs for learners, travel time and other associated costs are also reduced.

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- Learning through Web CT is self-paced, gives learners a chance to speed up or slow down as needed.

- Learning is self-directed, allowing to understand the content in an effective way.

- On-demand access, learning can happen when needed. Learning materials and most of the support are available 24/7. Learning does not require physical presence, however, fosters better learner/instructor contact.

- Promotes greater student interaction and advances collaboration. e-Learning uses interactive technology to develop fun, engaging, effective simulations. Collaborative learning in the online environment is often far easier and more comfortable than in the classroom. Companies can share working experiences, staff members can quickly learn the inner technologies and techniques. e-Learning systems allow team members at collaborating companies to understand shared objectives.

- Drive business transformation or change. New processes can be implemented faster with an educated staff. Employers can train staff members to handle sophisticated tasks without risking production quality.

- Learning, education and training on new technologies and methods increase employee efficiency and collaboration, improve computer and Internet skills, knowledge sharing keeps skills current.

- Geographical barriers of learning are eliminated. e-Learning opens global opportunities.

- The technologies allow the ability to use tools and resources that are impossible in a traditional educational system.

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An active role for learners, contributing content and knowledge, making connections, and building relationships for informal learning enabled by technology.

- Shift from read to write: more and more learners are contributing content and knowledge.
- Combination of pull and push: content, knowledge and connections are increasingly relevant and personal, driven by a company's and an individual's personal and/or professional needs.
- Open, unstructured content in various formats and different media (increasingly in audio and video format) and found through search.
- Involvement with realistic tasks; Interactions with peers or facilitators; Opportunities for feedback and self-evaluation.

Human interaction is a critical component for learning. Face-to-face contact is still not comparable with virtual meeting. There are situations in which classroom training cannot be replaced. Certain content because of its nature, importance is not suitable for pure e-Learning. Blended learning is an integrated approach that applies a mix of e-Learning and traditional education or training delivery options to teach, support, and sustain the skills needed for learner's competencies. With blended learning, the tried-and-true traditional learning methods are combined with new technology to create a synergetic, dynamic learning structure that can boost learning to better results.

The educational institutions are under intense pressure to get the best course to their learners, in the right format, at the right time, for the right price and, very importantly, in the required quality. To do this, they have to spend considerable time and resources on planning their supply strategy to respond to the demand of the industry or society. This goal can only be reached if the organizations introduce a usable and innovative tool, which serves the above mentioned requirements. This tool must enable networked educational partners to work together across different and possibly flexible platforms. Moreover it must support the sharing of management and technological information (Katz, 2002).

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The trend towards inclusion of Blended learning through Web CT can be characterized by the following critical issues:

- shift from traditional education or training to flexible, individual, self-organized learning,
- move to process-oriented learning instead of product oriented learning,
- collaborative learning based on a community of learners, experts, facilitators, etc.

In education the adoption of blended learning has led to radical shift in the power politics of education not only in terms of providers but also particularly at the level of the teacher-student relation. The old hierarchical structure is breaking down as globally we see shifts along a spectrum from didactic education to communities of learning (Petch, 2006).From focusing on the local learning environment and its available educational tools, the universities are now facing a new situation, where the students just under their fingertips have access to the global pool of knowledge. Consequently, not only the role of the teacher is changing, but also the whole university organization and the principles of learning in relation to both methodology and pedagogy. The role of the universities will have to be reengineered based on this new paradigm of knowledge sharing (Enemark, 2006).

The ability of students to connect with experts around the world, as well as their group members, also opens new opportunities for learning and professional development. Students and tutors find these opportunities motivating. Distributed instruction, the explosive expansion of networks is a general trend. Whatever the revolutionary changes in technology, the learning is the vital element. The teaching is not enough, it is the active (or proactive) learning, which is essential (Markus, 2005).

Educators will be confronted with their changing role in e-Learning environments. While technology-based learning will unlikely able to completely replace the university education, it offers more opportunities for corporate training and continuing studies. However, the role of educators will change: they will become more and more facilitators, providing dynamic update of knowledge databases, transparent and clear syllabi, reading recommendations, etc.,

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and offering guidance and motivation strategies for students who should get used to self organized study approaches (Seufert, 2001).

Because of the cost of using Web based communication technologies is decreasing, more universities, governments, companies have added online courses and other forms of distance learning to their organizations (WorldWideLearn, 2008).

To disseminate the knowledge, it is essential to have up-to-date learning materials. Thanks to the development in information technology, there have been many possibilities and tools replace and renew the traditional teaching methods. Thus the e-Learning methods are expected to play an increasing role in professional education. Today, the universities or companies - based on their own limited resources - are not able to respond the exponentially growing demands. There is a strong demand for international cooperation in educational developments though except a few international co-operations, there is a lack of collaborations in networked education.

The scenario in Indian educational systems will be enormously transformed and benefited by the following features:

- The IT revolution holds great promise and presents great challenges. It will be difficult to control but impossible to resist. We must transform all traditional institutions of learning to prepare students for their future. In addition to the basic skills of a profession, every learner should be a master in communication, collaboration, and creative problem solving.

