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RESEARCH PAPER

Qualitative Analysis of Blended Learning: Acceptability and Effectiveness of This E-Learning Model

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ABSTRACT

Increasingly, educational set ups are inclined towards the use of technology to provide greater flexibility and an attempt to enhance educational quality. This paper highlights factors that are imperative in e-learning implementation. Institutional resources, physical and technological infrastructure, institutional intention and course team are important in the functioning of blended model of education. Post the organisational readiness study, we examined the effectiveness of the model by interviewing the students exposed to blended learning design.

Key words: *E-learning, Blended learning, internet technologies, institutional resources, course team, face to face learning.*

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INTRODUCTION

Literacy in the 21st century means more than reading, writing and computing skills. It means knowing how to use knowledge and skills in the context of modern life. As writer Alvin Toffler points out, "The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn and relearn. In the current scenario, spiralling costs, budget constraints and burdening educations debts is putting pressure on the education industry. The educational institutes are compelled to have a re-look at the existing structure to meet the actual and latent demands of the students. There is a visible paradigm shift in education led by e-learning models which is nothing but a subset of the conventional distance learning programs. A fundamental rejig is occurring across societal systems due to the information age making life-long learning inevitable.

REALM OF E-LEARNING

E-learning, or electronic learning, has been defined a number of different ways in the literature. In general, e-learning is the expression broadly used to describe "instructional content or learning experience delivered or enabled by electronic technologies" (Ong, Lai, Wang).

Some definitions of e-learning are more restrictive than this one. For example, limiting e-learning to content delivery via the Internet (Jones A). The broader definition can include the use of the Internet, intranets/extranets, audio- and videotape, satellite broadcast, interactive TV, and CD-ROM, not only for content delivery, but also for interaction among participants (Industry Canada). More recently, this definition can be further expanded to include mobile and wireless learning applications (Kinshuk, Suhonen, Sutinen) (Lehner, Nösekabel, Lehmann). Khan 1997 defines online instruction as an innovative approach for

delivering instruction to a remote audience, using the Web as the medium. Mohamed Ally defines the same as use of the Internet to access learning materials; to interact with the content, instructor, and other learners; and to obtain support during the learning process, in order to acquire knowledge, to construct personal meaning, and to grow from the learning experience.E-learning can synonymously be known as e-learning, Internet learning, distributed learning, networked learning, tele-learning, virtual learning, computer-assisted learning, web-based learning, and distance learning.

According to Sherron and Boettcher (Sherron, 1997), there has been a growth and a convergence of telecommunications and computing technologies. As these two industries grew and merged, new hybrid technologies extended the capability to attain high quality instantaneous communications despite geographic location. Second, as we shifted from an age of "industry" to "information", so have students' needs and demographics. The accelerated rate of change and growth of information commonly associated with the Information age requires contemporary workers to prepare to change careers (not jobs) three or four times (Colin Rose, 1997).

Online learning allows participants to collapse time and space (Cole, 2000); however, the learning materials must be designed properly to engage the learner and promote learning. If designed properly, online learning systems can be used to determine learners' needs and current level of expertise, and to assign appropriate materials for learners to select from, to achieve their desired learning outcomes.

Leaders in the field of education have argued that e-learning technologies can effectively respond to accelerating global competition (Daniel, 2000), increase the quality of learning experiences (Garrison, 2002), remove situational barriers (Bates, 2005), and be more cost effective (Twigg, 2003). In an effort to provide evidence for the promises forwarded by e-learning advocates, interventions and explorations into the use of e-learning technologies have been conducted. Based on these investigations, commonly cited advantages of e-learning technologies include an ability to provide just in- time learning; increased access; removal of time, place and situational barriers; cost effectiveness; greater accountability; increased interaction; provision of future employment skills for students; and effective support for lifelong learning. (Terry Anderson, 2003) Garrison and Anderson (2003) assert that educational technologies can transform the learning experiences in positive ways, resulting in increasing the quality of learning experiences (Terry, 2003). Self-paced e-learning allows learners to assimilate content at their own speed which is 20-50% faster than classroom method (Forrester report, Claire).

