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Theme:

**Learning - Relearning – e-learning:  
Technology in Higher Education**

*Guest Editor*

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## Guest Editor's Note

### Learning - Relearning – e-learning: Technology in Higher Education: An Introduction and Invitation to our Special Issue



Electronic learning (e-learning) has received wide acceptance in all levels of education i.e., pre primary, primary, secondary, higher and tertiary education either in the form of pure online or blended learning format. There are various devices like computers and other mobile devices like smart phones, personal digital assistance (PDAs) orchestrate real time two way wireless communications among users. The onset of 2000s devices with sensors and radio frequency identification (RFID) embedded in different objects places in the surroundings of the users facilitate ubiquitous learning. From pedagogical perspective management education should be more focused on context specific theme based delivery method as pursued in the business schools of US and Europe. In India, context orientation is yet to be developed. Contextual learning requires admixture of concepts, cases, exercises, simulations, and teamwork etc. and there is a need to move in this direction through e-learning. The present special issue on e-learning provides some contours in this direction.

Romero Margarida's paper "E-learning Technologies for Management Education" delves into the domain of social networking technologies and traces its impact of learning. Further, the paper explores the generic technologies used in learning organizations and returns with the idea of a socially acceptable learning system facilitation higher learning gain.

Mukherjee, in his paper "Blended Learning Model for Management Education in India – A Critical Review" critically reviewed the variety of learning method and their suitability in fostering higher education in the context of management education. The paper also proposes a conceptual model involving factors determining three dimensions of higher learning. His second paper talks about contemporary e-learning technologies and gives an account of five top of the list Learning Management System (LMS) and Authoring Tools technology products.

Chakrabartty & Jain in their paper "Comparison of Learning Methods with Multivariate Evaluating Criteria Theoretical Approaches" discussed as there are no established method of teaching in management education also the factors responsible for measuring the effectiveness of learning methods. They have discussed the used of three different statistical models for measuring the effectiveness of learning methods.

Shome, Luthra & Mukherjee in their paper "Effectiveness of e-learning in Management Colleges" discusses the effectiveness of e-learning in



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higher education. From empirical evidences the paper also develops an understanding of factors responsible for improved learning experience while imparting management education under e-learning environment in B-Schools.

Gaurav Joshi and Wasik Iqbal's paper "Total Quality Management in Higher Education – Perception of Management & Engineering Faculty" measures the perception of teachers of higher education drawn from engineering and management stream towards TQM in education. Since TQM in higher education has received global acceptance in developed nations and our inability to implement the same countrywide might deter the students an effective learning environment.

Anagha Shukre's article titled, "Social Media as an Advertising Platform: Technocrats' Perspectives" describes the digital divide between the consumers and marketers today. Marketers find social media exploits to be extremely useful to reach out to their target group while reaping the cost advantage. Consumers today engage in digital transactions and spend significant time online. On the other hand, companies involved in promoting their products in digital space need to benchmark and streamline present capabilities and improve upon process variability to deliver maximum value for their customer. Given the context the article brings in interesting perspectives to bridge this digital divide between consumers and marketers.

Maheswari & Taneja's paper "A Comprehensive Study of Environmental Attitudes with respect to Green HR in Indian IT Industry" brings in the perspective of Green HR. They proposed that under present talent based economy, the scope of Green HR evolved rapidly in consumer and employee expectations and future environmental changes will require corporate houses to address "green" issues for a sustainable future.

Sharma's paper "My Experiences and Experiments in Teaching Corporate Governance and Related Ideas" offers various path breaking intuitive models practiced in the realm of management education across various institutes all over India. As a triadic thinker some of his models like Holistic Corporate Management (HCM), Creative Enlightened Organic (CEO) or Discussion, Dialogue & Discourse (3 D) compel thought provoking ideas to surface which revolve around practice and pedagogy in higher education

The articles in this special issue explore different dimensions of higher education and opportunity for technology intervention in pedagogy towards development of blended learning models and contribute in transformation of exiting learning models. We sincerely hope the articles together help in design & development of awareness of e-learning technologies and pave the path for augmenting the same as integral part of formal curricula in near future.

**Debarshi Mukherjee**  
Guest Editor

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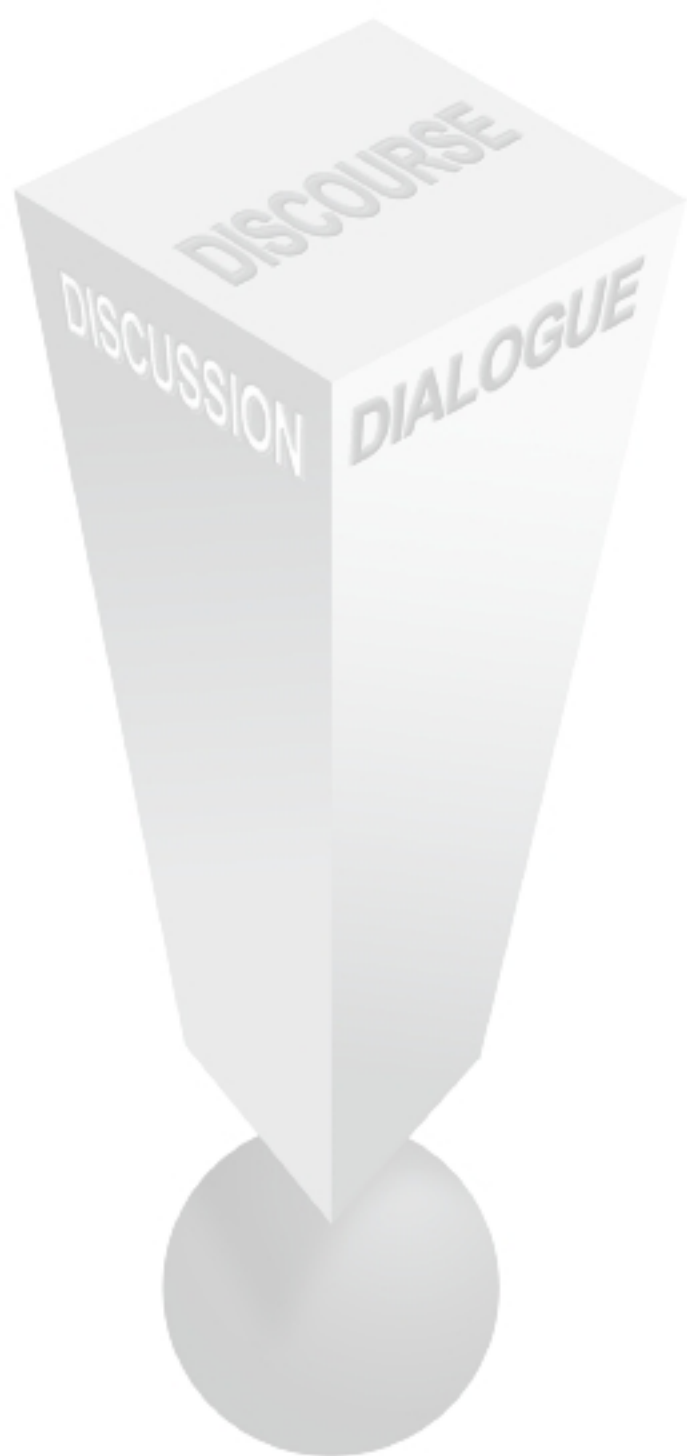
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# E-learning Technologies for Management Education

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## ABSTRACT

Internet and the rapid development in social and networking technologies have increased connectivity and have eased the use of educational technologies for management education. Nevertheless, the huge number of technological solutions that could be used for management education raises the question about the relevance of each type of educational technology for different educational needs. This study analyse the educational technologies that provide support for network learning in the context of management education. To this end we will discuss the suitability of public and corporate social networks in comparison with learning management systems and e-portfolios. The paper examine these different technologies and their educational uses, taking into account the degree of control exerted by the educational organisation and the facilitation of informal teaching and learning processes that they allow. Although social networks facilitate informal learning, they do not guarantee the educational quality required by institutions in terms of curriculum design, management of the educational process, knowledge capitalisation and data privacy of participants. On the other hand, traditional Learning Management Systems makes possible to structure teaching and learning processes, but they do not allow the emergence of dynamics for their participants to create and share content and educational activities. Between these two extremes, we will consider solutions that combine the best of both approaches: socially oriented learning management systems and e-portfolios.

**Keywords:** *E-learning, Educational Technology, Social Network, Learning Management System.*



## 1. Introduction

The information and communication technologies (ICTs) have become democratized, entering all spheres of our lives, from the professional to the personal, including the academic (Coll & Monereo, 2008). In this article we focus our attention on those ICTs that allow communication and collaborative work in remote networks used in the educational sphere. Network learning makes it possible to perform teaching and learning activities with the support of electronic networks that facilitate communication between participants and teachers or tutors.

Also, the introduction of Internet and the rapid development in social and networking technologies has increased connectivity and has eased the possibility to Continuing Professional Development (CPD) hence converging and interweaving Lifelong Learning (LLL) and technology. In Sharples' words (2000, p.3), "computer technology, like learning, is ubiquitous". LLL and CPD for employees are considered a key aspect for organizations to increase quality and performance as it is perceived as a clear link to improvement (Browell, 2000). Other authors also consider CPD and LLL as vital to both individual and organizational success (Wall & Ahmed 2008) and it is seen as a way of providing people with knowledge and skills they need to succeed in world in continuous change (Sharples, 2000).

In this sense, the need for organize the LLL and CPD for employees has promoted the development of the corporate universities in most large companies. Meister (1998) defines Corporate Universities (CU) as a strategic umbrella for developing and educating employees, customers and suppliers that allow the organization to meet the business strategies. For deploying the training courses, the CU could consider the models of distance learning or a combination of classroom and distance learning in order to be able to help combining professional, personal and learning challenges (Teixeira & Valente de Andrade, 2011).

## 2. Generic technologies and educational technologies for teaching and learning.

Not all the ICTs that are used for network learning were originally designed for academic use. Thus we can consider those technologies that were designed for general use and have been adopted (and sometimes adapted) for network learning by participants and teachers. Among these technologies, blogs, wikis and Google tools are the most notable. All these tools possess a series of functionalities (synchronous and asynchronous communication, content publishing and feedback, collaborative writing, etc.) which provide support for certain educational activities based on the communication, creation and evaluation of content. Despite the potential of their functionalities, the use of generic tools in educational spheres also presents major limitations in more complex or structured teaching and learning processes requiring a structure for the courses and educational sequences and specific functionalities for users, both for the participant (submission of exercises, report cards, etc.) and the teacher (tools for monitoring and assessing participants, tools for content publishing and creation, etc.).

With the aim of meeting these specific educational needs, educational technologies or edtech have been developed over the last two decades. These technologies have been designed to facilitate teaching and learning processes in a formal educational environment (schools, higher education and corporate universities). One of the main educational technologies to have been developed has been learning management systems. These include a course management and teacher-student user system, together with a system for publishing learning objects and performing and assessing activities in synchronous mode (chats, videoconferencing, interactive whiteboards, etc.) or in asynchronous mode (forums, questionnaires, etc.).

### 3. Learning management systems and the rise of social networks.

Nowadays most universities, including corporate ones, have one or more learning management systems (LMS) to support networked teaching and learning processes. At the same time as LMSs have become a standard in universities for formal learning processes, there has been an observable increase in the use of social networks among university students and participants in corporate universities. In the face of this use of social networks as a channel of private communication, the temptation has arisen to ban them, at one extreme, and to promote them as a virtual learning environment (VLE), at the other.

Considering the differences between informal social processes and formal learning goals in a university and lifelong learning context, it is necessary to analyse the suitability of using learning management systems and social networks in a formal academic environment.







To this end, we will start by categorising the educational technologies concerned according

to their degree of organisational control. We will reflect on the organisational control of VLEs considering the ability of educational organisations (institutions and corporate universities) to design, manage and capitalise on teaching and learning processes in the VLEs that they place at the disposal of their educational communities.

While learning management systems such as Moodle offer the possibility of controlling the series of processes safely and entirely within the bounds of the educational organisation, open social networks such as Facebook escape the necessary control to ensure not only the quality of the educational process but also the data privacy of participants on the course.

However, an excess of control and design have a disadvantage: the need to plan the formal teaching and learning process in its entirety, which limits the emergence of informal processes that social networks allow. Between these two extremes we will now go on to analyse a wide spectrum of network technologies that enable us to consider different degrees of control and emergence of informal teaching and learning processes.

**Table 1. Educational technologies according to their degree of organisational control and support for informal learning.**

Greater organisational control					
Traditional learning management systems (LMS)	Socially oriented LMSs (learning communities 2.0)	E-portfolios (Personal Learning Environments)	Corporate social networks	Academic social networks	Open social networks (e.g. Facebook, Twitter)
E.g. Moodle 	E.g. RCampus 	E.g. Mahara 	E.g. Campus Groups, Academia.edu... 	E.g. Academia.edu... 	E.g. Facebook, Twitter... 
					Greater support for informal learning



**3.1. Learning Management Systems** are also known as course management systems for their potential to reproduce an organisational model of the training. This includes the modelling of courses, educational sequences and activities, and also the modelling of the range of educational players and their respective roles and functions (participants, tutors, teachers, course administrators and/or system administrators). This ability of learning management systems to organise formal educational processes often limits informal learning.



Figure 1. Use of Moodle in ESADE Business School.

**3.2. Socially oriented learning management systems (learning communities 2.0)** are the 2.0 evolution of traditional LMSs. This new type of learning management system combines the design of top-down educational processes with the possibility of creating learning communities 2.0 in which users can generate both content and educational activities and share them with the community. In short, they are a technological solution that combine the advantages of traditional LMSs with the possibilities of Web 2.0 social technologies, but safely, as the system is still under the control of the educational organisation.



Figure 2. RCampus On Demand WebCourse creation.

**3.3. E-portfolios**, unlike course-based LMSs, are solutions that focus on the participant. Each participant has the possibility of creating a collection of evidence of his or her learning. In turn, other participants and tutors or teachers can provide qualitative or quantitative feedback to this evidence. E-portfolios can be installed as corporate solutions for a specific learning community or used online on public sites.

In the first case, the degree of organisational control can be as high as with the learning management systems described above. E-portfolios have raised great expectations as a technology over the last five years, but they have not become widespread due to the conceptual and technical difficulty of applying current solutions.



Figure 3. Mahara use in the University of the District of Columbia.

3.4. Corporate social networks are social technologies that are only available to members of the organisation that owns the social network. These technologies are not designed specifically to support teaching and learning processes, but they offer great potential to support the creation and sharing of informal educational content.

The installation of a social technology into a corporate environment provides it with all the functionalities of social networks, at the same time maintaining organisational control over content. Despite this potential, the capitalisation of content in these horizontal open environments is hindered by the lack of knowledge capitalisation functionalities to be found in socially oriented LMSs or learning communities 2.0.

For this type of technology to succeed it is necessary to have a critical mass of participants, in order for the internal dynamics of content generation and sharing to be sufficient to be relevant to the community.

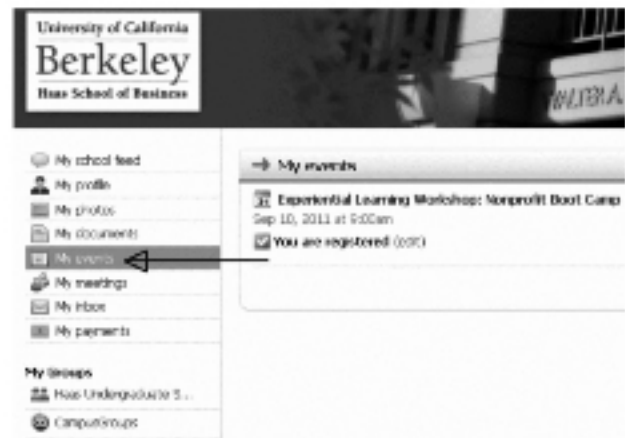


Figure 4. Haas School of Business CampusGroups.

3.5. Academic social networks are public social networks, but with an explicit academic focus. Their interest depends on the degree of confluence between the content and educational activities of these social networks and those of the organisation. Being public networks, educational organisations can neither design nor manage nor capitalise on the knowledge and activities generated within them.



Figure 5. Open University Business School in Academia.edu.

3.6. Public social networks are today one of the most popular ICTs, both in the personal sphere and in that of organisational marketing. However, public social networks have been used as VLEs in very limited cases, often

in relation to educational innovation experiments (Lambropoulos & Romero, 2009) without any intention of widespread organisational implementation.

As with academic social networks, their public nature not only impedes the management and capitalisation of teaching and learning processes but also constitutes a major privacy problem for their users. Data on the participants in these social networks does not belong to the educational organisations, and violations of the right to privacy may occur, leading to ethical and legal problems.



Figure 6. Harvard Business School Twitter.

#### 4. Conclusions and Prospects.

In this article we have considered educational technologies according to their degree of organisational control exerted by the educational organisation over the virtual learning environment (VLE) and the degree of support for informal learning provided by social technologies. Considering the importance of informal learning in corporate universities, it is important to take social technologies into account.

However, for ethical and legal reasons we must consider the use of social functionalities

(within learning management systems or as corporate social networks) to guarantee the privacy of the data, content and teaching activities used by a formal learning community in an educational institution. If traditional systems do not provide suitable support for informal learning, we should consider combining them with corporate social networks or socially oriented learning management systems.

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# Blended Learning Model for Management Education in India – A Critical Review

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## ABSTRACT

Technology mediated learning process continuously trying to modernize development and delivery of management education. Strategic use of technology in higher education is needed to foster management education in India. This paper reviews research contributions in the field of e-learning and tries to find out the mix of factors suitable in Indian context. Existing theories and models have been discussed thoroughly to develop conceptual understanding.

**Key words:** *blended learning, management education, pedagogy,*

## Introduction

Since the ancient times, management education has been recognized as one of the most important means for development. Need for its continuous modernization of the learning process in terms of format and content have been realized and purposeful efforts were made globally to redefine the traditional education in tune with professional education. Infrastructural needs made it expensive and consequently, out

of reach for many deserving and needful divisions of the society. All this resulted in an urbanized privileged class, thereby defeating the basic idea of developing the masses. Most importantly the management education framework is strategically attributed by the idea of developing cognitive aspects of a manager (Sharma, 2005). To accomplish this aim, the educational planners have worked endlessly and came up with a “proactive strategic approach” towards learning in the form of digital “e-learning”.

Recent technological advances have created the possibility for the discovery of new ways of learning and teaching. The internet has captured the imagination of more people than any other contemporary innovation. Harnessing full advantage of the potential of internet requires researchers to think about teaching and learning in new ways to establish guidelines and benchmarks to ensure quality online delivery and to identify best practices of online courses.

Some critical success factors associated with teaching effectiveness in online delivery mode are – technology, instructional pedagogy, interaction and communication.

Key questions about technology are ease of access and navigation, interface design and level of interaction. The merger of computer, communication and IT enables multimedia capabilities on the Internet. Web based instruction can be complemented over customary instruction. However, understanding how to use the technology to support training and learning activities presents a substantial challenge for the designers and evaluators of this emerging technology. The important attributes required for developing an efficient web site can be page design, Media use, Client side processing, Server side processing and site structuring. Hypertext & Hypermedia are structured around the idea of offering a learning environment that mimics human thinking i.e., an environment that allow the user to make associations between concepts rather than just moving sequentially from one to the next. They are no longer forced to follow linear lesson sequences rather they can define their own specific progression. However some researchers are skeptical about the educational relevance of hypermedia environments. Since links can be made in many ways, including totally arbitrary ones with little semblance to how people associate ideas. Moreover, enabling learning control assumes that students have sufficient knowledge to select and make optimal links. It suggests that there

is a need for substantial work on synchronous computer mediated communication.

Existing techniques for automatically building hypertext structures rarely capture the entire author's initial intentions, and are very limited in their scope for knowledge-based interpretation of documents. Most hyperlinks only propose structural links and reference links. When hypertexts are developed from existing text, the resulting hypertexts traditionally store information more than knowledge. We view the structure of learning material from two different aspects. One aspect is in terms of various concepts and relationships found within the subject. There is a need to define knowledge associated with information in hypertext documents. In most classical hypertexts, this knowledge is not elicited because inclusion and reference link types are not powerful enough to express many of the logical relations within a text. The second aspect is in terms of 'learning methods', which describe the various navigational techniques which a student uses according to the instructional aspects of the subject that they want to learn. There is a need to co-ordinate the learning methods to work with the different concept-relationships of subject material, leading to a flexible system, capable of catering for a variety of instructional objectives.

An abundance of tools have presented nearly unlimited possibilities of instructional design, including synchronous and asynchronous communication mechanisms. A derivative of current pedagogy may result in increased effectiveness of learning through re-engineering instructional models in accordance with the environment and available technology. At the moment the available methods and tools for the specification are not in balance with the rich choices of methods and instruments which are available at the technical level. Most of the methods described are only suitable for the design of specific types of applications and not for broad range of applications varying from simple tutorials



to multi user and multimedia collaboration and simulation processes. It seems that in most projects pedagogical design is specified with rather ad-hoc methods. This could have consequences on the pedagogic quality of the resulting product and on the efficiency of the development process. On the efficiency side, the problem with ad-hoc design specification methods is that they do not stimulate the systemic reuse of existing design elements and existing program code. Assessing the completeness of the design is yet another problem for an efficient development process. Designs are incomplete from the start.

Management education in its formal structure is different from other professional courses as it encourages discussions, dialogue and discourse (3D) which are the democratic ways of developing holistic knowledge of a subject domain (Sharma, 2007).

### **Review of relevant literature**

Stefanov., Stoyanov & Nikolov. (1998) concluded that flexible, online learning allows learners to acquire skills and knowledge at their own pace, to choose the location of study, to choose the time for the group sessions by using flexible learning material. Saunders (1998) reviewed the inter-relationship between electronic support for learning and its connection with different types of work based culture. The work cited the Telematics cab effect in culture. Uys P M (2000 & 2002) discussed the existing tertiary education pattern and recommended a new model for managing educational systems of virtual class infrastructure in conventional education system. Okamoto, Cristea & Kayama (2001) concluded that for obtaining web-based learning environments, intelligent tutoring techniques are being adapted and developed for the web. He remarked that this field has no benchmarks or standards yet although setting standards can be potentially dangerous as it can inhibit creativity. Liang (2001) reviewed a list of guidelines for operating instructional development for a telecommunications distance education, thereby contributing to

improving the quality of distance education. Alison et al (2001) and Alison, McKechn, Ruddie & Michaelson (2001) and emphasized the relevance of Quality of Service (QoS) in Web-based education. He recommended that QoS must be taken into account from many perspectives before traditional educational processes can be satisfactorily transformed into web-based. Drira, Villemur, Baudin & Diaz (2001) reviewed and recommended the functional, architectural and technological views involved in the development network-based distance learning. He also concluded three levels interaction-co-operation, co-ordination and communication and the genetic functions related to each level for such applications. Zumbach & Reimann (2001) reviewed the advantages and disadvantages of hypertext as instructional media and the possibilities of successfully instructing via networks while proving the learning and cost effectiveness of these innovative systems. He presented a framework for the development of web-based learning environments. Brinkerhoff & Klein (2001) reviewed the effects of overview mode and computer experience on achievement, attitude and instructional time. They also reviewed the learning form, beliefs about and design of network -based instruction and hypermedia.

Liaw (2008) reviewed the individual perceptions of web technology as a use and training tool. Littlejohn (2002) reviewed practical recommendations for the design and provision for continuing Professional Development. Batanov, Dimmit & Chookittikul (2002) reviewed and concluded a framework can be used for building educational software systems which can be easily adapted to different levels and subjects of education on top of internet/intranet and Web Technologies. The idea concluded that certain psychological attitudes of students differentially facilitate efficient use of web-based learning approaches. Ghaoui & Ainsley (2002) reviewed and recommended an object oriented methodology for hyper texting the learning material to support the automatic

generation of multiple instructional views. Abdullah M A S (2004) concluded that to deliver learning contents online a learning management system (LMS) is needed to integrate the contents and the integration should be ergonomic. Lavis C C (2005) discusses the cognitive aspects and pedagogic importance of teacher student interactions their inter relationships towards facilitating education. Schmidt C P (2005) concluded that online teaching aids can facilitate only those student who have done well in their back ground course work otherwise students exposed to direct online assignments would not perform well if prerequisite knowledge is absent. (Orza, 2005) concluded that there is a gap of knowledge among the teachers of professional courses towards development of electronic academic portfolio which may be a bottle neck towards the development of online education. Teachers may facilitate education in a better way for the students beyond class room content driven pedagogy in online environment if knowledge gets transformed honestly and candidly. Kiekel Jean M. (2007) reviewed the work flow of various online programmes starting from course design to funding and administration and concluded that for professional online courses the degree of involvement of good quality teachers enhances the success of the delivery of the programme. Teachers show transformative learning skills by collaborating with new ways of education technology. Transformative learning related to cultural differences and may lead to change in perspective. Zakaria (2008) concluded that assistive technology is a powerful tool. Although it is up to the teachers to decide when to use the technology educators must also be open to the technology aspect to education as it is an accommodation towards measuring the accountability assessments.