- Systems will be more “learner centered” in the sense that they will offer learners and teachers / trainers global access to online resources and assessment strategies, enable learners to interact with learning objects, teachers, tutors, mentors, administrative and service resources, and enable learners to tailor the learning experience to their needs.

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- Original educational objects, expertise and knowledge can be incorporated to add value to

  learning resources acquired elsewhere. Course planners and teachers can acquire learning objects from large content databases, and aggregate and manage these according to the needs of particular groups of learners by selecting the appropriate mode of delivery.

- Learners will be able to fulfill their educational needs by choosing from a world-wide list

  Of educational / training institutions.

- Collaborative learning will enable learners to establish their own learning groups focused

  on their common interests.

- New business models promise to radically change the educational services and greatly improve the effectiveness of knowledge delivery. The most important ones are customization and community building. The web links students, professionals, alumni etc. and allows for new ways of communication and interaction. E-Business also changes how we teach and learn; it is more about redesigning the strategy than the technology.

Thus, blended learning through web based technologies is the new age mantra that has the potential to become one of the key success factors for making higher education widespread and versatile in all aspects.

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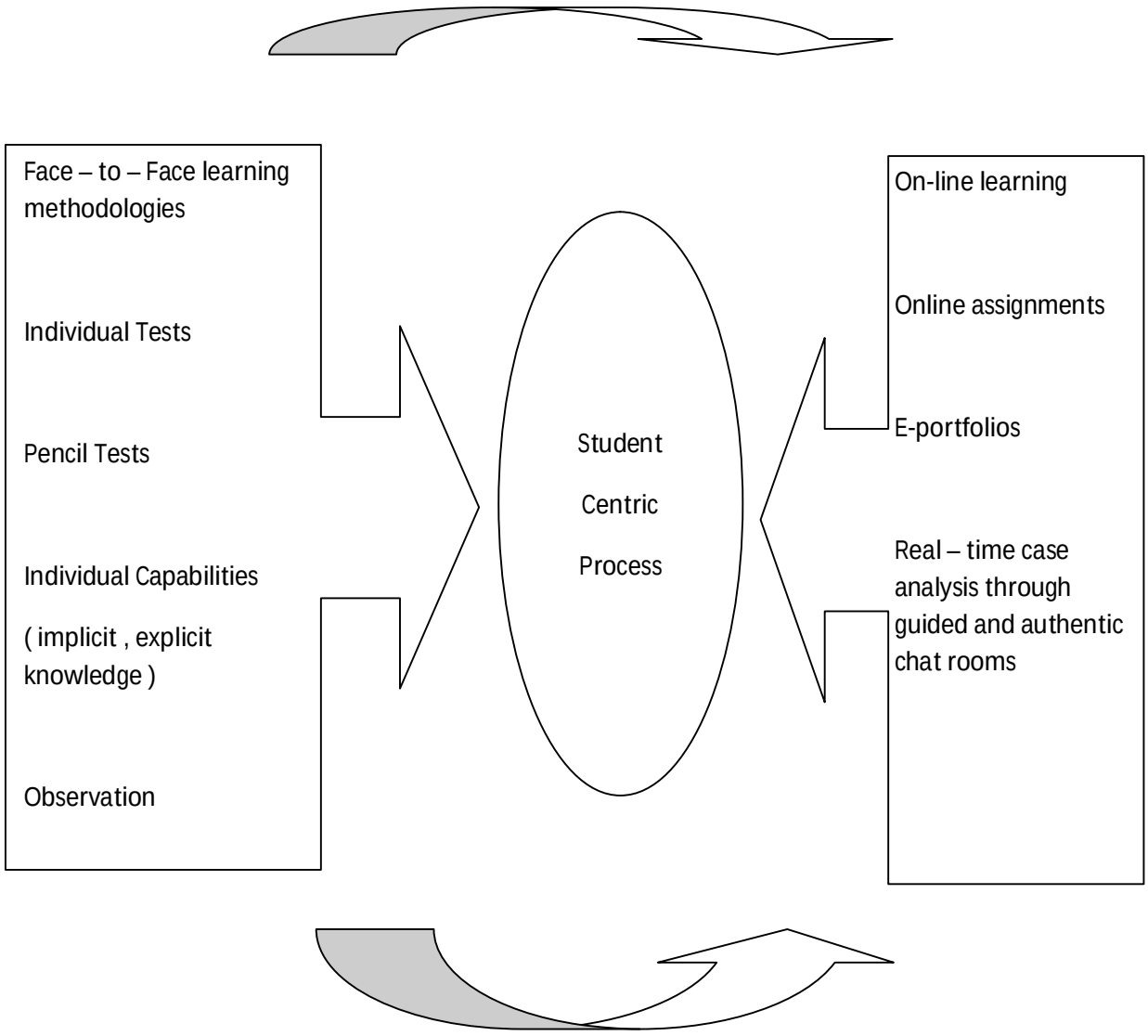
Blended Learning Model



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