In the Indian context, the Indian Information Technology and industry accounts for a 5.9% of the country's GDP and export earnings as of 2009, while providing employment to a significant number of its tertiary sector workforce. More than 2.3 million people are employed in the sector either directly or indirectly, making it one of the biggest job creators in India and a mainstay of the national economy (http://www.aicte-india.org/ictit.php).

Also, India has become the largest market for e-learning after the US, and the sector is expected to receive a boost from the Digital India initiative, says a recent report by the UK-India Business Council. India's e-learning sector is expected to grow at a compounded annual rate of 17.4% between 2013 and 2018, twice as fast as the global average (UK-India British Council Report).

EVOLUTION OF E-LEARNING PROCESS

E-learning has also evolved over the years. In its first generation, the classroom curriculum was mostly recorded and compiled online. The heaviness in its content made it very mundane and repetitive. The second generation of e-learning experimented with multiple modes of instructional delivery models which increased the choices, relevance and sociability factor. Blended learning was experimental design which garnered

attention in this phase. Anecdotal evidence indicated that blended learning not only offers more choices but also is more effective. (Harvey Singh, 2003).

HAS BLENDED LEARNING REALLY 'BLENDED' IN?

Blended learning is a format rapidly spreading in education worldwide. Several researchers defined blended learning. For instance, Driscoll (2002) defines to blend learning as intermixing of any instructional forms to achieve an educational goal, whereas Garrison and Kanuka (2004) explain that to blend simply means integrating classroom teaching with online experiences. Singh (2003) views blended learning as combining different delivery media to promote meaningful and motivating learning. Live chats, self-paced learning, instant messaging, social networking, blog and forums, applications, and webinars are examples of tools instructors can use to incorporate online opportunities in their classes. Such a combination provides better learning outcomes (Garrison & Kanuka, 2004). The trend of merging asynchronous Internet technology with face-to-face interaction is associated with improved pedagogy and easier access to information (Bonk &Graham, 2004). Similarly, Garrison and Kanuka (2004) suggest that blended teaching can facilitate independent and collaborative learning experiences. Blended learning builds both a community of inquiry and a platform for free and interactive dialogue. In addition, Paechter and Maier (2010) refer to how university students speak in favour of blended learning. Students being digitally literate enhance the chances of extending their lessons and conversations beyond the classroom. Instructors-led live events and webinars provide students with asynchronous content to explore in their own time and at their own pace, to be followed by classroom discussion or debate. It is evident that combining technologically mediated learning with class debates helps students gain more understanding of the subject matter, and develops their cognitive and social skills at the same time.

METHODOLOGICAL IMPLICATIONS & DATA SOURCES

Data mining and data pooling has incorporated the following sources-

1. Personal judgement via an observation method of classes undertaking e-learning. This would include self-study in computer labs, faculty using white-boards or internet to assist study methods, group study on tablets/internet and home usage by students of intranet or internet. The perspective was taken on both individual and group level for a superior qualitative study. It was obtained by 45 students of Class IX at St. Xaviersschool, Civil Lines, New Delhi.
2. Focussed group discussion was conducted with academicians (IGNOU and CEMCA-Commonwealth Educational Media Centre for Asia), entrepreneurs with their e-learning ventures, faculty members in the related education field. My conversation with a University of Delhi faculty was helpful in understanding the e-learning models used in neighbouring countries like Sri Lanka mainly backed by international funding. With commonalities in cultural background, demographics and economic status, the discussion gave direction to my research.
3. A study was conducted in a neighbourhood school- St. Xaviers. Students of class IX were interviewed in order to retrieve an understanding of e-learning usage. The hitches and benefits of having exposed to online technology in the class were discussed. Alongside, the school management software provider, Franciscan Solutions Pvt Ltd employees were interviewed. The service provider highlighted on the importance of infrastructure, staff support and management's willingness in implementing blended learning models in the school.
4. A survey to get students' feedback on new features of learning in a blended format has been conducted. The questionnaires addressed new (for the students in question) features of the transformed course as compared to a traditional one: a new format (blended learning), a new structure (flipped classroom), a new learning environment

(virtual– in the form of an interactive site), a new approach (parallel study of the theory and the practical application of it), new learning activities (annotating, discussing, project-based learning), a new type of assessment (score and rating system).