### **Forms & modes of e-learning practices in management education**

The world of higher education is perceiving sea change as the advent of e- learning

technology driving the entire gamut of higher education sector in a realm of new learning format in terms of technology augmentation and a whole new learning experience. For a student of management education interactive e-learning technologies have many promises to keep. The capabilities of these technologies should accommodate and provide access to the following namely; locally unavailable study material in digital format, searching facilities, interactive simulation games, personalized information and guidance tools for better learning experience, communication facilities to engage discussion threads with peer group, facilities to support differently-abled learners and data analysis tools. As the new technologies are being developed and updated at regular intervals perfect e-learning technology is just like hitting a moving target. For example, the above mentioned capabilities and promises may be altered once we start experiencing 3G mobile phones as a programme delivery tool influencing our behavior. The success of any set of technologies is determined by the level of acceptance among the students. The technological impact on learning experience may be studied under following factors:

- **Cultural**, where students are comfortable with existing e-learning technologies, as they have had experiences of previous use of products same or similar nature.
- **Intellectual**, where students find a whole new engagement through online interaction.
- **Social**, where students take greater responsibility of self learning through online social networking platform.
- **Practical**, where students find a platform of knowledge sharing across a network inviting maximum participation, thus making it suitable for flexible and self paced learning.

Over the last century the educators have been talking about the paradigm shift in higher education and the realization of the same. It could be perceived in the reference frame of



the development of e-learning pedagogy. Although, e-learning could have been the silver bullet solution for all types of higher education, but for the continuous development of the array of learning expectation have made the job a little difficult. In the context of higher education and technology intervention, researchers have developed various models some of which could be worth mentioning here as those models are relevant for management education.

Lewis Elton (1999) has drawn a distinction between hierarchical and cybernetic models of governance. He has analyzed strategies for innovation and change in higher education. He opined that the hierarchical model of governance is a top – down approach whereas cybernetic approach is bottom – up with network structure. Hence embracing a right innovative model of governance would require right balance between the two. Bentley & Wilsdon (2003) corroborated this opinion when he identified the hierarchical model as ‘mechanistic state’ contrary to the cybernetic model which is ‘adaptive state’.

Today Indian management education requires systems to create values for its stake holders by enhancing its capabilities to reconfigure them instead of a static blue print. Every system thrives for knowledge management which essentially leads up to continuous innovation. Hence adaptive learning must be exploited in conjunction with ‘generative learning’ which gives us the capacity to create something new.

Historical antecedents depict a square fact that technological change in the interactive multimedia technologies has been driven mostly by market forces and rarely for meeting the needs of the students.

In management education e-learning technologies using multimedia capabilities throws enormous possibility of designing and developing new programmes. Laurilliard (2002) has envisaged that every student has individual learning objectives which can efficiently be catered by deployment of

multimedia oriented interactive technologies and she writes that these technologies “...for example, enables students to explore the effects of music on audience interpretation of a film scene, with the goal of producing a combination that generates a specific effect when tested with the target audience; students of art could investigate the principles of composition of paintings and collages, with the goal of using them to illustrate how certain visual effects are produced; drama students could investigate the effects of the timing of pauses in a monologue with the goal of ‘directing’ a given speech to produce their chosen interpretation.

*In the social sciences, a role play model of human transactions can assign roles, tasks, and information to different groups or individuals, and process their decisions to simulate, say, political negotiations; students of child psychology could use a video display and editing program to practice their interpretation of video-recorded behaviours, with the goal of presenting their own evidence of a particular interpretation of a child’s behaviour.”*

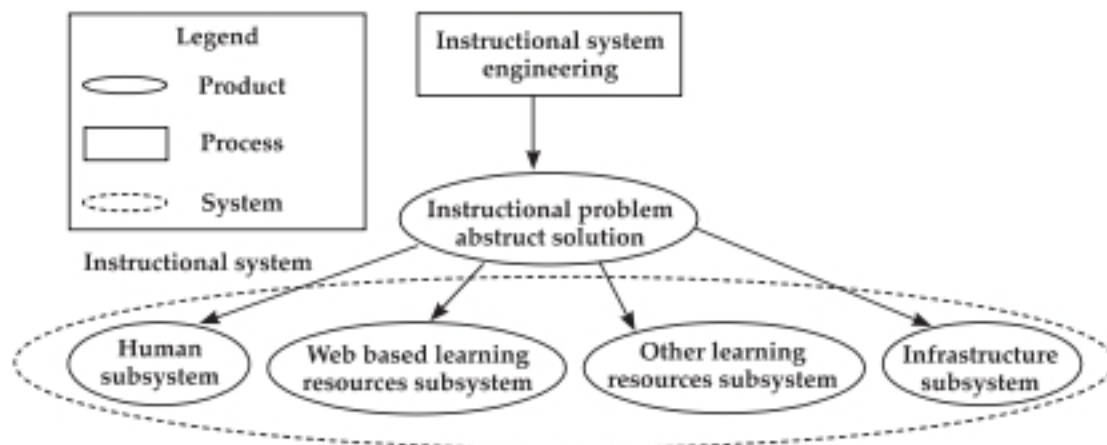
WBIS design architecture, as mentioned in the figure below discusses the criticality of design of various subsystems of WBIS. In those subsystems, apart from human factor, the technological issues that draw our attention become crucial for the success of a strategic WBIS.

Whenever we talk about forms and modes interactive multimedia technologies that facilitate management education we primarily focus on four aspects namely communication, Content resources, connection and collaboration.

**Communication:** Between two modes of communication via the Web; in synchronous mode user may choose chat room messengers, web conference and electronic white boards (Romiszowski, 2004). In asynchronous mode user may choose from bulletin board, feedback /email, SMS.

**Content-resources:** Content generation also takes place in two modes print and non –





**Figure 1: The process of creating an instructional system's architectural blueprint (Symeon Retalis & Paris Avgeriou, 2002)**

print. In print mode, material may include traditional text books, web pages, hand outs, slides, transparencies and all other presentation material that may be printed. Non – print mode includes mainly multimedia content (non-print) and all that may not be printed.

**Connection:** An organization connects to the web with or without wire. Wired option includes modem, cabled network to connect to Internet or Intranet. There are also wireless options to establish a connection through the wireless application protocol (WAP), Infrared, Blue Tooth.

**Collaboration:** The very essence of collaborative learning lies in inducing discussion among learning communities and knowledge sharing among learners. In order to collaborate, regardless of where the user are means of file sharing is a necessity. This would require not only a common platform of document creation, but also a file transfer protocol.

For the successful implementation of an online programme the actors of the environment must be given due importance and be understood all its criticality and its dimensions. The People – Process – Product continuum or P3 model by Khan (2004a) identifies with the inherent criticality of online programmes and

suggest a framework for instructional systems design covering pedagogical issues in much wider spectrum. As the organizations are in a process of implementing e-learning initiatives and in the same way integrating instructional pedagogy with the organizational culture under periodic review of the same have become extremely important. The format of learning specifically for management education is changing rapidly, as the market the market forces are driving the learning needs. Hence, the P3 model which advocates evaluation of online programmes on the continuous basis found acceptance as it instills rigor in the programme. To continue with the process online programme evaluation Khan (2004) integrated his P3 model with E-Learning Framework to develop a Comprehensive Approach to Programme Evaluation in Open and Distributed Learning (CAPEODL).

The E-Learning Framework addresses the following eight dimensions on open and distributed learning under organizational settings which are

- **Technological:** This includes technology infrastructure, planning system software and hardware
- **Resource support:** This includes online support and other resources important for online learning environment.

- Pedagogical: this addresses teaching and learning issues involving content, design approach, audience and strategies of e-learning environment.
- Interface design: It identifies with content design, navigation and usability testing.
- Institutional: It refers to academic and administrative issues and student services.
- Evaluation: It refers to assessments of learners and instructional systems and overall learning environment.
- Ethical: It identifies with learners cultural, geographical diversities, socio-political accessibilities and legal issues.
- Management: This includes overall management and maintenance of learning environment and distribution of information.

Every e-learning initiative travels across the following development phases involving planning design, development, evaluation, delivery and maintenance of information and curriculum. Every initiative can be split into two major portions namely content development and content delivery and the development process is interactive in nature. Although the evaluation process is auxiliary to the core development process, still during the formative days of any initiative rigorous revision of the development process helps zeroing on the learning objective. CAPEODL reviews the quality of products and services during e-learning initiative development phase under eight dimensions mentioned previously.

### **Summary of the Literature Review**

E-learning has been touted as one of the fastest growing education sub-sector of total education industry with present market size of \$ 2.3T USD globally. The market of online education in higher education sector is expected to grow to \$69B USD by 2015 (Hezel Associates, 2005). Keeping the above potential

in mind educators and courses must deliver value learning so that it ultimately benefits the students. For an education system the primary stake holders are teachers, students and the organizations offering education. Wagner, Hassahein and Head (2008) has discussed the perspective of the stake holders and developed a matrix for better understanding of the concept as mentioned in chapter 2. Since the focus of our study is to develop a blended learning format using multimedia oriented WBIS for the success of management education. Hence this matrix would prove immensely crucial measuring the expectation and concerns of the primary stake holders.

For the students, e-learning may create motivation greater scope of accessibility to the courses which they would have not joined otherwise due to geographic dispersion or time constraints (Huyanh et al., 2003); (Kabassi and Virvue, 2004). Since e-learning environment provides with a shift from traditional classroom education it commands more discipline and maturity. Students can exercise freedom in terms of information accessibility from different sources (New Media Consortium, 2007) which makes them more independent than in the traditional format (Huyanh et al., 2003). At the same time it has also been observed that in case of pure online format which lacks high social interaction and instructor led teaching (ILT), incidences of drop outs rose higher (Zhang, Zhou and Briggs, 2006). Another factor which may not be directly concern the effectiveness and delivery of e-learning programmes still it has a bearing on the success of implementation of any such programme. A study showed that developing and administering e-learning programmes almost doubles the workload for the instructor than in traditional format (Douhty, Spector and Yonai, 2003). If we tilt the angle towards our next stake holder i.e., organizations offering e-learning programmes we may find that with the advent of e-learning the organizations can enroll students across the globe diluting geographic boundaries (Young, 2001), i.e., the quest for virtual organization



are being realized. The factors that deter the organizations to promote such courses may include budgetary constraints (Huynah et al, 2003), over customized programmes not in compliance with global standards and poor acceptance from student community, cost intensive technology deployment (Weller, 2004), infrastructural bottleneck in terms of poor bandwidth, inadequate computing facilities or it could be an HR challenge which may require deputing additional manpower which essentially shoots up the budget (Young, 2001) to name a few.

Moreover the tendency of the organization to calculate the effectiveness of online programmes in terms of return on investment (ROI) has led them to offer cheaper programmes with less scope for innovation (Romiszowski, 2004) ; (Weller, 2004).

Another significant factor which might have led to reluctance of the educational institutions to offer this programme is the resistance from its faculty members who do not accept the e-learning way of education and rate them inferior to traditional classroom training (Huyanh et al 2003). Therefore acceptance of online education in any of the forms – pure or blended would require support from all quarters of the society. If organizations do not find students with online degrees suitable for employment, the enrollment for such courses would surely dip (Chany, 2002). The employer may have their reasons still we need to re-strategize our programme structure, delivery and focus for a successful implementation of online courses.

Apart from the abovementioned important stakeholders the tertiary stakeholders group incorporate the organizations, content developers & technology providers and accreditation bodies. They may not directly involve in theorizing and conceptualization of courses, their role seems pivotal from operational perspective i.e., developing infrastructure, delivery and compliance with industry standards.

The scope of e-learning in management education is growing at a rapid momentum and our focus should be to maximize this potential by implementing e-learning initiatives under a technology combination which essentially brings in a pedagogic democracy catering to individual needs, thus fulfilling final educational objectives. Having analyzed the primary, secondary and tertiary stakeholders of e-learning environment and measured their roles towards the success of e-learning initiatives we need to figure out a suitable strategy of overcoming challenges of growing educational expectations.

With the emergence of newer technologies and complex market economics, management education is seeing sea change in terms of variety of subject and content. In the light of knowledge economy in the globalized environment neither pure traditional education setting nor pure online format may augment actual form or flavor of management education. Hence in order to harness informational accessibility, individualized learning and academic freedom which essentially personify higher education we have to resort to a format which can be termed as 'blended learning',

The features and factors of this format have been explored in following chapters which would essentially give rise to a new model of management education.

Besides identifying essential factors required for an efficient MWBIS the study also aims to suggest strategies to develop an effective framework for the propagation of management education in India. Hence, before proceeding further we need to focus on theoretical underpinnings with reference to definitional issues of strategic management. According to Chandler (1962), "strategy is the determination of the long-term goals and objectives of an enterprise and the adoption of courses of action and the allocation of resources necessary for carrying out these goals"

Tertiary education, particularly management education brings along with it a professional dimension has to be dealt to strategically to meet student's expectation. As both formal education and e-learning in their pure form have not been proven very effective, hence blended form that bridges both extremes could suffice educational needs.

Delivery of educational content contribute the learning process significantly, hence pedagogic overtures are to be controlled to ensure effectiveness. As professional education clamors flexibility in terms of space to be given to the students there is a need to design a suitable communication channel for delivery and secondary interaction. Technology intervention at different capacities intends to provide for self paced learning and improved visualization. However, owing to its heavy initial deployment cost and unidentified learning goal the investment in technology infrastructure has been miniscule and intermittent. Mostly, across organizations, technology investments meet the formalities and do not figure as a part of the learning strategy. The vocational aspect of management education demands more focus on hands on training thus altering the role of teachers as in primary or secondary education system. In order to respond to such changes an integrated learning system is needed to be in place specifically designed for management education bridging two maxims of management education i.e., pure formal and pure e-learning.

## Conclusion

The practice of using e-learning pedagogy in management education in its traditional settings of India has been intermittent. The objective behind the initiative was to foster management education for better learning gains. Multimedia tools could simulate the real life problems in laboratory environment thus facilitating higher retention of knowledge for students.

The study was conducted to understand the implications of multimedia web based

instructional system in management education. There were many questions that needed an answer; from its acceptability among teachers and students to its perceived benefits to infrastructural issues. The skepticism regarding adopting e-learning pedagogy might have come up due to limited practice or exposure to technology tools. Lack of enthusiasm among senior academicians may create a digital divide between the students and teachers deterring access to the knowledge. This issue is of paramount importance hence needs to be addressed with gravity. It has also been found that creation of an inter-institutional knowledge repository consisting of data regarding institutional research, teaching tools, course curriculum and subsequent content etc., (Boezerooy, 2006) would facilitate the students across different parts of India to stay connected over a global private shared knowledge network. Researchers also in turn can benefit from the captive knowledge (Prtichard (ed.), 2002).

While working on this research assignment one of the main objectives was to identify the gaps in present structure of management education and developing a model of education bridging those gaps subsequently. Present teaching pedagogy is not fulfilling the learning requirements of the students and the level of satisfaction is also low among the corporate.

Further investigation has revealed three different models of management education namely Pure e-learning, Pure traditional and Blended format of learning. Blended learning has been defined by Singh as "*Blended learning mixes various event-based activities, including face-to-face classrooms, live e-learning, and self-paced learning. This often is a mix of traditional instructor-led training, synchronous online conferencing or training, asynchronous self-paced study*" (Singh, 2003). Requirement of blended learning has been realized by researchers as "*a single mode of instructional delivery may not provide sufficient choices, engagement, social contact, relevance, and context needed to facilitate*



successful learning and performance" (Singh, 2003).

Pure e-learning format has not been accepted in India, perhaps, we in India are not ready yet to adopt e-learning as a mode of learning. There could be number of issues that could have lead to such decision like infrastructural issues, factor of expenses, psychological barrier, lack a well trained faculty, maturity among students etc.

Pure traditional format has been given higher precedence over pure e-learning. Management education in its existing traditional format has not been able to satisfy the students owing to various issues like limited interaction among the students and teacher, rigid curriculum, narrow range of specialization etc. thus reducing academic freedom and interactive learning.

Considering the reluctance towards adopting technology mediated learning and traditional classroom and curriculum based learning the study has found that there could be an alternative pedagogy bridging gaps and meeting expectations by blending the variables of both types and can be termed blended format of learning. The observation has been aptly corroborated by Smith (1999) with the statement: *"With an increasingly diverse range of pedagogical methods being employed by academics, little that students have previously learned in traditional classrooms has prepared them for the era of online learning"* (p. 1).

The variables like Peer group learning, self paced learning, Role of a teacher as a moderator, real life problem analysis, contextual and choice based learning etc. have formed the foundation of this model.

Since management education deals with post graduate level students and students might have domain expertise owing to their previous work experience hence respecting their wisdom would be one of the critical issues of collective learning (Dzakiria, 2006). If the students carry certain level of

work experience prior joining management programme it might help them in knowledge sharing among peers and solidifying own knowledge (Ginnaousi et al, 2009).

Academics at post graduate level demands maturity and rational approach from students hence the teachers are also expected to assume different roles as the students grow in knowledge (Segrave & Holt, 2003) i.e., from traditional teacher to moderator or facilitator. Pedagogy in school level academics would have to shift to andragogy when it comes to teaching at post graduate level. (National Research Council, 2009)

Emphasis has been laid on contextual and choice based learning which indicates that the time has come to put an end to 'one size fits all' type of curricula, rather domain specific micro level and focused curriculum should be imparted befitting individual learning requirements. We can always infer from the result that instead of pushing any general programme on management a detailed survey should be conducted which in turn would definitely bring forth expectations, requirements and present skill level from the students. After a thorough analysis various learning prescriptions could be generated which will lead formation of respective curricula. Now, this approach again throws few questions in front of us; the entire exercise would require the institutes to have a huge faculty pool to accommodate such wide array of choices followed by other infrastructural issues like books, classrooms, computers etc. Given the circumstances, it can be assumed that very few institutes would have such kind of infrastructure or like to enter into such expensive affair. Hence, forming an integrated knowledge network would surely cater to the requirement where institutes would have to share individual knowledge resources for collective learning and mutual growth. Preference is given to such practice due to its convenience in use, speed, accessibility and availability highlighting the acceptance of technology tools in formal curriculum.



## Conceptual contribution

Prof. Subhash Sharma's (2007) 3-D Grounded Praxis model of learning identifies with these factors quite evidently as management education in its formal structure involves Discussion, Dialogue and Discourse. This model seems befitting in its traditional setting but online learning causes a paradigm shift in the way education has been dealt so far. Although pure e-learning has so many promises to offer still in Indian context the model could not get high acceptance. Pure e-learning model offers three major dimensions in education which are manifested in its enriched content, easy delivery mode and experiential learning. However, from the study, it is evident that instead of previous two models a blended form of two would meet learner's expectations more effectively.

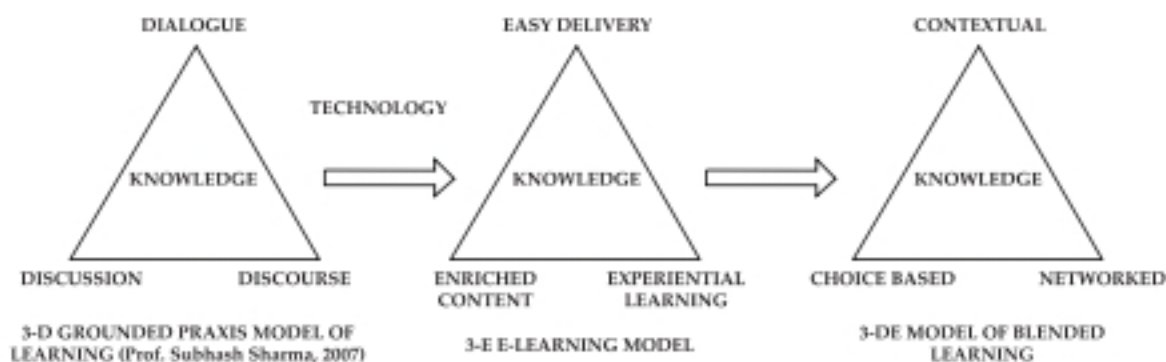
In blended learning format the focus shifts from three dimensions namely enriched content, easy delivery and experiential learning towards contextual, networked and choice based learning. Level of interaction in this format of education is more virtual in nature as target audience may be located at dispersed geographic location. The content must be unambiguous, dynamic and carry good navigational mechanism to create an instructor free self learning environment. Therefore a pedagogic overture of traditional system has been overruled by the factor of convenience. Students of management programmes remain constrained due to lack

of time which causes high student drop outs in traditional courses. Limitations of traditional systems of reaching out to those students have been won over by the flexible pedagogy.

Hence, the new model which is the improved version of 3-D and 3-E model and contextually based on blended environment could be termed as 3-DE model.

## Directions for further research

Although the study adds to previous work done web based instructional system, it primarily focuses on acceptance and usefulness of multimedia web based instructional system in management education in Indian context. The revelations from this study points at few crucial corners. More research in this area would determine suitability of any specific technology. With the emergence of different market situations globally management education also needs to respond to such changes with different array of curriculum. Hence, it is very important to ascertain the dimensions of curricula need to be offered to the students to remain competitive. Secondly, the proposed model needs to be tested across various scenarios using different combinations of scores to understand the usefulness of the model. Blended model of education has been so far conceptualized with intermittent use of technology. This study has given a model for the same. Now, more research needs to be done to find out the degree of involvement of technology tools in imparting education.



## Evolution of Blended learning model

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# Green HR practices in Indian IT Industry: A Comprehensive Study of Environmental Attitudes

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## ABSTRACT

Green issues have been a subject of HR concern for a very long time. Business houses are following suit and are devising green policies and practices within their companies to reduce their carbon footprint. HR is playing a prominent role in helping organizations achieve this by initiating various people management policies and practices in these lines. The concept of 'going green' generally refers to following practices that could lead to more environment-friendly and ecologically responsible decisions and who else is better placed to craft such policies than HR? HR has a very important role to play in the pursuit of greener businesses. Its closeness to people, across departments makes it arguably the best-placed business function to introduce and enforce greener working practices and transform environmentally unfriendly behaviors. HR managers have the tools and the opportunity to leverage employee commitment and engage them in the firm's green strategy. This paper deals with determining how and to what extent HR policies and practices can improve the environmental performance of organizations. Further, an attempt has been made to identify various Green HR initiatives taken by the organizations and the employee awareness and attitudes towards these green initiatives with special focus to IT industry.

**Key Words:** *Green issues, Carbon footprint, Environment unfriendly behavior.*

## Introduction

Across the globe, we are moving from an industrial-based financial system to a talent based economy. We are also entering a green economy – one in which consumer and employee expectations and future environmental change will require businesses to address “green” issues.

Environmentally conscious organizations will become increasingly prominent as we re-enter into a period of growth. While CO2 growth may have stabilized during the recession, it is destined to increase again as businesses increase production and other business activities. In addition, during the recession, the main environmental focus of many businesses was placed on reducing waste and optimizing resources. A renewed focus on growth provides unique opportunities for businesses to become green by looking at ways to create new environmental DNA while producing operational savings by reducing their carbon footprint.

## What is Green HR?

The term ‘green HR’ is most often used to refer to the contribution of people management policies and practices towards the broader corporate environmental agenda. Typical green activities include video recruiting, or the use of online and video interviews for minimizing travel requirements. Green rewards includes the use of workplace and lifestyle benefits, ranging from carbon credit offsets to free bicycles, to engage people in the green agenda, while continuing to recognize their contribution.

## Building the Green Business

HR can have a significant impact on the broader green agenda. For services-oriented business in particular, employee focused green initiatives can be extremely impactful since the workforce is often the largest single contributor to waste and pollution. Although

green initiatives are often supported by an operations group, HR can also play a role in reviewing how the business works and identifying how people can act differently in order to reduce their use of energy and materials.

A relevant focus should be placed on job and organizational design. Increased efficiencies in organizational hierarchies, more virtualized work or eliminating unnecessary time spent in the office and optimizing the use of company resources, including travel, can uncover significant cost savings and efficiencies. Increasingly, companies around the globe are supporting greener options include telecommuting, flexible work schedules (allowing people to travel outside peak times), “hot-desking” or hoteling office space, etc. HR can also work collaboratively with the workforce to encourage employees to think more environmentally consciously when developing products and services (and even creating products and services to help customers manage their environmental impacts). Product and manufacturing companies have a great opportunity to look for supply chain efficiencies that can have both a long-term economic and environmental impact.

In the evolution of HR, establishing a green agenda can have a big impact on an organization and can also increase HR’s impact outside of traditional workforce and personnel areas. Strong environmental management can – and should – have an economic impact to an organization including reducing operational costs, increasing sales in new markets, engaging employees and building a strong employee-centric culture. However, for most businesses, there will still be limits to how far this approach can go. Unless employees are already highly engaged in helping a business succeed, it is unlikely that they will be very highly engaged in helping the business through better environmental management.



## Creating a Green Brand

Creating a green initiative requires a comprehensive approach throughout the organization. Rather than using environmental policies to help achieve existing business objectives, organizations can embed a green "brand" at the core of the corporate strategy and throughout all aspects of sustainability and corporate social responsibility. Being "green" can become an integral part of the company's way of doing business and a basis for both the organizations corporate and employer brand.

The green opportunity for many organizations can be a compelling competitive advantage. In terms of the corporate brand, this is not just about making the existing business greener, but finding more green ways to do business. In terms of the employer brand, it is both about seeking to recruit people who see environmental management as important, and being able to compete for critical talent more effectively by leveraging an employment brand.

Sustainability and environmental management can be used as a beachhead for a number of ongoing initiatives which, if continued over a relatively lengthy period of time, can make a very worthwhile contribution to the environment, an employer's carbon footprint, the employees and the profitability of the organization.

Companies such as GE, Shell and Nike have recreated their corporate brands around their social and environmental behaviors. Wal-Mart has been using 'going green' to offset negative press coverage regarding its treatment of employees and impact on local communities. More than a half a million of Wal-Mart employees have made personal commitments to the environment by supporting company-sponsored initiatives. British Sky Broadcasting (Sky), the largest UK-based television service, has established a 'bigger picture' strategy to raise its customers' awareness of the impact that individuals have

just from living their lives, and to engage them in practical and inspiring ways to use energy efficiently. The company believes that to support this it needs to help its employees inspire others by becoming more progressive and efficient in their own energy use. Specific actions within the company's green program have included offering staff incentives for buying a hybrid car, savings on carbon offsetting, on public transport and bikes. Sky have also made additions to their holiday discount scheme to feature holiday companies operating in an environmentally friendly way, and to their volunteering program, for example to volunteering in schools, to help pupils undertake environmental projects. Some of the company's actions have been really simple, but still very effective (at least for raising awareness), for example allowing employees to buy a coffee mug at their coffee bar rather than using disposable cups, and then receiving a small discount off a cup of coffee.

Sky has also launched a carbon credit card where employees receive points for taking public transportation or walking to work, or video conferencing rather than taking a flight. Prizes are given to people with the most points. Each employee's individual portal to the company's intranet shows a coral reef, and the more points that employees earn -- the more fish and perhaps a shark swim around the reef. Fewer points means the reef starts to get dirty and all the fish swim away. This is a really simple but also an imaginative and engaging solution.

## Literature Review

After a wealth of research into green marketing (Peattie, 1992), accounting (Owen, 1992), and management (McDonagh and Prothero, 1997), gaps still exist in the Human Resource Management (HRM) literature on the HR aspects of environmental management - Green HRM.

The past decade marks a shift from thinking of facilities as a way to house the workforce



to thinking about the entire building portfolio of a company in strategic terms (Horgen et al, 1999).

In part this is due to the re-engineering and downsizing of the past decade; but more importantly, CEOs are beginning to think of their buildings as a way to achieve strategic corporate goals. Although the theory and research in this area has not specifically addressed sustainable design, there is reason to believe that sustainability may become a strategic asset in the future (Hart, 1995; Johnson, 1996; Weinberg, 1998; Magretta, 1997; Russo and Fouts, 1997). Proponents of sustainable design argue that green technologies and design strategies will enhance interior environmental quality and thus be more conducive to human health and productivity than buildings that use standard practices (Browning and Romm, 1995).

One way to conceptualize green building benefits is to adopt a framework used by organizations to evaluate their performance. One such approach is the "Balanced Scorecard" (Kaplan and Norton, 1996). The Scorecard assesses four categories of performance: financial, business process, customer relations, and human resource development (which they call "learning and growth").

A survey by the American Society of Interior Designers of 200 business decision makers found that 90% of respondents believe that improvements in office design can increase employee productivity (Wheeler, 1998). Furthermore, 97% said the investment would be worth the costs if a correlation could be made to productivity. The ASID respondents identified five aspects of the environment that they believed affected worker productivity: comfort and aesthetics, privacy, distractions, flexibility of space and customization, and access to people and resources. All of these are factors in interior environmental quality.

General job descriptions can be used to specify a number of environmental aspects. These include environmental reporting roles

and health and safety tasks, which staff are exposed to harmful substances/potential emissions (and their extent), and matching personal attributes to needed environmental competencies, i.e. buying-in specialist competencies via new hires or investing in training. Induction for new recruits is seen to be needed to ensure they understand and approach their corporate environmental culture in a serious way (Wehrmeyer, 1996: 14).

Performance Appraisal can cover such topics as environmental incidents, usage of environmental responsibilities, and the communication of environmental concerns and policy (Wehrmeyer, 1996: 15).

Training is one area where the role of HRM in environmental management has been recognized for some time (as job rotation provides a useful way to train Green executives or future Board members in environmental management, and is seen as a crucial part of successful environmental programmes (Wehrmeyer, 1996: 15). Moreover, Fernandez, Junquera and Ordiz, (2003: 644-646) make the case that an environmental approach requires increases in employee awareness and knowledge of process and materials, and employee skills – meaning employees need 'integrating training' – and for employees to show an emotional involvement to attain objectives.

Fernandez, Junquera and Ordiz (2003: 641, 644) argue that 'an advanced environmental approach demands a culture based on ecological values', which is made in part by managers leading in environmental issues – a mix of manager and worker training, ecological awareness and high levels of motivation to generate enhanced environmental performance.

Reward packages are related to acquiring designated skills and competencies (and not just for performance), as they are seen to be important factors in performance over the long-term, an example being that knowledge

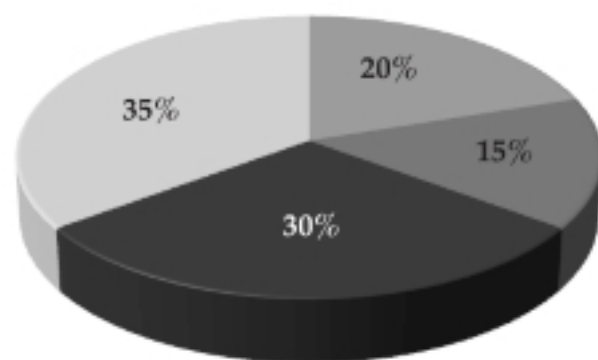
of environmental legislation or chemistry may prevent serious accidents or illegal emissions occurring (James, 1996: 44-45)

### Research Design and Methodology

The study is exploratory in nature as it investigates the area and provides insights into understanding the problem. A structured questionnaire was employed for employers (HR executives) and their employees to gauge the extent of various Green HR initiatives taken by their respective organizations and the employee awareness and attitudes towards these green initiatives. The reliability of the questionnaire was judged by Cronbach's Alpha score, which came out to be 0.852. A convenient sampling technique was employed to collect the responses of 75 employers (HR Executives) and 200 employees of varied companies of IT industry within Delhi and NCR region. The responses of the employees were recorded on the major parameters of green workplace environment and were statistically analyzed using mean response and percentage method.

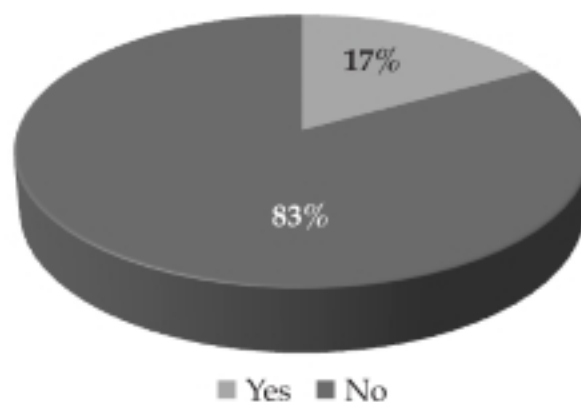
### Data Analysis and Results

- 50% of HR professions indicated that they have a formal or informal environmental policy



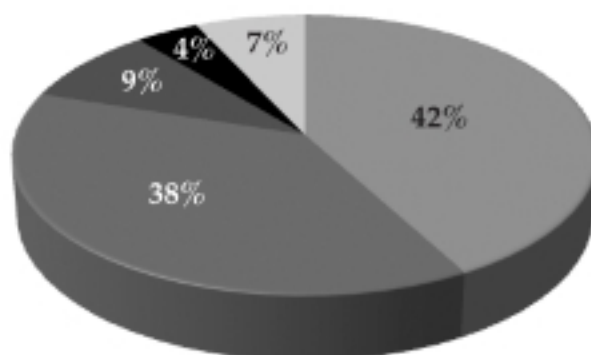
- Yes, we have a formal policy
- No, but planning in next 12 months
- Yes, we have an informal policy
- No policy, no plans

- 83% of the organizations surveyed do not have any separate budget for Green Activities



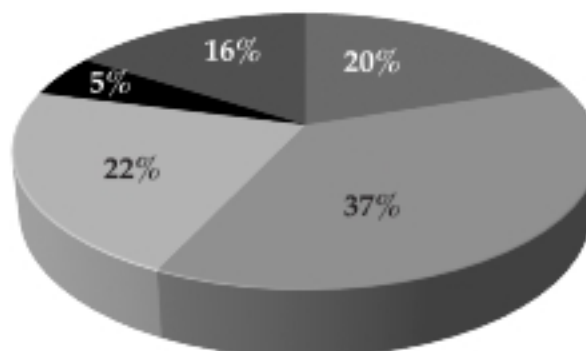
■ Yes ■ No

- The Green Programs in companies are mostly handled by operations and HR department of the organizations



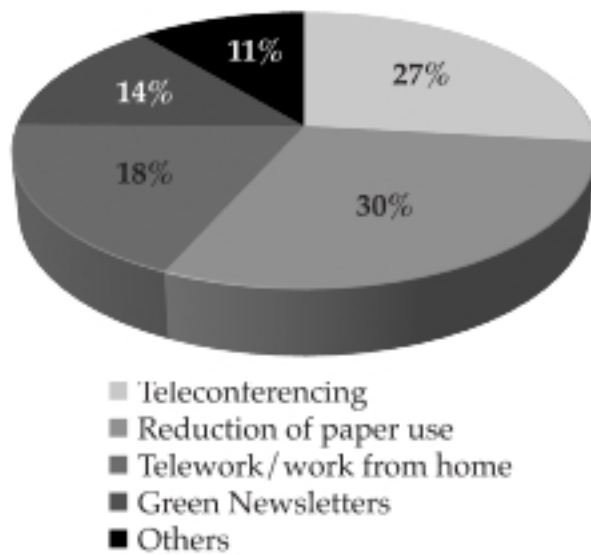
■ Operations ■ HR  
■ Corporate Responsibility ■ Finance  
■ Other

- 37% of the organizations have Senior Management responsible for the creation and implementation of Green Programs while only 20% of HR is responsible for the same



■ CEO ■ Senior Management  
■ HR ■ CFO ■ Others

- Top three Green HR Practices reported by the HR professionals are teleconferencing, reduction of paper use and work from home



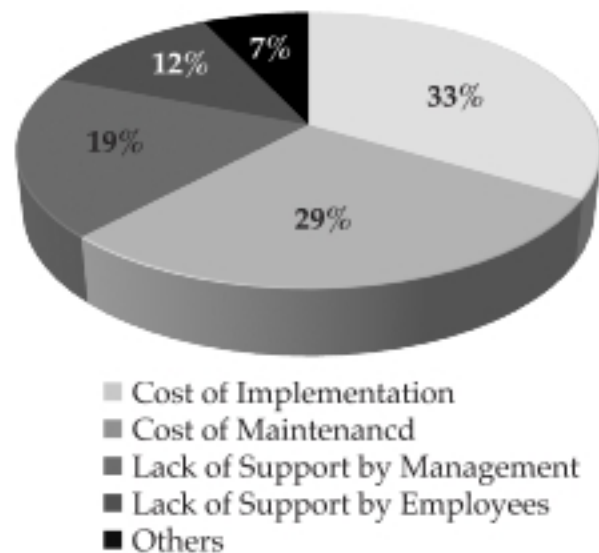
- About 70% of the organizations use Newsletters and publications to demonstrate its commitment to Green Programs and 21% do it through Organization's Stated Goals



- According to the HR professionals the main driver of Green HR practices is the contribution it makes to society while only 7 % view competitive advantage as its driving force

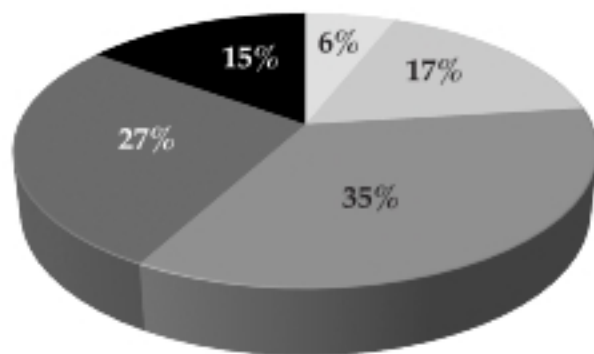


- The major barrier for Green HR Practices in Organization is the cost of implementation which rounds up to 33%



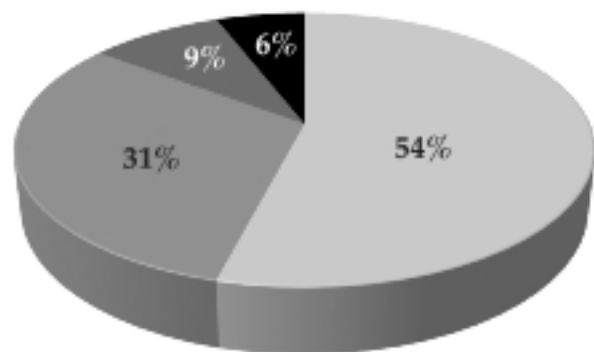
- More than 50% of HR professionals indicated that company's Green HR effort help it to attract high quality employees





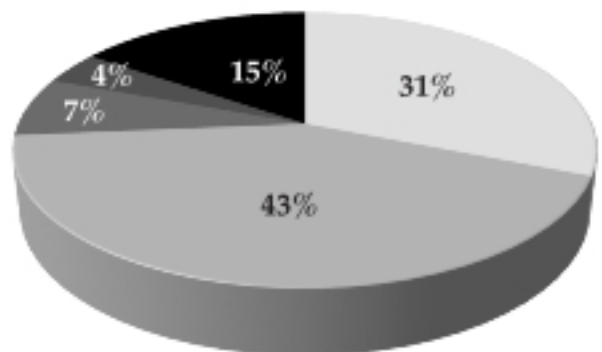
■ Strongly Disagree ■ Disagree ■ Some what Agree ■ Agree ■ Strongly Agree

- 73% of organizations reward employees with Awards and Special Recognition to encourage the Green Behavior



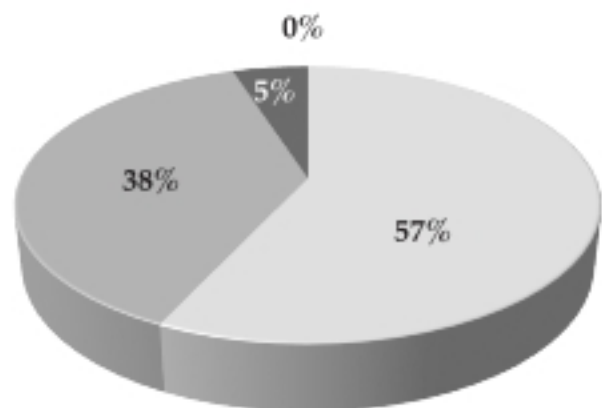
■ Award and Special Recognition ■ Prize Incentive ■ Monetary Incentive ■ Others

- Nearly 43% of HR professionals reported Improved Employee Morale as positive outcomes of the organization's Green HR practices



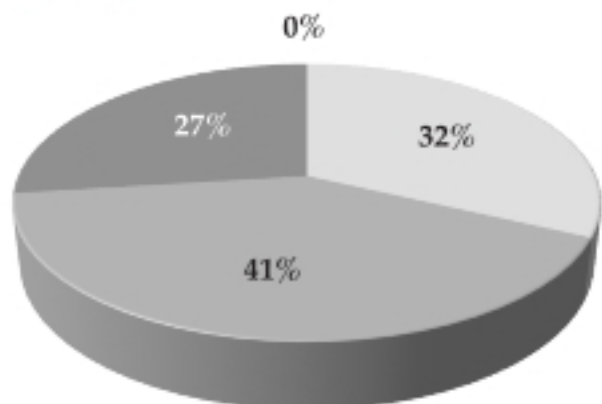
■ Improved Employee Morle ■ Stronger Public Image ■ Increased Employee Loyalty ■ Increased Employee Retention ■ Others

- More than 90% of employees consider themselves environmentally conscious



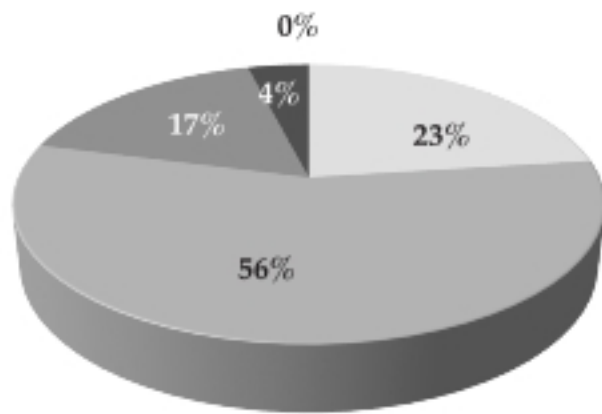
■ Strongly Agree ■ Agree ■ Neutral ■ Disagree ■ Strongly Disagree

- Nearly 73% of employees agree that they make environmentally conscious decisions at work



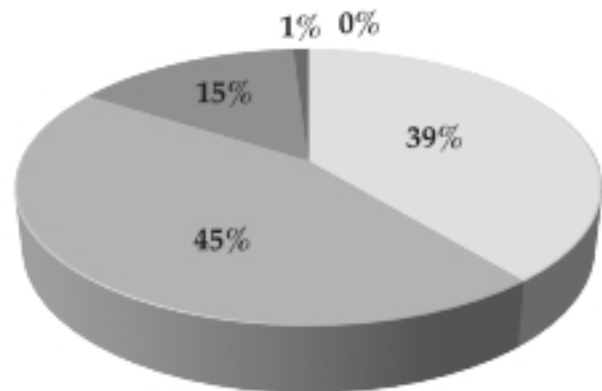
■ Strongly Agree ■ Agree ■ Neutral ■ Disagree ■ Strongly Disagree

- 56% of employees consider their company to be environmentally friendly organization



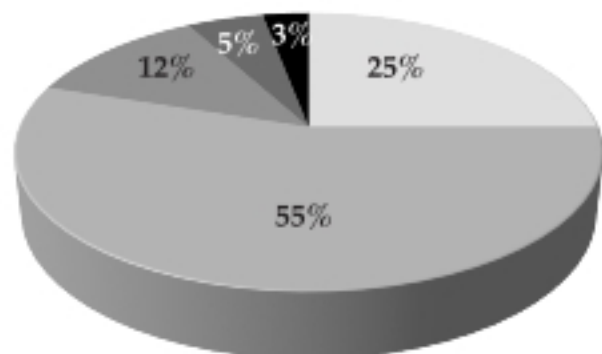
■ Strongly Agree ■ Agree  
 ■ Neutral ■ Disagree ■ Strongly Disagree

- Considering all the priorities 84 % of employees agree with the fact that it is worthwhile for the company to investigate ways to be more environmentally responsible



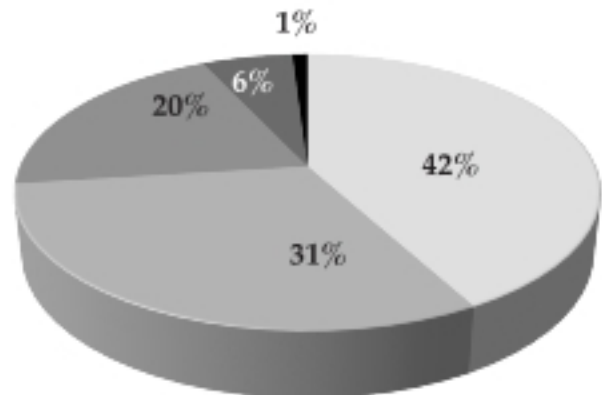
■ Strongly Agree ■ Agree  
 ■ Neutral ■ Disagree ■ Strongly Disagree

- Nearly 55% of the employees strongly agree that the company's efforts to act in an environmentally responsible manner will instill a sense of corporate pride in existing employees



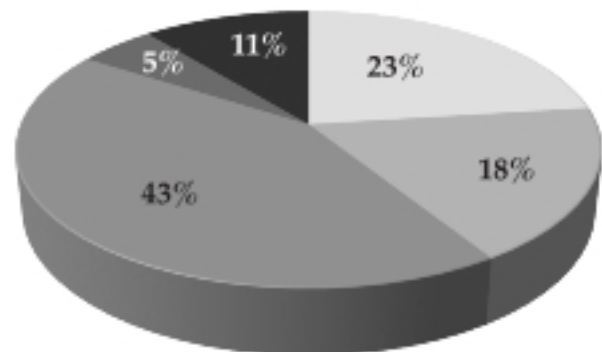
■ Strongly Agree ■ Agree  
 ■ Neutral ■ Disagree ■ Strongly Disagree

- 41% of employees strongly agree that company's efforts to act in an environmentally responsible manner will help it to attract high quality employees while 7% of them disagree with the same



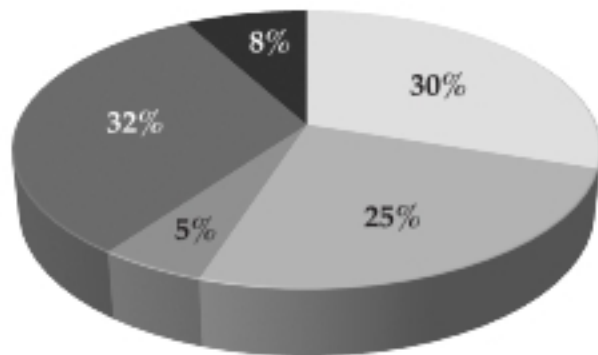
■ Strongly Agree ■ Agree  
 ■ Neutral ■ Disagree ■ Strongly Disagree

- 43% of the employees reported that the organization should focus its Green Efforts on tele-work / work from home



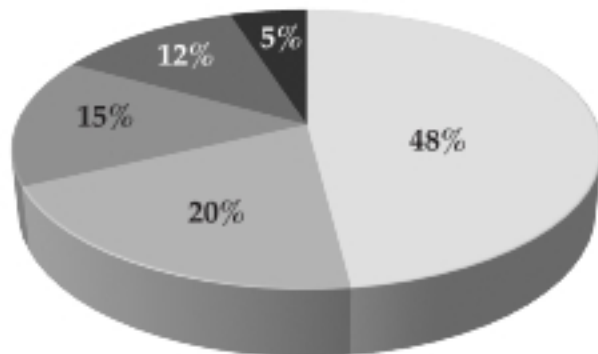
- Teleconferencing ■ Reduction of paper use  
 ■ Telework / work from home  
 ■ green Newsletters ■ Others

- According to the employees the three main drivers of Green HR practices are the contribution it makes to society, the profitability derived by the company and attraction and retention of top talent



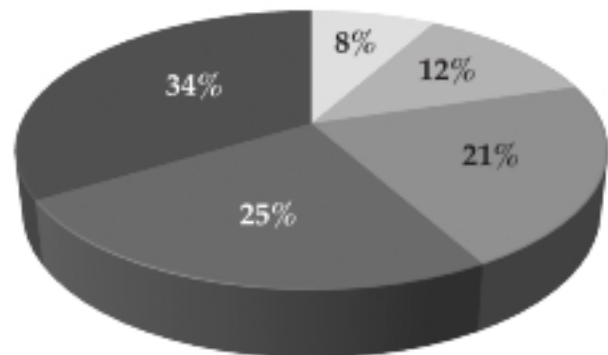
■ Contribution to Society  
 ■ Drive profitability  
 ■ Attract and retain top talent  
 ■ Public Relation Strategy  
 ■ Competitive Advantage

- The main barrier of Green HR practices for organizations as indicated by the employees is the cost of implementation which account to around 48%



■ Cost of Implementation  
 ■ Cost of Maintenance  
 ■ Lack of Support by Management  
 ■ Lack of Support by Employees  
 ■ Others

- 59% of employees reported that it is likely that they would be staying in an organization as a result of its Green HR practices



■ Very Unlikely ■ Unlikely  
 ■ Some what Likely ■ Likely ■ Very likely

### Suggestions

HR Operation requires a lot of consumables, such as paper, plastic, envelope and ink toner. Although there are both environmental and economical concerns, it is very hard to use less of those because they are integral part of our basic operations. Then, is it possible to be ecological, economical and practical at the same time? Apart from general green office practices, here are some latest environmentally-friendly solutions to stay Green in the HR functions.