Table 1: Factors aiding blended-learning Readiness quotient

Critical Factors	Faculty
Management intention	8
Blended learning policy	3
Student support services	5
Training workshops	7
Access to computer	7
Access to internet	8
Requisite Staff – Instructional Designer, Computer Programmer, Video editor etc.	6
Allocation of funds	7
Setting departments – Media, Centre for teaching, Digital learning	5
Collaboration of face to face and online learning	4
Tie up to access third party licensed material	2
Blended Course Plans	7

Table 2: Frequency Chart to garner blended learning Acceptability quotient

Questions	Answers	
Is it for the first time you are exposed to blended learning?	Yes – 78% (35) No – 22% (10)	
Did you prefer it to traditional face to face teaching method?	Yes- 85% (38) No – 15% (7)	
Reasons to like/dislike blended learning	85% said-	15% said-
	More interactive and interesting	Internet connection a must
	Material and information available at one place	Lack of practice in using interface
	Engaging discussions, experiments, quizzes etc	Higher work load-watching video,quizetc
Support services are available all the time?	Yes – 20 (44%)	No – 25 (56%)
Is the online assessment system satisfactory?	Yes – 25 (56%) - Too many sections.	No – 20(44%) - No grace marks as it is automated.

DISCUSSION OF THE RESULT

The interviews and informal discussions with academicians assisted in shortlisting a few parameters encapsulating the broad question on the readiness quotient. Here, the agenda was to know the level of importance of relevant critical factors in executing a successful blended learning design. Due to paucity of time, only four faculty members, two academicians and two school IT support staff personnel's were interviewed.Managements intention or share-holders approval to incorporate blended learning was agreed upon unanimously. Since, the implementation of blended learning requires a complete re-jig in existing learning style, classroom set up, support staff etc., allocation of funds was an important parameter to be considered. Seven out of eight interviewed highlighted on the access to computer to students as this is one of the biggest impediments in the existing schooling system. Nearly nine-tenth of them felt that teachers/staff have to be trained to cope up with the blended course plan. Likewise, the same percentage felt that, even before analysing the effectiveness, a structured course plan should be considered beforehand. Three fourth of the interviewed highlighted on the importance of having a

specialised team to handle blended learning design. The existing faculty would be the content developer along with the instructional designer, computer programmer and video editor to package in a format suitable for online platform. A faculty without sound computer programming knowledge cannot be held responsible for packaging his course in an interactive manner. This would require educational set ups to incorporate a media centre, digital centre etc for generating new and revising existing course content. Six tenth of them believed in having such a system to enhance professionalism along with having a student support services division. This would facilitate not just the faculty members but also the students on the other end. With prior experience in teaching, half of them reiterated the need of a coherent and consistent collaboration of online and face-to-face learning.

The paper focussed on understanding the acceptability quotient from the students' aspect. Mostly all students of class IX of a private school (St. Xavier's) were exposed to online learning along with the traditional classroom learning. Only 20% were accustomed to the face to face learning style. Once exposed to blended learning, 85% preferred the new structure over the traditional set up. The reasons mentioned by them were:

1. More interactive and interesting.
2. Material and information is available at one place. Students who were absent were also able to access the material with ease. The structured way of presentation made it clear for students and their guardian/tutor to be abreast with the class.
3. The students preferred online quizzes, simulations, games, experiments and discussion on blogs over traditional monologue lecturing style.
4. The novelty element attached to online learning kept the students motivated to learn.

A meagre 15% didn't approve of the blended learning model for the following reason:

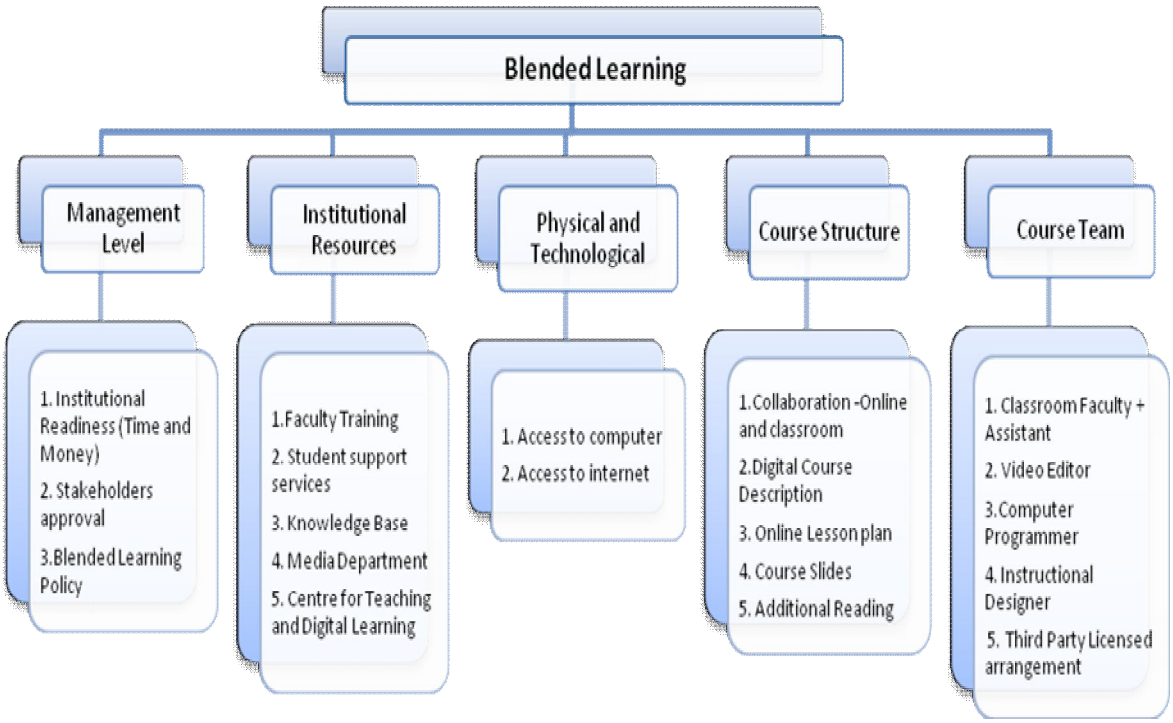
1. Lack of internet connection and computer. Students complained of a very slow connection or no connection due to loss of electricity. This indeed is a major concern for implementing online learning in India. A few students did not have computers back home to access and complained that mobile sites took too long to open.
2. A few found it too complicated to use the online interface. Technical phobia made them stay away from the online material. Others found it confusing to follow the steps without support back home or even in the computer lab.
3. Increased workload was a concern for the ones who disapproved of blended learning model. Having to attend quizzes, online assignments, in-class discussions etc. was too cumbersome.
4. Heightened transparency. With sub-division of marks to so many activities and an online compilation of marks method led a few students to be unhappy. The ones who missed the passing by a point or two said the scope of grace marks just vanished with this complicated assessment system.

An important observation arose when asked about the prompt support services. The students had a divided stance. This showcased that the school needed to ramp up support services as queries remained unanswered. Solution to an online query came to late to come handy. Thus, this area needed attention.

CONCLUSION

The indicators suggest an emerging need for integrating technology and face-to-face learning. With the new generation being technology savvy and mobile friendly, blended learning approach can be beneficial in imparting quality education. Since blended learning is at its infancy, it is the management's approval that is imperative to kick-start the discovery and experimentation process.Instructors need to choose the appropriate tools to engage and motivate students. This analysis has brought about the critical factors that are needed to implement a successful blended learning process as shown in Table 3.

Table 3: Break-Down of Key factors in imparting Blended Learning



LIMITATIONS

The number of students and faculty members, whose readiness and acceptability quotient was evaluated, is very small and limited.Thus, the research should be extended to a greater target segment. This will help in getting a more reliable result to make further generalizations.

This particular research tackles the basic problem of implementing the blending learning design but does not focus on specifics. Further researches could consider characteristic specific analysis (age, study skills, gender) etc. Also, this paper breaks down blended education into measurable parameters. Futuristic researched could focus on measuring the degree of the blended quotient in educational set-ups. This would be highly beneficial in comparing the performances of similar institutional players.

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