### Green Printing

Paper and toner consumption are both obvious causes for environmental problems, but reducing printing and paper consumption is very hard especially for those corporations with huge numbers of staff, each with their own habits and preferences. More printing naturally leads to increase in paper, toner wastage and Co2 emission. The latest technology has offered a solution to solve this problem. PretonSaver is software which can reduce paper demand by up to 20% and toner and ink demand by up to 50% without degrading the output image quality. One can set the toner reduction rate by department, and it also helps to manage printing jobs by consolidating departmental print logs; one can even set printing page allowance for those departments that doesn't require much printing. According to actual case reference, a company with 1000 employees may reduce its



toner consumption by around 350 cartridges per year and will reduce its carbon footprint by around 1.68 tons of Co2 annually.

### **Green Design for Payroll and Taxation Forms**

Technology is not the only solution to stay Green in daily operation. There are some simple and easy ways to be environmentally friendly, for example by just switching to Green design products like sealer forms. Sealer forms can be folded into a self-contained envelope, so a single piece of paper can both act as a form and an envelope, a perfect way to prepare pay rolls and taxation forms. 'Sealer Solution' enables automatic individual information printing and form sealing in a secure manner. Comparing with traditional payroll printing method by Dot Matrix, its speed can be as fast as 3400 pieces per hour while operating in a comparatively silent mode. It not only reduces the manpower tremendously, but also enhances the indoor working environment in the HR Department.

### **Green Manufacturing & Disposal of Staff ID Card**

ID card issue is a familiar part of HR operation. Usually these cards are made of PVC, which is harder to recycle and cause more pollution. PETG is a better material to produce plastic cards in terms of ecology, it is 100% recyclable, does not produce any noxious fume, and creates less water and air pollution. Moreover, when such cards that contain personal information need to be disposed, the organizations can make use of 'Disposal Service'. This enables the waste plastic cards to be securely transferred for recycling.

### **Recruitment**

General Job descriptions can be used to specify a number of environmental aspects. These include environmental reporting roles and health and safety tasks, which staff are exposed to harmful substances/potential emissions (and their extent), and matching personal attributes to needed environmental

competencies, i.e. buying-in specialist competencies via new hires or investing in training. Induction for new recruits is seen to be needed to ensure they understand and approach their corporate environmental culture in a serious way.

Overall, being a Green employer may: 'Help to increase motivation and engagement (through a shared set of values), reduce labor turnover (because the organization is one in which people want to work), and Improve the health of the workforce (for example, by encouraging cycling to work)'.

### **Performance Management and Performance Appraisal**

Organizations may use Performance Management in Environmental Management by installing corporate-wide environmental performance standards (which cover on-site use, waste management, environmental audits, and the reduction of waste) to measure environmental performance standards, and developing green information systems and audits (to gain useful data on managerial environmental performance). They can also include a green audit program that contains field audits – which are seen as important, as they can give employees a mechanism by which they can raise any recurring problems, and gain information and feedback on past and future environmental performance of their firm. Performance Appraisal can cover such topics as environmental incidents, usage of environmental responsibilities, and the communication of environmental concerns and policy.

### **Training and Development**

Training is seen in the literature as a key intervention to manage waste (in terms of both prevention and reduction), and occurs through organizations training teams of front-line employees to produce a waste analysis of their work areas. Organizations may include a Total Waste Minimization (TWM) component into their training, and

can also use education initiatives in general waste minimization. Training organizations in environmental management may involve regulatory requirements, employee awareness, and Training on Environmental Quality Management (TQEM).

Organizational departments may work out their own environmental targets individually. Such training could proceed in three stages of training content such as environmental legislation and the Environmental Management System (EMS) (for environmental managers); issues like waste management, transport and air emissions; and a discussion of treating waste and ground water, communications, awareness-raising and risk management.

Environmental training may include induction training for new staff, awareness training for more experienced employees, and training on specific green topics for staff specifically associated with environmental operations and/or co-ordination.

A number of steps may be used to establish an environmental training system, such as an audit of existing training system resources and activities, forming a corporate environmental committee (with HR representatives, environmental professionals and other executives on it), a job analysis producing a job description, and environmental awareness as part of induction training or to use a performance management system to monitor and review performance on productivity, quality, wastage and accidents. This may be followed by training to do the job, and an assessment of the attitudes, knowledge and skills staff may need for future roles.

### **Employment Relations**

A number of rationales for using Employee Involvement teams in environmental management include the ideas that they can cut waste (as employees are seen to have the most knowledge of the work processes and products involved); can manage such complex work well; and that using them helps

build employee pride and commitment in their work. Using Employee Involvement in the environment management domain is not only seen as changing how work processes are performed, but also in terms of improving worker health and safety too.

Organizations may also encourage employees to propose changes to generate revenue and reduce pollution through their Pollution Prevention Pays (3P) program wherein the employees could be rewarded for their contribution.

### **Conclusion**

Green HR is one which involves two essential elements: environmentally friendly HR practices and the preservation of knowledge capital. Green HR involves reducing the carbon footprint via less printing of paper, video conferencing and interviews, etc. Companies are quick to layoff when times are tough before realizing the future implications of losing that knowledge capital. Green HR initiatives help companies find alternative ways to cut cost without losing their top talent; furloughs, part time work, etc.

According to 43 percent of HR professionals, HR departments were directly involved in their organizations' environmentally responsible program. Although HR was directly involved, the creation and implementation of environmentally responsible programs were perceived by HR professionals to be the responsibility of the senior management team of their organizations. About one-third of HR professionals (36%) believed their organization would be very interested or somewhat interested in adopting an environmentally responsible program.

This research shows improved employee morale as one of the positive outcomes of environmentally responsible programs. A greener HR practices can mean productive and healthy employees and strengthen an organization's financial bottom line through operating efficiencies and innovations.



Developing a green HR strategy provides a great opportunity for HR to increase its impact on the business, and beyond. As the study suggests, the opportunity includes:

- Undertaking green HR initiatives to reduce adverse environmental impact.
- Supporting for the green businesses by engaging organizational members into higher impact eco-friendly changes.
- Creating a green employer image as well as corporate brand, providing the opportunity to significantly transform the way an organization works.

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# Comparison of Learning Methods with Multivariate Evaluating Criteria: Theoretical Approaches

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## ABSTRACT

Traditional learning delivery method has undergone changes especially in the last two decades. E-learning, blended learning (combination of e-learning and traditional), distance learning etc. are gaining popularity in higher education and in training programmes both in terms of efficacy and cost of teaching. There is no known best way to teach and train management students.

The paper addresses some of the epistemic and practical issues associated with various learning methods with an emphasis to compare such methods. There does not appear to have a consensus of criterion on which learning methods are to be evaluated. To compare m-number of pedagogies w.r.t. p-number of criteria in a multivariate setup, the paper discusses three techniques like D2, T2, and MANOVA which are well applicable in this context. Some of the suggested techniques also help to rank the pedagogies considering simultaneously all the chosen criteria.

## Introduction

Business scenarios force educators and planners to consider multiple objectives as well as multiple methodologies / pedagogies for achieving these objectives. Rapidly changing

business environments dictate that a major determinant of organizational effectiveness will be adaptability and flexibility (Ulrich et. al. 1989). Managing a work-force with accelerating diversity and continually higher

levels of education poses new challenges in the area of human resources (Schuler 1990). These factors, in addition to increasingly complex technologies and organizations, demand that the effectiveness of management education be higher than ever.

With the adoption of multiple pedagogies, academic organisations are now facing the dilemma of identifying appropriate resources (Burnett 2001). The heterogeneous nature of teachers vis-à-vis students sets the path for varying acceptance of technology tools in the present learning environment. As global economies and industries change rapidly, so too does the educational and training dynamics of an information age. In today's society, technology systems in education and industry require an employee to be continually up-skilled (Niru et. al. 2009).

It has been suggested that the various generations of students enrolled in today's higher education institutions as well as different generations of employees in the corporate workplace require a different approach to education and training (Reeves and Oh, 2007). Parker and Burnie (2009) assert that, state-of-the-art technology in the classroom has become a competitive tool that hope to meet or exceed the expectations of students and parents. Students born in the 1980s and raised on technology may hold technology expectations that will soon alter the way professors teach, the way classrooms are constructed, and the way colleges deliver degrees.

The notion of signature pedagogy has gained rapid acceptance since it was first introduced by Shulman (2004, 2005a, b) during his presidency of the Carnegie Foundation for the Advancement of Teaching and Learning. Under Shulman's direction, the foundation has sponsored a series of studies of signature pedagogies in the professions.

The major issues are (i) How to find the optimal blend of e-learning and traditional classroom delivery? Online Learning News (2001)

observed that many training managers are not sure on proportion of each teaching method in blended learning. The mix may probably be different for different subjects. (ii) How to evaluate the outcomes of different learning methods? ASTD (2000) conclude that the technique to evaluate e-learning and methods should be same. Following Kirkpatrick (1979) and Phillips (1996) the results of different methods may be evaluated at following five levels:

**Level – I:** Reaction i.e. learners' reactions to the programme. This level does not measure learning and simply measures how the learners liked the programme. There are qualitative results both from learners and teachers favouring e-learning, but what about quantitative results?

**Level – II:** Learning i.e. what the learners have learned. Usually it is done through a test to measure acquired skills and / or knowledges. For training programmes, sometimes pre-test and post-test are used to determine the extent of learning. However, this approach depends heavily on heterogeneity of the groups of learners and parameters of the test viz. reliability, validity, difficulty value, discriminating value etc.

In many of the research, no statistically significant differences were found among various system of learning. In other words, even with no teacher or face-to-face interactions, there are no significant difference in the amount of content learned. This may speak in favour of low-cost non-traditional methods since gains in knowledge or learnings are more or less same.

However, studies are their which founds higher mean score for technology driven learnings. Navarro and Shoemaker (1999) reported that cyberlearners performed significantly better than the traditional learners. Nelson (2001) found similar result for 406 university students learned in traditional and distance education classes, where the distance learners outperformed the



traditional learners. Asynchronous Learning Networks (ALN) (2001) reported that out of 15 empirical studies submitted to them, two-thirds reported e-learning to be more effective and the rest had no significant difference. Jonassen (2001) stressed the crucial need to develop critical thinking and other higher order skills among students using e-learning products. Bates (1996) noted that the potential for developing higher order skills relevant to a knowledge based society is a key driver in developing computer-based distance education courses.

Developing critical thinking and other higher-order skills is undoubtedly a desirable goal in a purely academic setting. It may be of critical importance depending on the objectives of the course and employability say for Management Education.

**Level- III:** Transfer i.e. a measure of changes in the behaviour of the learners Changes in on-the-job behavior is certainly a goal of most Management Education and corporate training programs. However, measuring this change is a more complex task than measuring Level-I and Level-II effects.

Bregman and Jacobson (2000) emphasises the need to measure business results rather than just evaluate trainee test results. They point out that all important business results affect customer satisfaction, either directly or indirectly. Thus, a training program is successful when the training changes employees' behaviors in ways that matter to their customers. Usually the participants are asked to discuss how they have integrated their new skills into their work and to share their best practices. However, many employees may not learn new material, but rather they polish their overall skills and customer interaction techniques and thus makes Level-III measurement difficult.

Hall and LeCavalier (2000 a and b) make a strong case for focusing on Level III with job performance-based measures. Their research study of eleven U.S. and foreign companies

helped them identify best practices within these companies, which have significant e-learning success stories. They conclude that the most promising strategy for many companies is to focus on Level III to find out what is really effective within e-learning programs.

**Level - IV:** Results i.e. a measure of outcomes that occur as the learners do their jobs differently after the programme.

Level IV evaluation attempts to measure the results of training as it directly affects a company's bottom line Kirkpatrick noted that the number of variables and complicating factors make it difficult, if not impossible, to evaluate the direct impact of training on a business' bottom line. While most companies do not address this complex evaluation process, some companies attempt to find the link between training and improved business results. In a different approach to business results, Bassi (2001) demonstrates that investment in training adds to the value of a company's shares.

**Level - V:** ROI i.e. cost-benefit ratio of teaching. Here, Level IV data are converted to monetary term and then compared with the cost of teaching.

Phillips' ROI calculation requires a lengthy and complex evaluation and calculation process. Phillips (1996) summarizes how Magnavox Electronics Systems Company derives its ROI calculations as it evaluates all the levels of its 18-week literacy program, which covers verbal and mathematics skills for employees. This was not an e-learning program, but it demonstrated the process of moving through the levels of evaluation, a process that may be applicable for each delivery method for training/teaching.

**Level 1:** Reaction was measured by surveys given after the course was completed.

**Level 2:** Learning was measured using the Test of Adult Basic Education.



**Level 3:** Behavioral changes were measured using daily efficiency ratings.

**Level 4:** Business results were measured through improvements in productivity and reductions in scrap and rework.

**Level 5:** ROI was calculated by converting productivity and quality improvements to monetary values.

In addition to above, one can think of other criteria like employability to evaluate and compare various pedagogies especially for management education. Common criteria for employability, other than subject knowledge and special knowledge (like legal etc.) are Leadership, Initiative, Problem solving, Communication, Team work, Creativity and innovation, Priority setting etc

### Evaluation & Comparison

Large number of alternate evaluation measures exists. For example, Holton (1996) recommended an alternative to Kirkpatrick's model. In his model, the impact of intervening variables such as motivation, trainability, job attitudes, and personal characteristics were considered. Other literature from the traditional training literature is also valuable. For example, Abernathy (2001) challenged us to think outside the evaluation box. Saba (2000) noted that many of the original studies, while experimental in nature, were not grounded in a theoretical framework. The researchers simply carried out their experiments in which they compared distance learning with traditional classroom content delivery and reported the statistical results. Perraton (2000) agreed and added that most previous studies have been in the areas of course or program description, audience analysis, cost-effectiveness, methodology, and social context. Furthermore, Researchers like Smith and Dillon (1999), Cookson and Chang (1995), Gunawardena and Zittle (1997), and Sherry, Fulford, and Zhang (1998) not only grounded their studies on theoretical foundations in the field of distance learning, but also used new methods of inquiry, such as discourse analysis and in-

depth interviews. To obtain more meaningful learner results, Saba opined that analysis of such studies has revealed just how complex the study of distance education is because of the many variables involved in any instructional setting plus other elements such as social, economic, and global issues affecting the field. Bregman and Jacobson (2000) observed that the additional desired outcome of positive business results for training programmes are extremely difficult to measure because of the following major reasons:

- Conducting a rigorous evaluation can be expensive and time-consuming.
- Isolating a direct cause-and-effect relationship between training programs and a business' bottom line is difficult.
- Determining the appropriate outcomes to measure is challenging.

One way to obtain meaningful results is to design more effective assessment methods. Driscoll (2001a) opined that assessments are the foundation of effective instructional practices and return-on-investment studies. The power of tests and assessments will become exponentially more important with the advent of content management systems and learning management systems.

According to Moore (1999) "One of the few generalizations that can be made about any distance education program is that a good monitoring and evaluation system is likely to lead to a successful program and a poor system is almost certain to lead to failure." Moore describes the three key features of a good system as follows:

- The preliminary specification of good learning objectives. Whether each student produced evidence of having learned what was required as specialised in the learning objectives? If not, why not?
- The construction and handling of assignments, which are the students' evidence of learning and an important source of feedback for the program.

- A good data gathering and reporting system and a solid review of all of the data by both instructors and program administrators.

Another way of approaching the attempt to guarantee better results in e-learning programs is to look at content quality measures, i.e., the quality of the online education product itself along with workable definitions of benchmarks. A new e-learning evaluation method is also gaining support in Canada (ASTD, 2000a). The guidelines, presented in Quality Standards for Evaluating Multi-media and Online Training, have been endorsed by the Canadian government and the Ontario Society of Training and Development. According to their developer, Lynette Gillis (in ASTD, 2000a), these guidelines provide a robust and comprehensive set of quality criteria that have been shaped by experts in the field of distance education. Another effort to address issues pertaining to competences and standards for teachers who design and deliver online courses came from an International Conference of the Center for Studies in Advanced Learning Technology (CSALT) and the International Board of Standards of Training, Performance, and Instruction (Spector et. al. 2001).

### Focus

Admitting advantages and disadvantages of each learning method, there is an urgent need to evaluate each learning method on the basis of a finite number of chosen criteria which may be finalised after literature review, brain storming etc. Thus, the problem boils down to evaluate and compare say m-learning methods with respect to say p-criteria which may be of different units and may be independent or dependent with various degrees. Methods of obtaining measurement of each chosen criteria is assumed.

Thus, the article focuses on

- To test equality of mean vectors of chosen criteria corresponding to the learning methods.

- To rank the learning methods (pedagogies) w.r.t. all the chosen criteria taken together.

### Available Tools

Techniques available for testing equality of mean vectors in a multivariate set up include Hotelling's  $T^2$ , Maholonobis  $D^2$ , MANOVA etc.

#### Hotelling's $T^2$

For testing equality of the population mean vectors under violations of the assumption of homogeneity of variance-covariance matrices, one may consider the modified Hotelling's T-square test statistic as given below:

$$T^2 = (\bar{X}_1 - \bar{X}_2)' \left\{ \frac{1}{n_1} S_1 + \frac{1}{n_2} S_2 \right\}^{-1} (\bar{X}_1 - \bar{X}_2)$$

which is a function of the differences between the sample means for the two pedagogies and sample variance-covariance matrix,  $S_1$ , for the first pedagogy and the sample variance-covariance matrix,  $S_2$ , for the second pedagogy. It is also a function of the sample sizes  $n_1$  and  $n_2$ .

For large samples,  $T^2$  is approximately chi-square distributed with p d.f. while for small samples, transformed F test is used with p and v d.f..

$$F = \frac{n_1 + n_2 - p - 1}{p(n_1 + n_2 - 2)} T^2 \sim F_{p,v}$$

where v is given by the formula:

$$\frac{1}{v} = \sum_{i=1}^2 \frac{1}{n_i - 1} \left\{ \frac{(\bar{X}_1 - \bar{X}_2)' S_i \left( \frac{1}{n_i} S_i \right)^{-1} S_i (\bar{X}_1 - \bar{X}_2)}{T^2} \right\}^2$$

and the matrix  $S_T$  is given by :

$$S_T = \frac{1}{n_1} S_1 + \frac{1}{n_2} S_2$$



## Maholonobis D<sup>2</sup>

For a data matrix whose columns represent variables (Criteria) and the rows represent the pedagogies, a natural way to compare two rows (two pedagogy)  $X_r$  and  $X_s$  is to look at the Euclidean distance between them i.e.

$$\|X_r - X_s\|^2 = (X_r - X_s)^T (X_r - X_s)$$

Here, T denotes the transpose. But when the variation in X is stochastic in nature it is better to look at a normal transformation of the form

$$Z_r = \frac{(X_r - \bar{X})}{\sqrt{S}}$$

Where,  $S = \frac{1}{n} \sum_{r=1}^m (X_r - \bar{X})(X_r - \bar{X})^T$

After the aforesaid transformation one can look at the Euclidean distance between the transformed rows. Such distances play a role in cluster analysis. The most important of these distances is the Mahalanobis distance given by

$$D_{rs}^2 = \|Z_r - Z_s\|^2 = (X_r - X_s)^T S^{-1} (X_r - X_s)$$

Mahalanobis distance can be of different kinds.

- (i) Let  $X \sim (\mu_1, \Sigma)$  and let  $Y \sim (\mu_2, \Sigma)$  then  $D_{\mu_1\mu_2}$  is a Mahalanobis distance between the parameters.
- (ii) Let  $X \sim (\mu, \Sigma)$ . The Mahalanobis distance between  $X$  and  $\mu$ ,  $D_{X\mu}$ , is a random variable.
- (iii) Let  $X \sim (\mu_1, \Sigma)$ ,  $Y \sim (\mu_2, \Sigma)$ . The Mahalanobis distance between  $X$  and  $Y$  is  $D_{XY}$ .

$D^2 / d.f.$  is approximate t-distributed.

## MANOVA

The model is

$$Y_{n \times p} = X_{n \times m} \beta_{m \times p} + e_{n \times p}$$

where Y is the observed matrix of criteria, X is the design matrix of pedagogies,  $\beta$  is the

coefficient matrix, e is the matrix of random errors, n is the total number of observations, p is the number of criteria, and m is the number of pedagogies. To test the equality of mean vectors for all pedagogies let  $\bar{Y}_{p \times m}$  is the matrix of mean value of observed criteria (p) subject to pedagogies (m) with the denominator n. Here  $\bar{Y}_{11}$  represents the mean of n score recorded for criterion 1 of pedagogy 1.  $\bar{Y}_{p \times m}$  matrix containing m mean vectors for each pedagogy say  $\bar{Y}_{p \times 1}, \bar{Y}_{p \times 2}, \dots, \bar{Y}_{p \times m}$ . Followings are the hypothesis –

$$H_0: \bar{Y}_{p \times 1} = \bar{Y}_{p \times 2} = \bar{Y}_{p \times 3} = \dots = \bar{Y}_{p \times m}$$

$H_1$ : at least one vector is different.

MANOVA gives procedure for testing the above said  $H_0$  stated above.

## Conclusion

To evaluate and compare various pedagogies in a multivariate setup, three methods have been discussed. Each method can cover large number or criteria and a finite number of learning methods. The choice of technique will depend on the type of data and purpose of the study. However, Mahalanobis Distance ( $D^2$ ) underlies Hotelling  $T^2$  statistics.  $D^2$  can be applied even if criteria are attributes (Mukhopadhyay, 2008). Assumptions on multivariate normality of the criteria are assumed in each of above said methods. MANOVA is sensitive to such normality assumption and also assumes linear relationship between criteria and pedagogies. MANOVA makes assumption of equal variance-covariance matrix for all treatment groups unlike other two methods. Presense of high multicollinearity may create problems in MANOVA. While  $D^2$  and  $T^2$  can deal with a pair of pedagogy, MANOVA helps to consider all pedagogies at one go.

$D^2$  can be used to rank two pedagogies w.r.t. all the chosen criteria taken together. For m - pedagogies,  ${}^m C_2$  pairs need to be considered and paired comparison method will give the rankings.



## Future problems

- Relative advantages of each method of comparing learning methods w.r.t a finite number of well defined criteria
- Effect of Test parameters to measure the criteria on effectiveness of comparing learning methods
- Expressing efficiency of a pedagogy as a multivariate function of criteria and find the optimal proportion of e-learning and traditional classroom delivery to maximise efficiency of blended learning

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# Social Media as an Advertising Platform: Technocrats' Perspectives

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## ABSTRACT

Advertisement is a vital part of economy and success in business. To allow a business to grow, it must get noticed whether on T.V., in magazines, in yellow pages or on internet. Advertisers' main purpose is to create awareness amongst consumers about new products and services and to persuade them to buy. While worldwide advertising is an important contributor to economic growth, individual marketing organizations differ on the role advertising plays. The Web is gaining importance as a strong advertising medium, as it improves the reach and is cost effective. The article aims to throw light on the effectiveness of social media as an advertising platform as viewed by technocrats.

## Introduction

Unlike conventional media, the online marketing encompasses the entire 'sales' process. Marketing campaigns can create awareness then drive consumers all the way through the process to actually making a purchase online. The vital difference is that the internet is a distribution channel for products and services, not just a communication channel. What then should be measured in

order to determine the effectiveness of an online marketing strategy? It is vital that online marketers (just as with any other medium) develop campaigns that have clear objectives and the metrics chosen must reflect the returns on investment. The proven ability to enhance brands through online ads creates new possibilities, but is fraught with opportunities and threats: opportunities to use online messages to make consumers aware about the product, to change perceptions and to gain

market share; and threats that competitors will figure it out first - or be more effective in their execution. It is constructive for marketers to think of the Internet as a technology that enables information transfer. Because of its unique characteristics, communication can be fashioned along two key dimensions: the first ranges from proactive to reactive communication, the second from broadcast communication to personal dialogue. Effectiveness depends on the right mix. With the growth of information on the Internet has grown the amount of time people spend on it, which has in turn generated a new market for internet advertising.

Internet advertising is targeted. As a company looking for advertising opportunities to a specific market, internet advertising offers some targeting methods that ensure that those who see the ads are the ones most likely to buy. Programs like Google's AdWords and AdSense match up the content with advertisers that their target market peruses regularly. Internet advertising enables good conversion tracking. It's impossible to get a good idea of how many people see advertising through traditional means. Tracking the reach of newspaper and television advertisements is difficult. However, internet advertising allows the advertiser to track the number of impressions an ad gets (how many people see it), and how many visits their business web site gets from particular ads, making it easy to see what kind of conversion rates internet advertisements are getting. Internet advertising has lower entry-level fees. If the organization has a limited budget, internet advertising can be much more in reach than traditional methods. A small yellow-page ad can cost several hundred dollars. However, one can bid for advertisements on Google and Overture on a performance basis, implying that an organization only gets charged when visitors click on the advertisement and bidding starts at a nickel or dime a pop. Internet advertising can be much cheaper.

Because of the targeted nature of internet advertising and the ability to track the

effectiveness of ads, conversion rates from internet advertising is typically much better than traditional mediums. Internet advertising has greater range. One more benefit is that, since the internet spans the globe, pockets of the target market scattered around the world can all be targeted at once, rather than trying to find different publications, radio stations and television stations that cater to a particular geographical area. On the whole, internet advertising can be a great way to get the word out there about a service or product in a cost-effective, efficient way.

Social media, while nothing new in the concept of building communities, changed marketing and the ability for consumers to learn, interact and discover brands. Social media takes on many different forms including magazines, Internet forums, weblogs, social blogs, micro blogging, wikis, podcasts, photographs or pictures, video, rating and social bookmarking. By applying a set of theories in the field of media research (social presence, media richness) and social processes (self-presentation, self-disclosure), Kaplan and Haenlein created a classification scheme for different social media types in their *Business Horizons* article published in 2010. According to Kaplan and Haenlein, there are six different types of social media: collaborative projects (e.g. Wikipedia), blogs and micro blogs (e.g. Twitter), content communities (e.g. YouTube), social networking sites (e.g. Face book), virtual game worlds (e.g. World of War craft) and virtual social worlds (e.g. Second Life). Technologies include: blogs, picture-sharing, vlogs, wall-postings, email, instant messaging, music-sharing, crowd sourcing and voice over IP, to name a few. Many of these social media services can be integrated via social network aggregation platforms. Kietzmann et al. (2011) present a honeycomb framework that defines how social media services focus on some or all of seven functional building blocks (identity, conversations, sharing, presence, relationships, reputation, and groups). These building blocks help understand the engagement needs of the social media



audience. For instance, LinkedIn users care mostly about identity, reputation and relationships; whereas YouTube's primary building blocks are sharing, conversations, groups and reputation. While places like Facebook, LinkedIn, You Tube and Twitter give us unprecedented audiences, it also brings us the ability to target our messages to the communities that matter most. Very few companies, if any, need to or should try to reach the 500 million people on Facebook or more than 100 million on Twitter. But if they can build loyalty, understanding and engagement with their brand, even if it's just a community of a few hundred, it's made the masses manageable and goals are more attainable. Additionally, according to Wikipedia, social media also gives us millions of ears and eyes to provide companies with one of the most valuable tools in marketing- feedback! It's the easiest way to know what people think about a brand or the latest campaign and thus also learn from what's being said. Social Media helps us lot in many ways, viz., building a global business from scratch, finding talent in the trenches, viral marketing on the cheap, finding unexpected collaborators. Social media advertising is promoting a site in social networks, community development & developing personal contacts with customers & spreading word of mouth publicity through blog, social network sites like face book, MySpace, LinkedIn, twitter, orkut, social bookmarking sites like dig, delicious etc. Web is called personal now due to this interactive feature brought up by web 2.0. Advantages online media advertising has over traditional marketing are that

1. One can track visitors/customers through web analytics software's like Google analytics, click tracks etc so that one knows the exact return on investment on expenditure incurred and can optimize the campaign/keywords/advertising anytime.
2. Its pull based advertising, unlike traditional advertising which is push based i.e, one gets qualified visitors who are looking for

services/products offered by a particular company, so the marketers don't need to shout & convince the consumers again and again.

Main components of online advertising are -

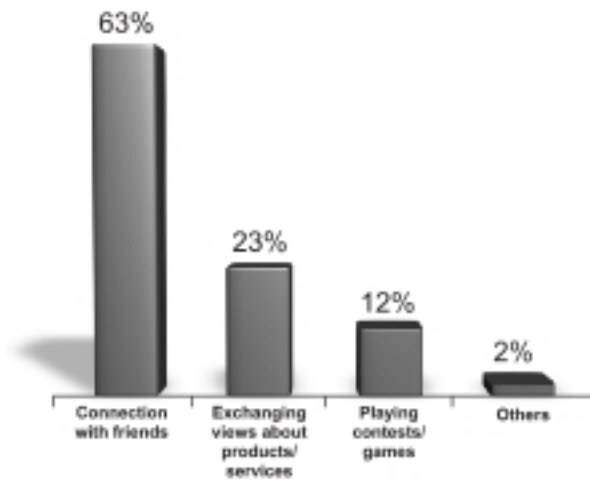
1. Search Engine Optimization (SEO)
2. Search Engine Marketing (SEM)
3. Social Media Optimization (SMO)

Search Engine Optimization is basically getting a site ranked among top positions in Search Engine Results Page (SERPS). It is also called natural search because in this a rank cannot be achieved as the website has to be optimized as per search engine algorithms so that it can fight with other sites & come among top results. Search Engine Marketing is getting a site ranked in right hand side of search results through ad words or (YSM in yahoo). This is a paid method in which the top rank can be gained by paying highest bid amount for that rank.

The Web has become an important advertising medium and online advertising has been growing rapidly. Various organizations have already started their communication mix on the web. They have also started reaching out to the customers through different modes of advertising followed in an online medium particularly through pop-up ads, banners and e-newsletters. This research aims to identify the viability and feasibility of using social media as an advertising platform, from technocrats' perspectives. A few staggering figures, as per the Nielsonwire reports(2010) include ( fig.1):

- 74% of the world's Internet population visit a social networking/blogging site.
- Social media site visits average almost 6 hours monthly.
- 3 of the 7 biggest brands online globally are social media: Face book, Wikipedia and You Tube.
- Face book has already crossed 500 million subscriber marks last year.





**Fig.1 Different Reasons for what social Media is being used**

Source: <http://blog.nielsen.com/nielsenwire/global/social-media-dominates-asia-pacific-internet-usage>

The net craft services ranked the top most visited web sites in India (Table 1). As can be deduced from the table, the most popular web sites are the social networking sites and the entertainment web sites. This of course showcases the popularity of youth usage

online. As a principle, it is followed that the youth are the most susceptible segment to be vouched for any marketing activity. Thus, Cannot we conclude that marketing on the social networking sites can turn out to be good enough platform to increase visibility and capture the attention of the audience?

### Factors Affecting Marketer's Choice of the medium

Fifty technocrats in the senior level of management across different information technology companies were interviewed in Delhi/NCR through a structured interview. On interrogation, the following different factors that could possibly result in the marketer's choice of choosing social media have been summarised:

#### 1. Site Popularity

With a huge fan base, more popular the site is, more will be the visits made to the site. As a result, it will offer real profit potential for the business.

Notable boards	Posts in the last year	Demographic/Site Description
<a href="http://forum.santabanta.com">forum.santabanta.com</a>	760.901	Bollywood celebrities and entertainment
<a href="http://india-forums.com">india-forums.com</a>	399.209	Hub for Indian TV and movie news and gossip
<a href="http://in.answers.yahoo.com">in.answers.yahoo.com</a>	350.110	General Q&A site
<a href="http://pagalguy.com">pagalguy.com</a>	280.161	MBA admission/Business school prep forum
<a href="http://apnicommunity.com">apnicommunity.com</a>	271.364	General interest forum with high volume of entertainment and humour posts
<a href="http://funonthenet.in">funonthenet.in</a>	216.008	Celebrity and entertainment forum
<a href="http://indiamike.com">indiamike.com</a>	191.052	Travel and tourism site popular with foreigners living in India
<a href="http://forums.bharat-rakshak.com">forums.bharat-rakshak.com</a>	179.771	Indian defence and military affairs-interest
<a href="http://bollywoodhungama.com">bollywoodhungama.com</a>	168.788	Bollywood interest forum
<a href="http://bcmtouring.com">bcmtouring.com</a>	142.848	Indian travel and auto enthusiast website

**Table 1: Most visited sites in India**

Source: [www. http://toolbar.netcraft.com/stats/topsites](http://toolbar.netcraft.com/stats/topsites)

## **2. Search Engine Ranking**

As a site is given a high search engine ranking, which translates to more traffic referred to via search engines, one can be assured that Google and all the other major search engines pay a great deal of attention to the ads and other content posted there.

## **3. Interactive Marketing Opportunity**

The popular social networking sites engage customers and prospects through fan pages that provide both customer feedback and opportunities for marketing products or services and promoting the company. This is a great way to increase the effectiveness of the ads and help create brand recognition and customer loyalty.

## **4. Ad Targeting**

The ads on social networking sites can easily be set up to target the demographic(s) the organization wants to reach with advertising. The ad setup process allows to target by location, gender, age, birthday, likes and interests, education, and connections. This helps to ensure that the ad is displayed to the market segment to which it will be most relevant, increasing the likelihood of success.

## **5. Reader "Endorsements"**

The "Like" button creates reader endorsements that can increase interest in the page and/or the ad. When users see that their friends/group members have "Liked" an ad or a company page, it piques their curiosity, making them more likely to click the ad or visit the page. This factor can significantly increase the return on the advertising investment.

## **6. Simple Ad-Creation Process**

Some SNSs like Face book provide an easy-to-use ad template to simplify the ad creation process. Once the first ad is created, subsequent ads are even easier to create by choosing the "Create a Similar Ad" option, which opens a new ad template that has the information from previous ads already filled in. The ad makers

are then free to alter the ad's content to create a new advertisement. The new ad doesn't automatically cancel the earlier ad, so one can run both ads simultaneously if desired.

## **7. Ad Content Control**

Within the parameters, SNSs have delineated, the ad makers control the content of the ad to a great extent. The advertising guidelines clearly point out prohibited content to help design an ad that says what the organization would like it to say but what is much more likely to be approved.

## **8. Automatic Ad Optimization**

Once the advertisement is created and properly targeted, the site will automatically display the ad on pages viewed by the chosen demographic target audience. It will also indicate to the targeted users which of their friends have "Liked" or used the product or service. However, if the companies are interested in checking to see how the ad is performing, the officials may do that by setting up automatic conversion tracking, which can help them further to refine the targeting and improve the ad optimization process.

## **9. Ad-Creation Guidance**

Many SNSs offer clear and comprehensive guidance on creating and designing ads, through their help topics as "success stories and best practices," "advertising guidelines," "suggested best practices," and "common ad mistakes," which provide numerous illustrated examples to aid understanding of the ad-creation process. To help new advertisers get started, the sites also offer a new advertiser guide for download.

## **10. Ad Creation Support**

Though not exactly live support, many advertisements inquiry contact forms allow to submit questions the officials may have but which were not answered in the ad-creation help section – a process which normally takes a day or two to hear back from the sites.

## Conclusion

Many companies have shied away from social media marketing because they are concerned about losing control of the message and fear what their brand message might become in the hands of the public. By integrating traditional advertising and marketing—tactics where one can control the message, with the influence and reach of social media, marketers can guide the message instead of control it. Traditional marketing clarifies Social Media. While social media marketing can be great for spreading the message, it has a significant short fall: people may not necessarily spread the same message the organizations would like them to. While the messages may be authentic and honest, it may not be a message that fits the strategy and may even be detrimental. Traditional marketing can help to create the foundation of information and guide the brand message as it is passed throughout the social community. By cross promoting the contents of one marketing effort, for example TV with another like social media it increases the “volume” of the message, focus the accuracy and add frequency—thereby maximizing the effectiveness of both efforts. Ads that make an impression in traditional media are more likely to stimulate word of mouth than ads that make an impression in digital media. Social media amplifies traditional marketing. Balancing the free-form messaging of social media with the control, consistency and mass reach of traditional media can thus offer the best of both worlds.

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# Conversion of GAAP as per IFRS: A Challenge and Opportunity to Indian Market

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## ABSTRACT

A set of international accounting and reporting standards that will help to harmonize company financial information, improve the transparency of accounting, and ensure that investors receive more accurate and consistent reports were attempted by International Accounting Standards Board (IASB) between 1973 and 2001 and are designated as "International Accounting Standards". In 2001 IASB, adopted the first iteration of International Financial Reporting Standards (IFRS) to serve as a possible pathway for establishing uniform global accounting standards. Since then, IFRS has been adopted or become accepted in over 100 countries.

The International Financial Reporting Standards the "IFRS" aims to make international financial reporting comparisons as easy as possible because each country has its own set of accounting rules. For example, U.S. GAAP is different from Canadian GAAP and both are far apart from India GAAP. Synchronizing accounting standards across the globe is an ongoing process in the international accounting community.

India, in 2011, joins the global accounting revolution: International Financial Reporting Standards. IFRS issued by the International Accounting Standards Board (IASB) are increasingly being recognized as Global Reporting Standards. Convergence with IFRS issued by the International Accounting Standards Board (IASB) has gained momentum in recent years all over the World. More than 100 countries such as countries of European

Union, Australia, New Zealand, China and Russia currently require or permit the use of IFRS in their countries. Apart from India, countries like Japan, Sri Lanka, Canada and Korea have also committed to adopt IFRS from 2011. United States of America has also taken-up convergence projects with the IASB with a view to permit filing of IFRS-Compliant Financial Statements in the US Stock Exchanges without requiring the presentation of reconciliation statement.

A set of international accounting and reporting standards that will help to harmonize company financial information, improve the transparency of accounting, and ensure that investors receive more accurate and consistent reports were attempted by International Accounting Standards Board (IASB) between 1973 and 2001 and are designated as "International Accounting Standards". In 2001 IASB, adopted the first iteration of International Financial Reporting Standards (IFRS) to serve as a possible pathway for establishing uniform global accounting standards. Since then, IFRS has been adopted or become accepted in over 100 countries.

**Key Words:** *Conversion, IFRS, GAAP, Accounting Standards, RBI, SEBI, IRDA, NACS, Ministry of Corporate Affairs*

### **Indian Accounting Standards**

Many of the standards forming part of IFRS are known by the older name of International Accounting Standards (IAS). IAS was issued between 1973 and 2001 by the Board of the **International Accounting Standards Committee (IASC)**. On April 1, 2001, the new IASB took over from the IASC the responsibility for setting International Accounting Standards. During its first meeting the new Board adopted existing IAS and Standing Interpretations Committee standards (SICs). The IASB has continued to develop standards calling the new standards IFRS. International Financial Reporting Standards (IFRS) are financial standards set forth by the International Accounting Standards Board (IASB). These standards are the international equivalent to the U.S. Generally Accepted Accounting Principles (GAAP) set forth by the Financial Accounting Standards Board (FASB). Both sets of standards provide authoritative literature for public companies under their jurisdiction.

### **How Will IFRS Change Them**

With the rising business enterprises and banking sectors, the need for accountants

and accounting measures has also increased gradually. An accountant helps to maintain systematic records of finance and related matter in a planned and measurable manner in order to derive results quickly and make quick decisions and judgments accordingly.

### **Need for Indian Accounting Standards**

The need for accounting standards was felt when the enterprises and organization started altering the accounting policies and concepts in order to achieve their profit maximization objective. In such a case, an authorized body was set up to form accounting standards applicable for all and keeping in mind the objective and the working criteria of the enterprises. The ICAI (Institute of Chartered Accountancy in India) formed the accounting standards for our country. At present, in total 30 Accounting Standards are in effect in the country.

### **Objective**

The Indian accounting standards were issued in order to equalize the different accounting policies and concepts making it easier to determine the financial situation of an enterprise with the help of accounting standards. Centre For Management is an



institute offering various management and accounting courses. It has a well trained and experienced faculty that adopts different study techniques. Centre for management takes care of the objective of the course applied for or studied. The industry driven knowledge helps an individual to understand clearly the objectives and functions of the Indian accounting standards.

### **IFRS vs. Indian Accounting Standards**

The International Financial Reporting Standards refer to the reporting standards of finance as set by the international accounting standards. Both IFRS and Indian Accounting Standards have different accounting standards. However, with the growing market trend, the need of a common set of accounting standards was felt by all. Hence, IFRS is to be followed. However, with the differences in the standards existing between both the bodies, a careful handling is to be carried out.

### **Global Foot Prints of IFRS**

In last few years, because of emergence of the Global Economy and growing integration of world's capital markets, financial reporting have undergone significant changes. Many market participants are considering the question of whether it is possible or desirable to move toward a single "Globally Accepted Financial Reporting Standard" so that these entities' can speak a uniform global "language" for financial reporting.

The proponents of this idea argue that a uniform set of global accounting standards, supported by strong corporate governance, independent standard-setting and a sound regulatory framework, could benefit investors and businesses alike. Others suggest that trying to establish a uniform set of global standards would run the risk of overlooking the unique economic, political, cultural, legal and regulatory realities that exist in different nations and regions across the globe.

Over the years the use of IFRS has emerged as widely used and accepted standard in the

world with more than 12,000 companies and over 100 countries accepting and mandating its implementation. India aims to be joining IFRS club starting FY 2011.

The table representing the users of IFRS in different Key Markets across the globe refers ANNEXURE B.

### **Conversion or Adoption of IFRS by Indian Company**

India today has become an international economic force. Indian companies has surpassed in several sectors of the industry that includes, ITES, software, pharmaceutical, auto spare part to name a few. And to stay as a leader in the international market India opted the changes it need to interface Indian stakeholders', the international stakeholders' and comply with the financial reporting in a language that is understandable to all of them. In response to the need several Indian companies have already been providing their financial statements as per US GAAP and/or IFRS on voluntary basis. But, however this is becoming more of a necessity then just being a best practice.

In the coming years, critical decisions will need to be made regarding the use of global accounting standards in India. Market participants will be called upon to determine whether achieving a uniform set of high-quality global accounting standards is feasible, what sort of investments would be required to achieve that outcome, and whether it is a desirable goal in the first place. This dialogue will be critical to the future of financial reporting and of fundamental importance to the long-term strength and stability of the global capital markets.

Performance measures, based on Indian GAAP may need revisiting as it may change in IFRS adoption by fair amount on account of valuation aspect. Expectation of investor and market will also be required to be of paramount importance to manage in the adoption of process.



## Development in India- IFRS

The Indian GAAP is influenced by several standard setters and influenced by Statute, namely Companies Act, Income Tax Act, Banking Regulation Act, Insurance Act etc and directions from regulatory bodies like RBI, SEBI, IRDA.

The legal or regulatory requirement will prevail over the IFRS requirement, in case of conflicts. Therefore, pre-conditions for IFRS adoption by India to be effective need amendments in required legislation and clarity on impact of IFRS adoption on Direct and Indirect taxes, especially transactions recorded at fair values.

Institute of Chartered Accountants of India is actively promoting the IASB's pronouncements in the country with a view to facilitating global harmonization of Accounting Standards and ICAI has pronounced that Indian GAAP will converge into IFRS with effect from April 1, 2011.

Under the statutory mandate provided by the Companies Act, 1956 the Central Government of India prescribes accounting standards in consultation with National Advisory Committee on Accounting Standards (NACS) established under the Companies Act, 1956. The Central Government notified 28 Accounting Standards (AS 1 to 7 and AS 9 to 29) in December 2006 in the Form of Companies (Accounting Standard Rules) 2006. While doing so the Central Government had adopted a policy of enabling disclosure of company account in a manner at par with accepted international practices, through a process of convergence with the IFRS. The NACS has taken up initiative for harmonization of accounting standards with IFRS would be continued with an intention of achieving convergence with IFRS by 2011. Ministry of Corporate Affairs has also set up a high powered group comprising of various stakeholders under the Chairmanship of Mr. Anurag Goel, Secretary to discuss and resolve implementation challenges with regard to

convergence of Indian Accounting Standards with IFRS from 2011. In November 2009 SEBI decided to provide an option to all listed entities with subsidiaries to submit their consolidated financial statements as per IFRS to be in line with objective of convergence to IFRS by 2011. On January 22, 2010, the Ministry of Corporate Affairs issued a press release which laid out a phased plan by which IFRS convergence will be achieved in India for companies other than Banking and Insurance Companies. This important announcement had cleared all clouds of IFRS convergence and provided the road map in phase manner for achieving convergence in India effective April 1, 2011. According to the above press release, there will be two separate sets of Accounting Standards under Section 211(3C) of the Companies Act, 1956. The two sets would be as described below:

**First set** would comprise of the Indian Accounting Standards which are converged with the IFRS (IFRS converged standards). It shall be applicable to specified class of companies;

**Second set** would comprise of the existing Indian Accounting Standards (Existing Accounting Standards) and would be applicable to other companies including small and medium companies (SMCs).

The table above set out the applicability of First set of standards to specified class of companies in phase manner:

## Differences in IFRS and GAAP

While some describe IFRS as purely principles-based and GAAP as purely rules-based, this characterization is actually not appropriate.

IFRS does tend to provide less precise guidance, but there are most certainly rules embedded in the international standards. On the other hand, anyone schooled in accounting knows that GAAP are based on the Conceptual Framework; which is a set of guiding principles. The difference is that the

**Table No. 1 Statement Showing Applicability of Standards to Specified Class**

Phase	Specified class of companies	Effective Date
I	Companies in Nifty 50 Companies in Sensex 30 Companies shares or other securities listed on stock exchanges outside India Companies (whether listed or not) having net worth in excess of Rs 1,000 crores	April 1, 2011
II	Companies (whether listed or not) having net worth in excess of Rs 500 crores but less than Rs. 1, 000 crores	April 1, 2013
III	All listed companies with net worth less than Rs 500 crores	April 1, 2014

U.S. standards have grown to include many rules due to requests by constituents for guidance.

For example, in the area of revenue recognition there are numerous standards under GAAP while IFRS has fewer revenue recognition standards. The FASB and the IASB Boards issued a Discussion Paper in December 2008 on revenue recognition and plan to have an Exposure Draft in 2010. This is one of many projects that the two Boards are working on together.

However, one must keep in mind that the U.S. standards are older than their international counterparts. Therefore, a question that is often asked is "Will IFRS look like GAAP in 40 years"? In other words, over time will companies desire more guidance that leads to more rules in the international standards? This is a question that only the future can answer.

The above enlisted specified class of companies will prepare an opening balance sheet in accordance with IFRS converged standards as of effective date and will follow the IFRS converged standards from the respective effective date as mentioned in above table.

On March 31, 2010, the Ministry of Corporate Affairs issued the final road map of Convergence with IFRS for Banking and Insurance Companies also, which were

excluded from the earlier notification issued on 22nd January 2010. In brief:

All insurance companies will converge with Converged Indian accounting standards effective April 1, 2012.

All scheduled commercial banks will converge effective April 1, 2013. A phased approach of convergence is prescribed for urban co-operative Banks.

NBFC which are part of Nifty - 50, Sensex 30 and NBFCs (listed or unlisted) having net worth of more than 1,000 crores will converge effective April 1, 2013. All other listed NBFC's and other NBFCs having a net worth in excess of Rs 500 crores would converge effective April 1, 2014. Unlisted NBFCs having a net worth of less than Rs 500 crores are not mandatorily required to converge but may voluntarily decide to converge.

There by, now the entire road map for Convergence with IFRS is conclusively defined for all categories of companies in India.

Thus, going by aforesaid directives if, corporate India needs to publish IFRS financial statements for 2011-2012, this would require comparatives for 2010-11, i.e., an opening balance sheet is required April 1, 2010. In a nutshell, this means that the real work for corporate India starts now.



Sr. No.	IFRS	GAAP
1	<b>Comparative prior year financial statements</b>	
	One year comparative financial information is required	Require three years of comparative financial information
2	<b>Reporting 'comprehensive income'</b>	
	Statement of changes in equity is required. A grand total of 'comprehensive income' is permitted but not required. Comprehensive income is net income plus gains and losses that are recognised directly in equity rather than in net income.	Must present grand total of 'comprehensive income'. Can present in the income statement, statement of comprehensive income, or statement of changes in equity
3	<b>Classification of liabilities on refinancing</b>	
	Noncurrent if refinancing is completed before balance sheet date	Noncurrent if refinancing is completed before date of issue of the financial statements.
4	<b>Classification of liabilities due on demand due to violation of debt covenant</b>	
	Noncurrent if the lender has granted a 12-month waiver before the balance sheet date.	Noncurrent if the lender has granted a 12-month waiver before the date of issue of the financial statements
5	<b>Extraordinary items</b>	
	In the IFRS the no any extraordinary items are entertained.	Extraordinary items are permitted but restricted to infrequent, unusual, and rare items that affect profit and loss
6	<b>Whether the costs of idle capacity and spoilage can be included in inventory</b>	
	Prohibited	Not Prohibited

### Educational Institutions and Their Responsibility

Accounting educators are charged with preparing their students for a profession that is constantly changing. These changes, in turn, lead to a need to continuously update curriculum. Educational institutions are now at a crossroads with the profession. They are left with a choice between 1) incorporating IFRS into the curriculum now before it is adopted in the U.S. or 2) waiting a while to gauge a better adoption picture in the event it does occur. Still another choice to be made if IFRS is to be integrated into the curriculum is whether a single course or complete curriculum integration is more appropriate.

These choices are difficult ones with the future of IFRS in the U.S. so unsure at this point.

#### Include IFRS or Not?

The decision to include IFRS or not should be a relatively easy one.

Accounting educators are increasingly being told that they need to prepare their students for the global marketplace. That global marketplace, by definition, includes a world where IFRS is already in use. Virtually every other developed country in the world uses some form of IFRS. Not including IFRS in the curriculum to some degree definitely fails the global marketplace yardstick.



In addition, at least one of the Big Four accounting firms is requiring some level of knowledge during the interviewing phase. This firm is now requesting that interviewers ask IFRS-specific questions and interviewees must display some level of knowledge based on the courses they have completed. Students who have had a principles or accounting course must display knowledge of what IFRS stands for and that the IASB governs these standards. Students who have had intermediate accounting course should be able to list differences between IFRS and GAAP. Therefore, at a minimum, those institutions preparing students to work with the public accounting firms need to consider some form of IFRS education in their curriculum.

### **Single Course or Curriculum Change?**

This is a more difficult question to answer than whether to include IFRS or not. Some institutions are running a separate IFRS course. Others are integrating it throughout their curriculum. The choice between these two, or some combination, is a matter of resources and program beliefs.

Incorporating IFRS though a single, stand alone course is in place at some institutions. This course usually discusses the major areas of difference between the two sets of standards and allows students to concentrate on IFRS after they are well grounded in GAAP. This course is generally taught at the master's level and may be a required or elective course. While this may be easier to implement than an all-out curriculum integration, it does come at a cost. Students may interview for full time positions or internships before having this course.

Therefore, to comply with the IFRS interview knowledge requirements noted above, IFRS may need to be discussed earlier as well or may need to be incorporated through some other mechanism. Fortunately, all of the Big Four and many of the other international firms have IFRS materials accessible by faculty and/or students on their websites. One benefit of this method is that a single, or maybe two, faculty members are all that need to be well versed in IFRS.

A more radical change is to incorporate IFRS throughout the entire curriculum. IFRS touches almost all of the courses that are taught in some way or another. The perception is that teaching IFRS is primarily a financial accounting issue. However, IFRS issues may also be taught in tax, accounting information systems, auditing, and other accounting courses.

Teaching IFRS in a standalone course may not make the best use of area expertise as it is difficult for a financial expert to understand all the nuances faced by the tax expert, etc. The cost to complete curriculum integration is that most, if not all, of the accounting faculty must understand how IFRS will impact their particular area. In addition, choices must be made as to what will be limited or excluded from the old course content as accountancy courses are already packed full of content. Without extending the length of a course material coverage choices must be made. The benefit in the long run to this path is that, if IFRS is fully adopted, those universities that have opted to integrate throughout the curriculum will be ahead of the learning curve.

### **Implementation of IFRS**

According to the Concept Paper on Convergence with IFRS in India, issued by ICAI in October 2007, the IFRS should be applicable to Public Interest Entities (PIE). PIE has been defined to include:

- All listed companies;
- All banking companies;
- All financial institutions;
- All scheduled commercial banks;
- All insurance companies; and
- All NBFC.

### **Adoption of Convergence?**

The two terms though used interchangeably but there is a faint but important difference.

Adoption- is process of adopting IFRS as issued by IASB, with or without modifications.

Modifications being, generally in the nature of additional disclosures requirement or elimination of alternative treatment. It involves an endorsement of IFRS by legislative or regulatory with minor modifications done by standard setting authority of a country.

**Convergence-** is harmonization of national GAAP with IFRS through design and maintenance of accounting standards in a way that financial statements prepared with national accounting standards are in compliance with IFRS.

### **What will change?**

Any kind of change results in somewhat different conditions. Similarly convergence to IFRS, which is indeed a complex process will, brings about a change inter-alia in the following:

- Change in existing GAAP;
- Changes in numbers reported;
- Changes to the accounting policies;
- Changes in procedures adopted by the company;
- Changes in financial reporting systems and
- Improving the IFRS skills for company personnel.

Either convergence or adoptions, both has important implication and will require synchronization of both internal and external reporting keeping in view that it can have a deep and wide impact on overall aspects of the organization as such mentioned below;

- Affecting investor relations;
- HR rewards;
- Debts covenants;
- Performance measures; and
- Investors and market expectations.

### **Who will be benefitted?**

The convergence with IFRS entails benefit to the following:

**The Investors:** The investor will be benefitted in as the way accounting information made available to them will be more reliable,

relevant, timely and most importantly the information will be comparable across different legal framework. It will develop better understanding and confidence among the investors.

**The Professional:** The professional, both in practice and in employment will get benefits as they will be able to provide their services in various part of the world, as few years after everybody will follow the same reporting standards.

**The Corporate world:** The Indian corporate reputation and relationship with international finance community will elevate because of achievement of higher level of consistency between reporting structure and requirements; better access to international markets; improving confidence among the international investors. The international comparability will also get improve strengthening the industrial and capital markets in the country.

### **Challenges to be faced**

Despite several benefits as may be looked out by the different people, there will be several challenges that will be faced on the way of IFRS convergence.

The first and far most would be from the differences between Indian GAAP and IFRS. The differences are wide and very deep rooted, to say a few -Plant Property and Equipment (PPE) accounting, Financial Instruments accounting, Investment accounting, Business combination, Share based payment, current and non-current classification of asset and liabilities, presentation of financial statements, all are not dealt under Indian GAAP.

Convergence is not just one time technical steps but will impose practical challenges of significant business and regulatory matters like structuring of ESOP schemes, training of employees, tax planning, modification of IT system, compliance with debt covenants.

Educating investors to understand the changed financial reporting's under IFRS.



Challenges on account of differences in various conceptual, practical, legal and implementation methods. The Indian GAAP keeps abreast the local conditions, including the legal and economic environment. For example AS 29 does not specifically deal with constructive obligation whereas IAS 37 deals specifically with this in the context of creation of a provision. The effect of this is that in some cases provisions will be required to be recognized at an early stage.

The regulatory and legal requirements in India will pose a challenge unless the same is been addressed by respective regulatory. For example the present direct tax laws do not address any tax implications likely to arise from IFRS transitions.

Complexities of the introduction of concepts such as present value and fair value measurement, recognition and the extent of disclosure required under IFRS. For example, a few listed below though not all:

IFRS does not provide for the compromise, merger and amalgamation through court schemes, effect of all such schemes are recognized through income statement. Treatment of expenses like premium payable on redemption of debentures, discount allowed on issue of debentures, underwriting commission paid on issue of debentures etc is different. This would bring a change in income statement leading to enormous confusion and complexities.

Equity definition changed, this would result impact on tax benefits where interest is treated as receiving a dividend.

Financial statements more complex under IFRS and thereby would pose challenge making useful decision. The law and regulations of a country is a land specific and so of India too. Therefore, to overcome the challenges, a Core Group has been constituted by Indian regulatory to identify inconsistencies between IFRS and as listed below,

Companies Act;  
SEBI Regulations;

Banking Laws & Regulations; and  
Insurance Laws & Regulations.

A draft Schedule VI consistence with IFRS has been formulated and sent to Ministry of Corporate Affairs, most probable to get passed under Companies Amendment Bill 2009. Formats of financials statements under Schedule III of Banking Regulations Act and Formats for financials statements for insurance entities under IRDA regulations, are also consider for revision to be in consonance with IFRS. The Annexure A attached set out the comparison of current Indian Accounting Standard with corresponding number of IFRS/IAS.

However, currently there are no corresponding Standards available under Indian GAAP for the following IAS/IFRS:

- IAS 26 Accounting and Reporting by retirement Benefit Plans
- IAS 29 Financial Reporting in Hyperinflationary Economies
- IAS 40 Investment Property
- IAS 41 Agriculture
- IFRS 1 First Time Adoption of International Financial Reporting Standards
- IFRS 2 Share Based Payment
- IFRS 4 Insurance Contracts
- IFRS 6 Exploration for and Evaluation of Mineral Resources

IFRS Adoption	Year
Australia	2005
Israel	2005
New Zealand	2005
European Union	2005
Brazil	2010
Canada	2011
India	2011
Russia	Undecided
<b>IFRS Convergence</b>	
China	2007
Japan	2011
United States	2013
India	2014



**Table No. 2 A Comparison With Current Indian Accounting Standard With The Corresponding Number Of Relevant IAS/IFRS**

<b>Indian Accounting Standard</b>		<b>IAS/IFRS</b>	
<b>AS No.</b>	<b>Name of Standard</b>	<b>IAS/ IFRS No.</b>	<b>Name of Standard</b>
1	Disclosures of Accounting Policies	1	Presentation of financial statements
2	Valuation of Inventories	2	Inventories
3	Cash Flow Statements	7	Statements of Cash Flows
4	Contingencies and Events Occurring after the Balance Sheet Date	10	Events after the Reporting Period
5	Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies	8	Accounting Policies, Changes in Accounting Estimates and Errors
6	Depreciation		No equivalent standard. Included in IAS 16
7	Constructions Contracts	11	Constructions Contracts
9	Revenue Recognition	18	Revenue
10	Accounting for Fixed Assets	16	Property, Plant and Equipment
11	The Effects of Changes in Foreign Exchanges Rates	21	The Effects of Changes in Foreign Exchanges Rates
12	Accounting for Government Grants	20	Accounting for Government Grants and Disclosure of Government Assistance
13	Accounting for Investments		Mainly dealt with in IAS 39
14	Accounting for Amalgamations	IFRS 3	Business Combinations
15	Employee Benefits	19	Employee Benefits
16	Borrowing Costs	23	Borrowings Costs
17	Segment Reporting	IFRS 8	Operating Segments
18	Related Party Disclosures	24	Related Party Disclosures
19	Leases	17	Leases
20	Earnings Per Share	33	Earnings Per Share
21	Consolidated Financial Statements	27	Consolidated and Separate Financial Statements
22	Accounting for Taxes for Income	12	Income Taxes
23	Accounting for Investment in Associates in Consolidated Financial Statements	28	Investments in Associates
24	Discontinuing Operations	IFRS 5	Non-current Assets Held for Sale and Discontinued Operations
25	Interim Financial Reporting	34	Interim Financial Reporting
26	Intangible Assets	38	Intangible Assets
27	Financial Reporting of Interest in Joint Ventures	31	Interest in Joint Ventures
28	Impairment of Assets	36	Impairment of Assets
29	Provisions, Contingent Liabilities and Contingent Assets	37	Provisions, Contingent Liabilities and Contingent Assets
30	Financial Instruments: Recognition and Measurement	32	Financial Instruments: Recognition and Measurement
31	Financial Instruments: Presentation	39	Financial Instruments: Presentation
32	Financial Instruments: Disclosures	IFRS 7	Financial Instruments: Disclosures

## Conclusion

Convergence to IFRS will greatly enhance the transparency of Indian companies which will surely help them to project themselves in global map, which will help Indian companies benchmark their performance with global counterparts. But companies will need to be proactive to build awareness and consensus amongst investors and analysts to explain the reasons for this volatility in order to improve understanding, and increase transparency and reliability of their financial statements. However, the responsibility for enforcement and providing guidance on implementation vests with local government and accounting and regulatory bodies, such as the ICAI in India will play a vital role. The ICAI will have to make adequate investments and build infrastructure for awareness and training program. Successful implementation of IFRS in India depends on the regulator's immediate intention to convert to IFRS and make appropriate regulatory amendments.

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# Effectiveness of e-learning in Management Colleges

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## ABSTRACT

The use of e-learning as a teaching and learning tool is now rapidly expanding into education, with thousand of courses offered by educational institutions. E-learning may help to open up for the traditional teaching of management but there are many questions about what makes e-learning effective and satisfactory method. There are different ways to measure the effectiveness of e-learning. The most usual measures are satisfaction and performance. The aim of the paper is to investigate the effectiveness of e-learning in Business Schools. This paper is based on secondary sources. It is concluded that e-learning is feasible and effective for management education and is more effective when integrated with face to face teaching and learning.

## Introduction

*"Knowledge is not what resides in a person's head or in books or in data banks. To know is to be capable of participating with the requisite competence in the complex web of relationships among people and activities." (Raelin: 2000; 274)*

*"Someday, in the distant future, our grandchildren's grandchildren will develop a new equivalent of our*

*classrooms. They will spend many hours in front of boxes with fires glowing within. May they have the wisdom to know the difference between light and knowledge?"*

*- Plato*

The 21st century is an era of knowledge economy (Drucker, 1993). In today's world, knowledge is power and knowledge is a source

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for a competitive advantage. *'Knowledge capital is the only asset that can grow without limits and new knowledge increases the efficient use of resources that are in finite supply'* (World Bank, 2005). Knowledge is also fuelling the economic and social development in every region of the world ( World Bank 2005) and economic and social developments of a country are related to the development of human capital which is associated with education ( ESCWA, 2005). According to Fayyumi (2009) *"through education and training, countries are able to improve the skills of its citizens, and its national innovation systems, and facilitate bridging the knowledge divide within the country itself and with more developed ones. Therefore, countries' success in the knowledge economy increasingly rely on highly-skilled and qualified people, which in turn, requires rapid, effective, and less expensive education and training"*.

Electronic learning or e-learning is *"the delivery of educational content via electronic media"* (Tastle et al., 2005). E-learning (also called online learning or multimedia learning) can be defined as using computer and Internet mediated communication for teaching and learning. Without any doubt, the aims of e-learning are to increase quality of learning, generate more educational opportunities, increase student numbers, improve lecturer's productivity, improve the effectiveness of resource usage, and ultimately enhance students' learning experience and outcomes. Broader definition of e-learning includes 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, 2001). More recently, this definition can be further expanded to include mobile and wireless learning applications (Kinshu et al., 2003; Lehner et al., 2003; Wagner et al., 2007).

According to Mateu (2004) the current decade could be termed the o-decade (following the 90's e-decade) because of the fast growing open movements. E-learning is scalable, less expensive than traditional learning

(Fayyumi, 2009) and today e-learning is a part of everybody's life whether a student or a house-wife, all tend to use e-learning for their day-to-day bits of information (Ramshirish and Singh, 2006) and e-learning is not confined to geographical barriers. The use of e-learning is reengineering as a solution for delivering online, hybrid and synchronous learning regardless of physical location, time of day or digital reception or distribution device( Wagner et al., 2008). Learning technology is transforming *'the way business thinks about educating its workforce and e-learning provides flexible learning materials and consistent information'* (epublishing.marquette.edu, 2012).

Presently teaching and learning are no longer limited to traditional classroom and e-learning has become one of the supporting and powerful tools for e-learning (Wu and Hwang, 2010) and e-learning is replacing face to face classroom instruction in a growing number of ways. According to Zou (2007) *"the aims of e-learning are to increase quality of learning, generate more educational opportunities, increase student numbers, improve lecture's productivity, improve the effectiveness of resource usage, and ultimate enhance students' learning experience and outcomes"*. Further Zou (2007) mentioned that *'the advantages of e-learning are manifold, including: more efficient and centralised maintenance of up-to-date course materials; more flexible class and learning time and speed (self paced learning); local or remote classroom access; online assessment; paperless delivery; capable of presenting learning materials in different forms, such as text, photo, video and animation; caters for large student numbers; allows part-time students to be enrolled; enables cross-disciplinary collaboration and reduces unnecessary duplication; ability to extend the course to students with disabilities"*.

### **Objectives of the study**

The objectives of the paper are as follows:

- 1) Which are the factors impacting the effectiveness of e-learning programs in B schools?

- 2) Proposed conclusions based on empirical evidence and explain factors affecting students' e-learning effectiveness. In this context to gather the information we have reviewed various research papers, journals, magazines, articles, newspapers, etc for the last 15 years. The data are based on secondary sources.

### Dimensions of e-learning

Dimensions of e-learning can be classified into synchronicity, location, independence, and mode. E-learning can be synchronous (real-time) or asynchronous (flex-time). Synchronous e-learning includes technology such as video conferencing and electronic white boards (Romiszowski, 2004), requiring students to be present at the time of content delivery. Synchronous activities involve the exchange of ideas and information with one or more participant's at the same period of

time. Asynchronous applications include programmed instruction and tutorials that allow students to work through the screens at their own pace and at their own time. Most of the courses available on the Internet are based on this asynchronous model (Greenagel, 2002). Students can be involved in e-learning from distributed locations, as in distance learning, or from the same place, such as using a group support system in a classroom to work on an assignment (Gunasekaran et al., 2002). E-learning applications also differ in the levels of collaboration that they involve. Synchronous activities occur with all participants' joining in at once, as with an online chat session or a virtual classroom or meeting. Lately context-aware ubiquitous technology has been providing an innovative way for written and oral communications by using a mobile device with sensors and RFID (Radio Frequency Identification) readers and tags (Liu and Hwang, 2009)

**Table 1 : The Dimensions of E-Learning**

Dimension	Attribute*	Meaning	Example
Synchronicity	Asynchronous	content delivery occurs at a different time than receipt by the student	lecture module delivered via email
	Synchronous	content delivery occurs at the same time as receipt by the student	lecture delivery via web cast
Location	Same place	students use an application at the same physical location as other students and / or the instructor	using a GSS to solve a problem in a classroom
	Distributed	Students use an application at various physical locations, separate from other students and the instructor	using a GSS to solve a problem from distributed locations
Independence	Individual	students work independently from one another to complete learning tasks	students complete e-learning modules autonomously
	Collaborative	students work collaboratively with one another to complete learning tasks	students participate in discussion forums to share ideas
Mode	Electronically only	all content is delivered via technology, there is no face-to-face component	an electronically enabled distance learning course
	Blended	e-learning is used to supplement traditional classroom learning	in class lectures are enhanced with hands on computer exercises

*Source : The definitions of these attributes are discussed in a variety of sources including (Ong et al., 2004), (Jack and Curt, 2001), (Greenagel, 2002), and Wagner et al., 2008)*



## E-learning in Management Schools

Technological advancement has been the major inspiration for change and advancement in information and communication technologies (ICTs) that have assisted in forming the pattern of new organizational forms, work practices, training methods (Fayyumi, 2009) and innovative methods of learning the way people live and work (Wu and Hwang, 2010). In this context, Rosenberg (2001) has remarked that *'e-Learning strategies are leading to changes in the way people learn'* and recent years, teaching and learning methods have started to change in educational institutions in general and in business schools in particular (Wu and Hwang, 2010). With the development of technology, the internet as a delivery platform that has motivated many universities, colleges and corporations to invest their resources on developing online programs at the local, national and global levels, thus increasing competition and encouraging business use of e-learning. *"Methods are often categories as e-learning or the use of Internet technology to enhance knowledge and performance, e-learning has been identified as valuable tool for teaching and learning"* (Kleinpell, et al., 2011). *"The business environment is going through a dramatic transformation due to the increased interdependencies, complexity, and uncertainty of the radical changes in information technology and emerging technologies, globalization, shifting industry boundaries, changing customer demands, increased expectations for social responsibility, rapid shifts in business practices, and other changes that are placing new stresses on the organization and its people and changing their requirements for success"* (Glotz, 1999).

Information technology has become an integral part of our life and we can't think without technology. There is no area where there is no information technology and it is a necessity rather than luxury. Now a day's information is readily available and one can get available information by just clicking a button press. Globalization has forced a radical transformation and organizations

need to maintain their competitiveness (degree-essay.com, 2012).

Different approaches to management education have been strongly influenced by traditional pedagogical models (Gheradi et al., 1998 ; Walker, and Baets, 2002). Walker and Baets (2002) states that *'a notion of learning as a process of information delivery from a knowledgeable source (either a teacher or text book) to a target lacking that information has been a common feature of management programmes'*. With the rapid development of technology, the Internet as a delivery platform has motivated colleges to invest their resources on developing online programs (Wu and Hwang, 2010) and e-learning is not confined to geographical barriers.

Sturges et al. (2003) pointed out that *'the MBA degree imparts certain key competencies to students. These competencies may be of key significance in the career success of students as "management" has gained in importance over other forms of professions'*. Management education has become a major profession that attracts considerable attention across the world. Emerging technologies are leading to the development of many new opportunities to guide and enhance learning that were unimaginable. Therefore, a large number of students prefer a managerial career and an MBA degree that has emerged as one of the most sought after higher educational qualifications. Due to rapid development of technology, the Internet is being used as a delivery platform and colleges are motivated to invest their resources on developing online programs.

Now a days in higher education costs is rising, budget is shrinking and there is an increasing need for distance education (New Media Consortium, 2007) for which educational institutions are finding new ways or to re-examine the way that education is delivered (Wagner et al., 2008). To cope with this changing environment, e-learning is being implemented frequently in higher education,



creating new and exciting opportunities for both educational institutions and students (Wagner et al. 2008).

As the cost of computer ownership decreases, more and more people are gaining access to the Internet and overall computer literacy increases (Huynh et al., 2003). These trends provide educational institutions an ideal channel for the delivery of educational content.

### **Effectiveness of e-learning**

The effectiveness of e-Learning programs basically depends 'on successful delivery of contents, courses and training via electronic media including the Internet, intranets, extranets, satellite broadcast, audio/video tape, radio, interactive television, and compact disk read only memory' (Mahmud, 2010).

Technology alone may not improve the quality of education. It can be a powerful educational tool when integrated with learning goals, skilfully created curricula, and effectively adapted into the learning environment (Bates, 2000; Kearsley, 2000; Palloff and Pratt, 1999). Research studies show that integrating technology into curriculum and instruction stimulates the development of higher-order thinking and problem-solving skills (Dede, 2000; Gardner, 2000; Imel, 1998; Kearsley, 2000). Adult collaborative learning endeavours can actively be encouraged (Bates, 2000; Palloff and Pratt, 1999; Papert, 1993) and Integrated learning experiences allow students to develop problem solving and team building skills from both the faculty and each other.

The success of e-learning depends on a three-way partnership between the organization, the learner and the supplier. In Asynchronous mode of e-Learning students can listen to the lectures of in-house or outside faculties. This facility helps expose students to lectures of outside faculty from premium institutes/universities etc. Those who do not get an opportunity to be the part of elite institute,

they can get an opportunity to listen to the lectures from faculty from elite institutes what gives more value addition to the students (degree-essay.com, 2012).

In Synchronous mode of e-Learning students get one-to-one communication to clear their doubts immediately and group discussion through blogs, wikis, and discussion boards' increases communication among student and faculty. In Asynchronous mode of e-learning may increase student participation in learning activities (Picciano, 1998). Picciano (1998), Swan (2001), and (Shea et al., 2002, 2003) noted that learner-instructor and learner-learner interactions are strongly correlated with student satisfaction and perceived learning.

Richardson et al. (1999) in a study among two groups of students on asynchronous interactions of instructor-learners and learners-learners found that students perceived learning was much more affected by the interaction between instructors and learners, instructors' involvement and guidance and incentive for participation on discussion were found to be important and effective discussion (Jiang et al., 2000; Shea et al., 2003). Swan et al. (2000) conducted a study and found that the factors that are affecting the success of asynchronous online learning. The results show that factors, such as consistency in course design, contact with course instructors, and active discussion, had a significant impact on the success of online courses.

Synchronous tools include two-way instant messaging for text-based, audio, and/or video communications, polling tools, instant feedback (Barron et al., 2005) and electronic handwriting tools (Loch et al., 2007). However some research shows that asynchronous methods are still insufficient, and synchronous tools need to be integrated (Barron et al., 2005; Shi et al., 2006) and Burnett (2003) suggest that constructive models require online instructors for being proactive in enabling rather than directing learning.

## Review of literature on effectiveness of e-learning

For evaluating the effectiveness of e-learning programs, it is required to understand the factors that influence the effectiveness of e-Learning programs which will help learning institutions, universities and training departments to channel resources to significant factors rather than unimportant ones. Accordingly, this study attempts to discuss the measures for the effectiveness of e-Learning and define the factors that influence –the effectiveness of e-Learning as perceived by the practitioners, in particular academic ones.

What makes e-Learning effective? Various studies deal with the one or few factors affecting the effectiveness of e-Learning. Researchers from various fields have been trying to evaluate the effectiveness of e-learning. However, some of them are focused on technology-based components of e-learning system (Islas et al., 2007) and some are focused on human factor of e-learning system (Liaw et al., 2007). Students' e-learning system consists of many subsystems, such as personal factors, technical environment, and social environment. Without a multi-level analysis, it is not possible to grasp a comprehensive view of applications of e-learning in college/university from the system perspective. Now days, e-Learning programs are fascinating and experts and researchers are now questioning how to measure the effectiveness of e-Learning programs. Rumble (1997) argued that efficiency is the ratio of output to input, while effectiveness is concerned with outputs. Further, he stated that "an *organization* is effective to the extent that it produces outputs that are relevant to the needs and demands of its clients. This implies the existence of criteria by which the *organizations* success in this respect can be measured". It is important to understand in what extent e-Learning programs respond to their objectives of enhancing "*learning*" is important and several outcomes have been related to this objective

such as: enhancing learners' grades, improving students' satisfaction, helping learners to perform specific tasks more efficiently, etc. Leidner and Jarvenpaa (1995) suggest that one should look beyond the instructor and technology and include also aspects of course content and students' characteristics.

Business schools are in the process of innovation and continuous improvement (Mowday, 1997) that has stimulated business education in international and multicultural contexts (Porter, 1997). Business schools are under increasing competitive pressure finding new strategies and new models in which way they can differentiate themselves and compete distinctively by using innovative uses of information technology (Leidner & Jarvenpaa, 1995). Advances in IT have made distance education easier to transmit content and have facilitated communication between education providers and learners. However, incorporating information technology in management education is not simply a matter of giving faculty and students' access to computers and computer training (Alavi et al., 1997). It demands far-reaching changes in logistical aspects such as course design and delivery (2004)

As the Internet changes almost every sector, it influences management education worldwide as well. Due to the interactivity and ubiquity of the Internet, learning is possible without space and time barriers. The globalization of education is increasing rapidly. Students are able to attend courses from all over the world, and no longer have geographical isolation at the college and university level. Education has become a major export factor between countries and the competition is increasing between universities and these institutes will have to find out some new strategies and business models" to produce and deliver educational products ( Zou,2007)

To make e-Learning more effective it is required to look more closely and to satisfy the students' need. Hiltz and Johnson (1990) conducted a



study to understand the students' satisfaction from various system of e-Learning. They suggested that to measure the effectiveness of e-Learning system it is required to develop a valid instrument. In their study they measure different characteristics of the system (learner characteristics, information quality...etc.) as predictors of satisfaction with e-Learning systems. Alavi (1994) suggested that learning effectiveness is measured in terms of students' perception of their learning and their evaluation of their classroom experience. In another survey conducted by SRI Consulting Business Intelligence (2003) among the students to rate quality and effectiveness in their e-Learning programs, it was found that respondents replied that number of people trained, cost savings, learner testing, and ROI analysis were the most used ways to gauge effectiveness with. Figure: 1 shows results of the survey.



**Figure 1 : In What Ways Has Your Organization Sought to Gauge Effectiveness?**  
Source: SRI Consulting Business Intelligence (2003)

Humbert et al. (2008) conducted a study among 129 respondents around the world on Open Educational Resources for Management Education: Lessons from experience. Among 129 respondents 45% were from Economics or Management Professors, 20% were from Science, Mathematics and Computing; the last 35% coming from other areas. The results are shown in Figure 2,3,4,5 and 6.

Results show that a nearly equal repartition among these categories (26%, 19%, 30%, 25%). Globally 46% of sample had never heard (or forgotten) about their open courseware initiative, 26% had heard about it and 32% had heard about it and visited the corresponding website. Again, Economics and Management Faculty's knowledge proved to be lower than others' knowledge.

Results show that the most significant barriers were lack of time, followed by the lack of a reward system to encourage staff members to devote time and energy to producing open content.

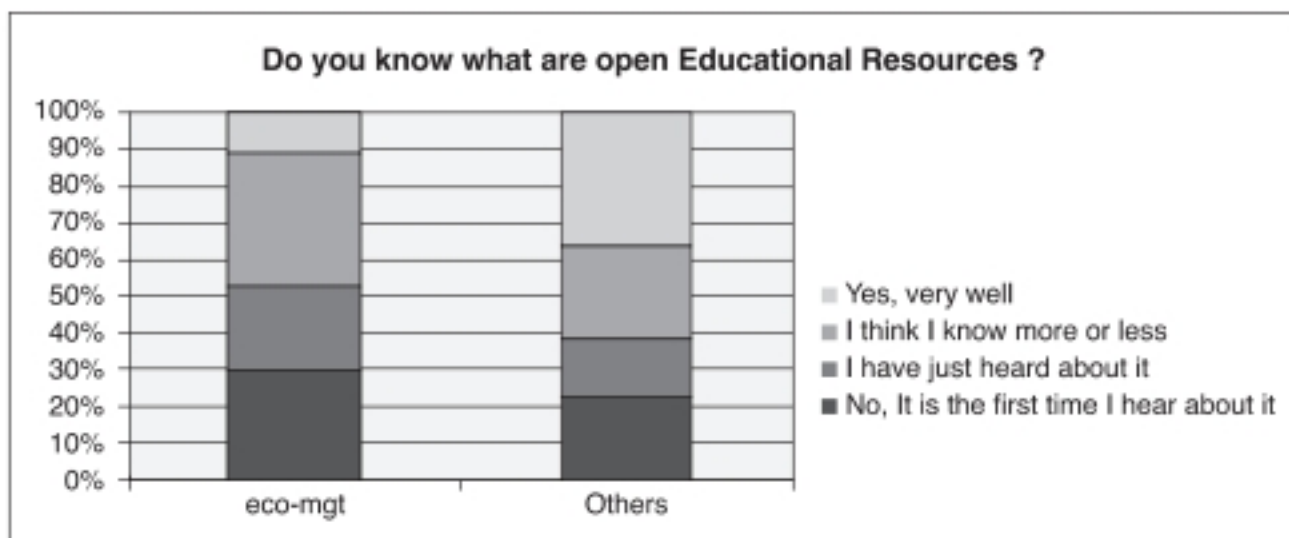
Results show that respondents are globally confident about the future of OER and they consider it more as an opportunity than a threat (globally: 4.35) and believe in collaborative production and multimedia development. They are rather concerned by legal issues.

Results show that globally, the respondents are confident in the improvement of quality (3.8), and slightly confident in the development of collaborative production (3.2). Most of them bet that most of online Educational Resources will be open" (3.15), but are less confident in having them used in replacement of traditional textbooks (2.9).

Result shows that about half come from France, then North Africa and sub-Saharan Africa.

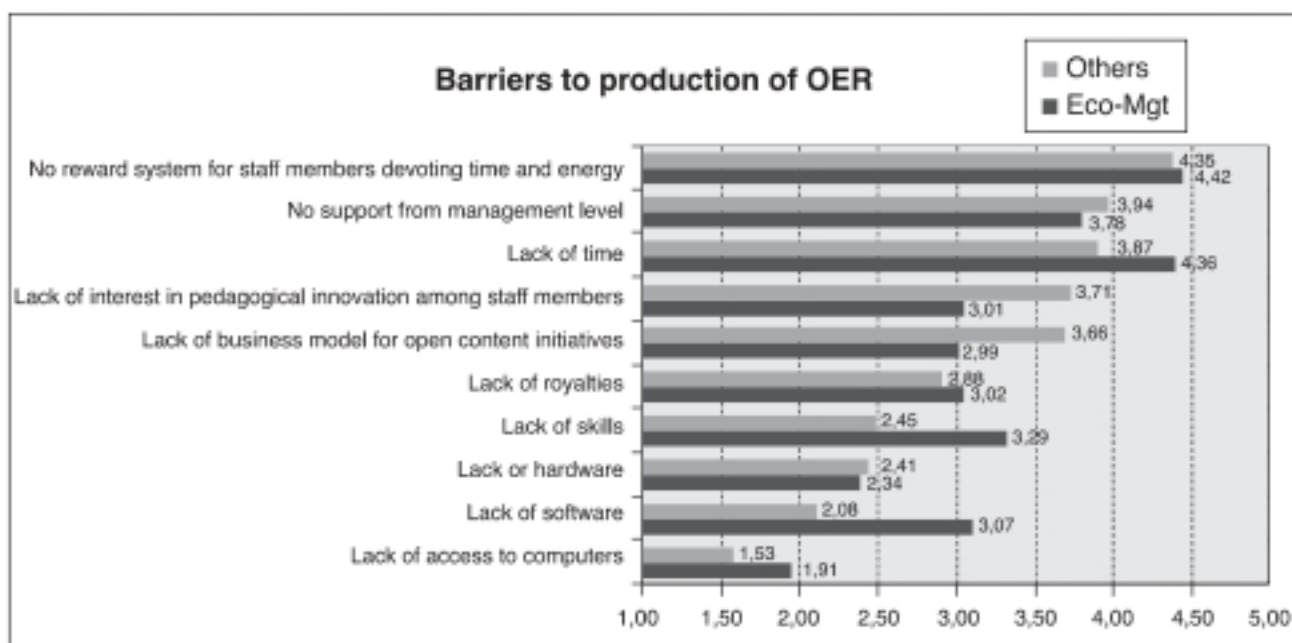
Osika et al. (2005) in a study found that some critical factors, such as, student's technical competency, motivation, interaction with other students and with the teacher, clear objectives, assessment, learner-centered, using other online resources, etc. Levy (2006), conducted a study to assess the effectiveness of e-Learning systems and measured the learners' value and satisfaction for each e-Learning system characteristics to measure the learners' perceived effectiveness of e-Learning systems. And found various factors affect the learners' perceived satisfaction and perceived value of the e-Learning system are : technical support, system errors, internet speed, availability





**Figure 2 : Do you know what are Open Educational Resources**

(Source : Marc Humbert, Cécile Rébillard and Jean-Philippe Rennard ( 2008) . *Open Educational Resources for Management Education: Lessons from experience . eLearning Papers*  
 • [www.elearningpapers.eu](http://www.elearningpapers.eu) • September 2008).

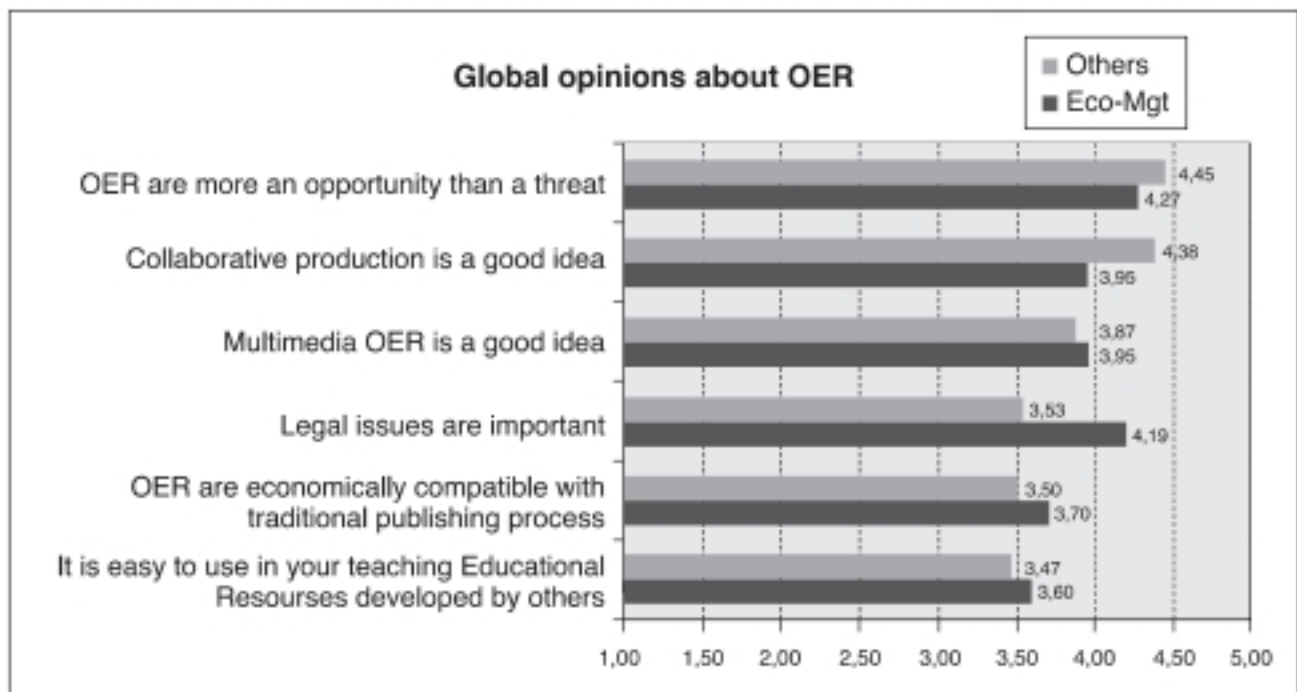


**Figure 3 : Barriers to production of OER**

Source : Marc Humbert, Cécile Rébillard and Jean-Philippe Rennard ( 2008). *Open Educational Resources for Management Education: Lessons from experience.eLearning Papers*  
 • [www.elearningpapers.eu](http://www.elearningpapers.eu) • September 2008

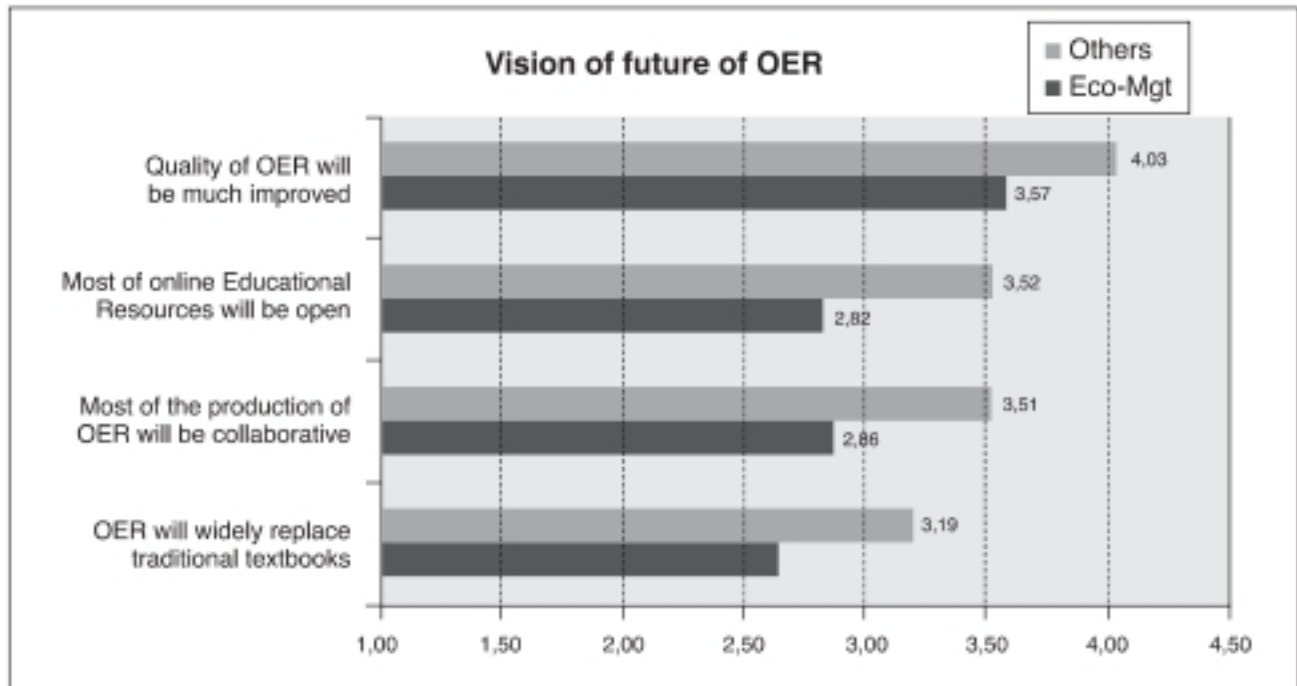
24/7, availability of other content, availability of assignments, amount of teacher-learner interaction, teacher attitude, amount of interaction with classmates, cost of the course, family support...etc.

Piccoli, Ahmad, and Ives (2001) conducted a study and develop a framework for e-Learning system effectiveness in the context of basic information technology skills training and proposed different factors related to



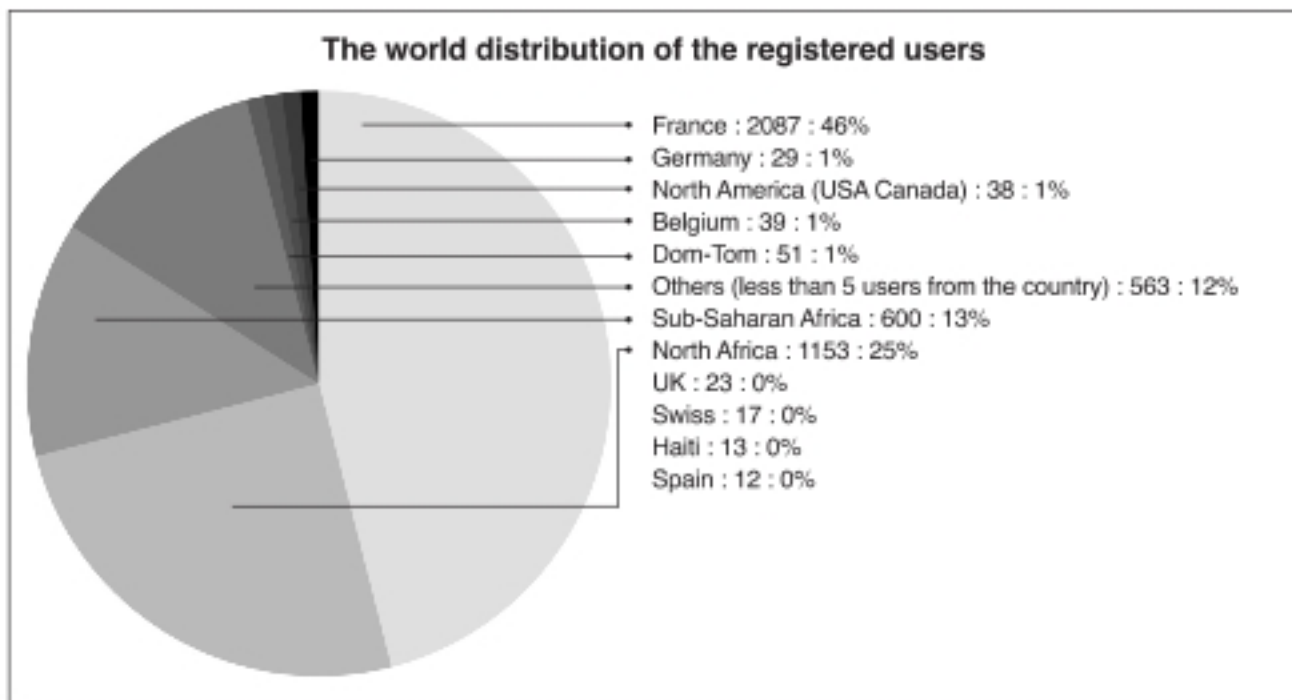
**Figure 4 : Global opinions about OER**

Source : Marc Humbert, Cécile Rébillard and Jean-Philippe Rennard ( 2008 ) . *Open Educational Resources for Management Education: Lessons from experience.eLearning Papers*  
 • [www.elearningpapers.eu](http://www.elearningpapers.eu) • September 2008



**Figure 5 : Vision of future of OER**

Source : Marc Humbert, Cécile Rébillard and Jean-Philippe Rennard ( 2008 ) . *Open Educational Resources for Management Education: Lessons from experience . eLearning Papers*  
 • [www.elearningpapers.eu](http://www.elearningpapers.eu) • September 2008



**Figure 6 : The world distribution of the registered users**

Source : Marc Humbert, Cécile Rébillard and Jean-Philippe Rennard ( 2008) . *Open Educational Resources for Management Education: Lessons from experience . eLearning Papers*

• [www.elearningpapers.eu](http://www.elearningpapers.eu) • September 2008

*learners* (such as maturity, motivation, previous experience, and computer anxiety), *instructors* (such as, teaching style, availability, and technology control), *technology* (such as quality, reliability, and availability), *content* (conceptual knowledge, procedural knowledge, and factual knowledge), and others.

Ozkan and Koseler (2009) after reviewing literature on e-learning proposed that systematic and multi-level consideration of evaluation of e-learning systems is necessary and considering the social issues, the socio-technical systems approach adopted in Kontoghiorghe (2004) should be employed. Chu and Chu, (2010); Ozkan and Koseler, (2009) on the basis of integrative review of literature associated with e-learning effectiveness, found that a systematic and multi-level consideration of students' e-learning effectiveness is necessary and the socio-technical systems approach adopted by Kontoghiorghe (2004) should be employed. According to this theory social system encompasses organizational

culture, interpersonal relations, values, beliefs, motivations, interactive patterns, learning, and adaptability to changes and technical system encompasses mechanical facilities, technical methods, and professional knowledge. Molleman and Broekhuis (2001), Pasmore (1988) and Trist (1981) and Salmon (2004) remarked that on a book titled *e-Moderating*, that emphasizing digital technology is an important "moderator" in learning activities. Besides, individual applications of technology are also influenced by the effects of social relations that exist between people, such as the reward system and power structure (Truffer, 2008). Contrary, Chu and Chu (2010) point out that the extant empirical research on students' e-learning effectiveness does not fully support a positive relationship between e-learning and learning effectiveness. They argue that there may be moderators between e-learning and learning effectiveness, therefore further exploration of the moderators is necessary.



Many studies of e-learning have revealed that application of a plurality of media (Keller, 2008) and interactive media (Hunt et al., 2004) can draw learners' attention and effectively enhance their learning effectiveness. Lee (2006) indicated that media richness is an important factor of e-learning. Hackman and Walker (1990) also indicated that media richness contributes to increasing e-learning satisfaction after the empirical study of the use of television for teaching. Researchers, such as Chen et al. (2004), Liu et al. (2009) and Sun & Cheng (2007), all indicate that media richness will affect learner's satisfaction and the assessment of e-learning system usability.

In a learning environment "motivation" plays a big role that propels students to be devoted to learning activities and intrinsic motivation is the critical success factor of e-learning (Wu and Hwang, 2010). Ryan et al. (1985) point out that 'motivation is a continuum of self-determination levels which reflect the perceived locus of causality. Motivations in the highest level are intrinsic motivations (enjoy doing it) and extrinsic motivations including autonomous motivation (worth doing) and controlled motivation (supposed to do it; must do it) (Wu and Hwang, 2010; Saade et al., 2007; Salmon (2004); Selvi (2006); Selvi (2010); Styer (2007). Therefore, in the context of blended course, good learning attitude may also turn into an intrinsic motivation, the enthusiasm, for using e-learning for participating in the activities of the course. Similarly, Ong et al. (2004) and Chiu et al. (2005) remarked that e-learning that increases user satisfaction will positively influence students' intention to continue using the e-learning system.

Learning climate encourages and stimulates the exchange of ideas, opinion, information, and knowledge (Prieto and Revilla, 2006). According to social learning theory, learners will imitate others' learning behaviors via observing their learning activities. The more students take part in e-learning activities for their blended course, the more others in the same course be encouraged to join them (Wu

and Hwang, 2010). Pituch and Lee (2006) observed that social interaction has a direct effect on the usage of an e-learning system, and the study of Chou and Liu (2005) has indicated that learning climate is an important antecedent of using an e-learning system.

Chu and Chu (2010) indicated that previous studies haven't fully supported the positive relationship between e-learning and learning effectiveness. Besides, there may be important moderators between them, so further exploration is required. However, they suggest that the social supports from learning environment, including "extrinsic motivation" and "learning climate" are influential.

Usability of e-learning and its antecedents, ease of use and media richness, are essential factors of the technical system; while extrinsic motivation and learning climate are important factors of the social system (Wu and Hwang, 2010). These factors directly impact or moderate the influence to students' use of e-learning and their e-learning performance. Therefore, institutes, universities must take care of e-learning both technical factors and social factors into account. In early years, the research of e-learning technologies was focused on system quality and service quality of the supporting systems, researchers began to shift their focus onto information quality, i.e. quality of e-learning materials and in recent years, compared with the system aspect, researchers paid more attention to the content aspect, i.e. sufficiency, richness, and presentation of the learning content. Therefore, many recent researchers have employed the media richness theory proposed by Daft and Lengel (1984) to propose the importance of content richness and use of multimedia in e-learning. Likewise, Carol Vallone, president and CEO of WebCT, said: "... for most universities, just offering face-to-face learning is no longer a viable option. Many students have jobs, or families to look after. They need the flexibility of being able to do some or all of their study remotely, at a time that suits them. By choosing WebCT, City University is leading the way with its commitment not only to offering

students a more flexible way of learning but by embracing technology that will improve learning, teaching and management to everyone involved in higher education process" (E-learning Age, 2003).

## Conclusion

On the basis of review of literature and the above discussion it is clear that various strategies such as active learning (Conole 2008), collaborative learning (Marks, et al. 2005), adaptive learning (Brusilovsky 2004), explorative learning (Or-Bach 2005) and use of concept mapping techniques (Chmielewski, et al. 1998) positively influence the effectiveness of e-learning. Besides blending pedagogical strategies, technologies and learning resources embracing pedagogies management of learning enhanced the effectiveness of e-learning (Sridharan, et al. 2008). Several studies have proposed various information and communication technologies (ICT) (Alavi, et al. 2001; Serva, et al. 2004) supporting diverse learning strategies for enhancing the e-learning environment. Information retrieval technologies, active learning technologies (Alavi and Leinder, 2001) computer-supported collaborative learning (CSCL) (Chou, et al. 2009) technologies, adaptive learning technologies (Brusilovsky 2004) and concept mapping technologies have been recommended (Sridharan et al. 2008). Further, it may be said that the better learning attitude, the students are more earnest in use of e-learning, especially with an e-learning system of better usability. Extrinsic motivation encourages students to use e-learning, and provides incentive to learn better. Though learning climate does not directly impact students' use of e-learning, but improves e-learning performance. This paper uses a more comprehensive review of literature and can be a reference for future researchers of e-learning in management colleges.

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# Total Quality Management in Higher Education – Perception of Management & Engineering Faculty

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## ABSTRACT

This paper aims to depict the perception of management and engineering faculties regarding Total Quality Management (TQM) in higher education present in Meerut city of Uttar Pradesh. This paper makes an attempt to understand how these perceptions vary by demographic variables such as, gender & subject specialization (management and engineering). The primary data were collected from 90 faculties of six different professional Colleges of Meerut city. The collected data were analyzed using SPSS version 14.0. Analysis of Variance (ANOVA) was employed to find out the significance of difference between variables. There is a significant difference between male and female faculties in the perception of total quality management. Female faculties had higher mean score than that of their male counterpart faculties. Again there is a significant difference between management and engineering faculties in the perception of total quality management. Management faculties have higher mean score as compared to the engineering faculties.

*Keywords: Total Quality Management, Demographic Variables, Higher Education*

## Introduction

In many countries the topic of quality management has been firmly placed on the agenda of higher education institution for

quite some time. Total Quality Management has generally been known as a major innovation in management contemplation and has gained pervasive acceptance in commerce



and industry. The principle of Total Quality Management has been successfully adopted in higher education by developed countries like USA, Japan and UK. In developing countries, like India and China, the number of higher education establishment applying the concept of Total Quality Management to improve the quality of students for competing in challenging environment is comparatively less. Higher education for masses and an escalating climate of increased accountability are frequently cited as rationales for a greater emphasis on quality (Eriksen, 1995; Oldfield and Baron, 1998; Becket and Brookes, 2006). The role of Higher Education in inspiring national economic development and the value of international students to national economies exacerbate the need to ensure quality within Higher Education. These forces demand that quality assurance processes are both, scrupulous and obvious; and that quality enhancement initiatives are firmly ingrained in any quality management programme.

The conservative academic approach to manage and sustain quality in higher educational institution appears to be less competent in present situation. The society-demand, for greater answerability in the utilization of public funds, would require a more unequivocal oath on quality in the delivery and management of higher education. The focus remains on quality assurance and quality enrichment. These issues have become a major cause of concern for most of the institutions.

Quality assurance should be part and parcel of the arrangement, system and approaches related to teaching, research and administration as to enable the stated aims and objectives of the institution to be achieved. The increase in focus on quality assurance is also closely related to the increase in funds invested in higher education. Funding of higher education is seen as a means towards further economic growth and development.

In current scenario alterations and modifications are required in the field of higher

education. The aggravated frustration among students is rising high day by day.

### **Review of literature**

According to Harvey & Green(1993) there are four perspectives of quality in higher education, and they are – excellence, fitness, value and transformation. Quality as excellence portrays the crystal clear criterion created by the institutions, whereas quality as fitness for purpose concentrates on satisfying the gap in the industry and considering the requirements of the customer. Quality from the value or financial perspective cites to the desired consequence of the institutions in terms of business and fiscal gains. Lastly quality as transformation or alteration is when the institutions espouse strategic modifications to gain a forte in the industry.

In 2007, Lomas stated that “Quality Enhancement” and “Quality Assurance” have been attached with the higher-education system. “Quality Enhancement” denotes the incessant improvement in the institution system where as “Quality Assurance” gratifies to the standards upheld by the institutions through verification of exterior bodies (Biggs, 2003). There is usually equivocality between the two; i.e. Quality Enhancement and Quality Assurance; and so separate departments are kept to maintain updates of the curriculum and to preserve check on the standards of the institutions.

TQM is very effective in higher education as it checks not only the trail of the entire system but also the unremitting up-gradation that keeps the quality high. This endeavor encourages and gears up the students making them well equipped for the market place (Soni, Chaubey & Rayan, 2000); where they use bottom-up approach to coordinate with their team members and render a healthy internal milieu. This is how the communication and coordination enhance the by and large production in the institution and give a greater consequence as result (Parker

& Slaughter, 1994; Vazzana, Winter & Waner, 1997). However the TQM can also have downbeat effects on the higher education. The most spectacular effect of execution of the TQM is that the institution has to take a risk of altering the entire system, quitting their conventional practice and spend unrestrained amount of time and wherewithal and other resources on the new system (Murgatroyd, 1993; Weller & Hartley, 1994; Antony & Preece, 2002). Even the faculties get affronted as their level of authority and techniques change leading to low morale; and also a want of focus on the new system can lead to the most terrible outcome (Raelin, 2003; Antony & Preece, 2002).

As Kaufman explained in 1992 the total "Quality Management" offers all that is required as judged by the client. It is carried out and achieved through everyone committed to obtain results, as a passion for quality and decision based on performance data in the organization. TQM emphasizes the fact that it is imperative for all elements to fit collectively to turn raw materials into the final products and deliverables that gratify customers. Client satisfaction is the most sought after result addressed by TQM (Crosby 1979; Caplan 1990). Neves and Akhai (1993) illustrate the basic tenets of TQM which are as follows: *"long-term perspective, customer focus, and top management commitment, systems thinking, training and tools in quality, increased employee participation, development of a measurement and reporting system, improved communication between management and labour, and continuous improvement"*. Thus it can be concluded that TQM emphasizes two main concepts: first, Continuous improvement; and second, tools and techniques used to achieve the desired result. On the whole, TQM embraces and encompasses various management and business philosophies and its focus gets transferred based on the scenario where TQM is applied. Whether it is in industry or higher education, TQM philosophies gyrate around the client and consumer.

## Objectives

1. To study the level of perception of management and engineering faculty in Meerut city regarding TQM in education.
2. To study the difference between male and female faculty in the level of perception regarding TQM in higher education.
3. To study the difference between Management and Engineering faculty in the level of perception regarding TQM in higher education.

## Hypotheses

**H1:** There is no significant difference between Male and Female management faculty in the level of perception regarding TQM in higher education.

**H2:** There is no significant difference between Management and Engineering faculty in the level of perception regarding TQM in higher education.

## Research Methodology

### Sample

90 faculties were arbitrarily selected from 6 professional colleges in Meerut city. All the faculties selected, from management as well as engineering stream, were considered as samples for the study. The samples for the study consisted of 60 faculties from management and 30 faculties from engineering stream to make the total sample size of 90 faculties. They can also be divided into 55 male and 35 female faculties.

### Research Instrument

Well structured and predrilled questionnaires with both open and closed ended questions have been used to collect primary data from management and engineering faculties in respect of TQM in education.

## Result and Discussion

### Demographic Profile of Respondent

Table 1 shows the demographic profiles of respondents. 66 percent, of respondents,



belongs to management stream while only 24 percent, of respondents, belongs to engineering stream. 72 percent respondents are having educational qualification of post graduation and 22 percent respondents are having doctorate degree as their qualification while only 6 percent respondents are having qualification till graduation only. 44 percent of respondents are in age bracket of 30 to 40 years and 29 percent in between 21 to 30 years while other 27 percent belongs to above 40 years. 61 percent respondents are male and rest 39 percent respondents are female.

**Table 1: Demographic Profile of Respondent**

Variable	Characteristics	Frequency	Percentage
Stream	Management	60	66
	Engineering	30	24
Education	Graduate	05	06
	Post-Graduate	65	72
	Doctorate	20	22
Age Group	21-30 Yrs	26	29
	31-40Yrs	40	44
	>40 Yrs	24	27
Gender	Male	55	61
	Female	35	39

#### **Level of Perception of Management and Engineering Faculty regarding TQM in Higher Education**

Table 2 shows the perception of management and engineering faculty regarding TQM in

higher education. It reveals that more than 55 percent, management and engineering faculty, exhibits average level of perception about TQM in education. However, the percentage of management and engineering faculties with above average level of perception about TQM is around 26 percent than that of faculty which is only 19 percent with below average level of perception about TQM.

#### **Comparison between Male and Female Faculty in the level of Perception regarding TQM in Higher Education**

Table 3 shows the comparison between male and female faculty in the level of perception regarding TQM in higher education. It indicates that the mean score by the female faculty is higher than that of male faculty which is 1.89 while in case of male faculty the mean score is 1.35. The Standard deviation is less in case of female faculty which is 0.21 while in case of male faculty this score is 0.25. At 0.05 level of significance, the obtained t-value is 2.16, which indicates that female faculty has better perception than male faculty regarding TQM in higher education. So on the basis of above results the first hypotheses is rejected which means there is a significant difference in perception of male and female faculty regarding TQM in higher education.

**Table 2: Level of Perception of Management and Engineering Faculty regarding TQM in Higher Education**

Sl. No	Above Average		Average		Below Average	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1	23	26	50	55	17	19

**Table 3: Comparison between Male and Female Faculty in the level of Perception regarding TQM in Higher Education**

Sl. No	Male Faculty		Female Faculty			
	Mean	S.D.	Mean	S.D.	t- value	Sig.
1	1.35	0.25	1.89	0.21	2.16	0.05



### Comparison between Management and Engineering Faculty in the level of Perception regarding TQM in Higher Education

Table 4 depicts the Comparison between Management and Engineering Faculty in the level of Perception regarding TQM in Higher Education. It shows that the mean score by the management faculty is higher than that of the engineering faculty which is 1.99 while in case of male faculty the mean score is 1.33. The Standard deviation is less in case of management faculty which is 0.20 while in case of engineering faculty this score is 0.28. At 0.05 level of significance the obtained t-value is 2.89, which indicates that the management faculty has better perception as compared to engineering faculty regarding TQM in higher education. So on the basis of above results the second hypothesis is rejected which means there is a significant difference in perception of management and engineering faculty regarding TQM in higher education.

**Table 4: Comparison between Management and Engineering Faculty in the level of Perception regarding TQM in Higher Education**

Sl. No	Management Faculty		Engineering Faculty		t- value	Sig.
	Mean	S.D.	Mean	S.D.		
1	1.99	0.20	1.33	0.28	2.89	0.05

### Conclusion

As per the study, there is a significant difference between male and female faculty in the perception about TQM in higher education and this difference is also found in the case of management and engineering faculty. In demographic profile, 66 percent of respondents belong to management stream while only 24 percent respondents belong to engineering stream. 72 percent respondents having education qualification of post graduation and 22 percent of respondents having doctorate degree as their qualification while only 6 percent respondents having qualification till graduation only. More than 55 percent management and engineering faculties exhibited average level of perception about

TQM in education. However, the percentage of management and engineering faculties with above average level of perception about TQM is around 26 percent than that of the faculties with below average level of perception about TQM which is only 19 percent.

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# A Study on Contemporary e-Learning Technology Products

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## ABSTRACT

Teaching effectiveness in online environment is determined by factors like technology, instructional pedagogy, content & communication. Effective use of technology tools develops higher gain. Easy access and smooth navigation to the desired content coupled with user friendly interface not only facilitate higher interaction also captures students' attention. This paper describes five top of the list products across categories of LMS and Authoring tools which are contemporary.

*Key Words: LMS, LCMS, e-Learning, Technology*

## Introduction

Over the last decade higher education has undergone overwhelming change in terms of technology intervention. Blending functional fluency with technology mediation enhances acceptance of professors within the student community. There are many technology tools available to facilitate services like content creation, knowledge dissemination, synchronous and asynchronous communication to foster effective learning (Marques, 2009). During early 2000s efforts

were made to exploit e-learning technologies mainly to proliferate distance education. Gradually educators started augmenting technology tools in formal education as well. Open source platforms started gaining strong foothold in higher education domain specifically vocational education & training sector (VET). Gradually skilset based micro learning also paved in to and people started feeling the need to ubiquitous learning (Carabaneanu et al, 2006).

## Contemporary e-Learning Technologies

Entire gamut of present e-learning technologies can be classified under two major categories depending on the tasks they are expected to deliver. From operational perspective, content creation, content delivery and programme administration are three major generic duties shared by LMS, LCMS and Authoring tools. Again LCMS consists of LMS and content development facility. Hence two major branches of technologies are responsible for e-learning courseware development and delivery which can be categorized as LMS & LCMS and Authoring tools. This paper discusses the available technology products practiced in e-learning programme development. The criteria of selection of products have primarily been the popularity of those products which can be ascertained by the number of organizations using the product. Under the category of LCMS & LMS the table below represents a list of products whose user level is fifty or more.

Considering the criticality of the technologies, the top five products of the list have been discussed here for a better understanding of the technical issues.

### 1. Product: KnowledgeHub

This product was originally released as an LMS in 2002 and having an excellent user base spreading 6000 organizations. This application is SaaS (Software as a Service) norms compliant and comes with facilities like customization, collaboration, configuration and integration capabilities to have a complete learning solution. Unlike traditional LMSs, the maintenance and upgradation part is taken care of by the company itself.

### 2. Product: IntraLearn XE

IntraLearn XE was originally launched in 1997 as a family of e-learning software applications developed specifically to cater the needs of mid-size enterprises & departments who are looking for IT & HR training for the people

in the organization & vendors or value chain partners. The strength of the product lies in its capability to utilize IntraLearn's Icosa multiple port technology and ALS (Alternate Language System) which facilitates customized courseware development & delivery. All members of an organization including employees, vendors, resellers, corporate customers and consumers are connected over an integrated learning environment sharing knowledge interactively over internet & intranet. The products also cater to the needs for content creation and equipped with e-commerce features, multimedia programme delivery and examination administration features. Standard & structured curricula can be designed & launched through IntraLearn XE. Additionally, threaded discussions, email, white boards, file sharing & focused group features are available as built in components. The product supports third party AICC/SCORM compliant documents. The product is easily configurable & integrated authoring tool allows content creation.

### 3. Product: SumTotal® TotalLMS

The product was released in 2001 and is a scalable enterprise oriented learning management application which brings in it a unique feature of talent management as an integrated suit which helps the organization in rearing talents and succession planning. The product is based on OAA (Open Activity Architecture) which can easily adapt to customer's existing process. Apart from other generic features of LMS like self paced Web training, live interactive Web training, instructor led courses, on the job training suitable for corporate set ups & documentation, this product is unique in blending formal & informal learning through its collaborative learning capabilities. TotalLMS facilitates personalized training; hence organizations can plan their training programme pertinent to individual departments & locations. Additionally, TotalLMS support in managing compliance & certifications for regulatory authorities.

**Table 1: Shows list of LMS products practiced widely in industry and ratings has been done in terms of number user organizations using a particular product (Brandon Hall Research, 2009a) (Brandon Hall Research, 2009b)**

**Product Category: LMS**

<b>Product</b>	<b>Company</b>	<b>No of user organization</b>
KnowledgeHub	Element K	6000
IntraLearn XE	IntraLearn Software Corp.	2000
SumTotal® TotalLMS	SumTotal Systems Inc.	1500
CERTPOINTVLS	CERTPOINT SYSTEMS, Inc.	1250
How To Master Learning Management System	InfoSource Inc.	935
CompanyCollege LMS	Business Training Library	800
Saba Enterprise Suite	Saba	750
e-doceo global solution	e-doceo	650
Absorb LMS	Blatant Media Corporation E-Learning Solutions	600
NetDimensions Enterprise Knowledge Platform (EKP)	NetDimensions	600
SiTELMS	Simulation and Training Environment Lab at Washington Hospital Center	600
JoomlaLMS	ElearningForce	500
eFront	Epingosis	500
GeoMaestro	GeoLearning Inc.	400
TrainingMine	Frontline Data Solutions Inc.	300
BlueVolt University	BlueVolt	200
SAP Enterprise Learning	SAP America	200
Avilar WebMentor LMS	Avilar Technologies Inc.	175
Cornerstone OnDemand Talent Management Suite	Cornerstone OnDemand Inc.	120
Course-Source	Course-Source Limited	110
Kallidus LMS	e2train	102
ABC Academy	Danish Probe A/S	100
Acadia HCS	Acadia HCS	95
ACS Learning Management System	Affiliated Computer Services, Inc.	80
iPerform	Beeline Inc.	52
WBTServer	4system Polska Sp. z o.o.	50

#### **4. Product: CERTPOINTVLS**

Originally released in 1998 and with user base of 1250 organizations this product is in its sixth version. The product is equipped with LMS

and LCMS, authoring tools & collaborative learning system. The major focus, so far, of this product has been primarily on sales &



marketing initiatives where curricula have been developed for effective transfer of brand & product knowledge across various sales channels. This particular product is a perfect match for classroom requirements where classroom based online courses can be launched. Once the courses are ready the administrators can launch it through VLS (Virtual Learning System) (Weyers, Adamson, Murie, 2004). Student registration, selection of wait listed candidates can be taken care of by the system itself. Even after the completion of the course, student's details can be tracked by the system. Additionally, various reporting tools are available that facilitate administrators to measure the progress of the students, even at the micro level of subjects, topics etc. The level of competency across the organization can also be tracked using the product. The system can measure skill gaps and suggest remedial measures for self development. VLS supports self assessment as well as assessments done by external and internal examiners.

## **5. Product: How To Master Learning Management System**

Originally released in 2000, this product is being used over 935 organizations worldwide catering to various training needs across departments. The main features of this product include Test Builder – a tool that creates customized test programmes, various types online reporting tools, students can chat & discuss online, file sharing, instructor led training track, progression measurement of students to understand skill gap, authoring tools (MAT – Master Authoring Tool) for content creation etc. besides generic LMS features. This product is also suited for conducting formal courses online. It provides the facility of student registration, facility to wait list students of over enrolled courses, calendar maintenance and manual enrollment for students coming at the last second and automatic generation of certificates after completion of the curriculum besides others.

## **1. Product: Adobe(R) Flash(R) CS3 Professional**

Adobe(R) Flash(R) CS3 Professional was originally launched in 1991 and as on date boasts an user base of more than 1000000 organizations worldwide. Its uses are mostly restricted in creating interactive rich content for a wide array of electronic devices. The usefulness of this product lies in its capability to create interactive multimedia content involving animated movements, images, sound, text and video. Once the content is prepared the same can be viewed using Adobe Flash player & other applications of Flash run times.

## **2. Product: Camtasia Studio**

Camtasia Studio was originally released in 1987 and with excellent product performance; the product boasts an overwhelming user base spreading 92,138 organizations worldwide. The beauty of this product lies in its capacity to allow people to create multimedia e-learning content without prior expertise of programming or multimedia animation design and that too with excellent presentation quality. The users can record a live lecture or presentation session and re-touch it later on and finally can beam it to various electronic devices of any screen size like web pages, CDs, portable devices like ipod with exceptional voice clarity. Multimedia files created over Camtasia Studio can be embedded easily in any web page or blog and built in FTP (File Transfer Protocol) provides necessary support to the user for transferring file into user's server.

## **3. Product: Adobe Captivate**

Adobe Captivate is a well known authoring tool for developing robust e-learning content which was originally released in 1982. As on date the product is being used in more than 50000 organizations globally. It consists of many unique features. Some of them can be enumerated as automated text caption

**Table 2: Shows list of Authorware products practiced widely in industry and ratings has been done in terms of number of user organizations using a particular product (Brandon Hall Research, 2009c)**

**Product Category: Authoring Tools**

<b>Product</b>	<b>Company</b>	<b>No of user organization</b>
Adobe(R) Flash(R) CS3 Professional	Adobe Systems Inc.	100000
Camtasia Studio	TechSmith Corporation	92,138
Adobe Captivate	Adobe Systems Inc.	50000
ViewletBuilder	Qarbon.com Inc.	25000
TurboDemo	Bernard D&G/TurboDemo	19000
ToolBook Assistant	SumTotal Systems	13000
ToolBook Instructor	SumTotal Systems	13000
Articulate Presenter	Articulate	12000
Articulate Quizmaker	Articulate	12000
Articulate Engage	Articulate	12000
THESIS	HunterStone Inc.	10000
ViewletCam	Qarbon.com Inc.	10000
myUdutu	Udutu Online Learning Systems Inc.	9862
Adobe Presenter	Adobe Systems Inc.	5500
Director and Shockwave Player	Adobe Systems Inc.	5000
Respondus	Respondus Inc.	3000
Questionmark Perception	Questionmark	2500
Lectora	Trivantis Corporation	2500
RapidBuilder	XStream Software Inc.	2500
Impatica for PowerPoint	Impatica Inc.	2000
Vox Proxy	Right Seat Software Inc.	2000
Accordent Capture Station	Accordent Technologies	1000
Authorware	Adobe Systems Inc.	1000
Dreamweaver CS3	Adobe Systems Inc.	1000
ReadyGo Web Course Builder	ReadyGo	1000
StudyMate Author	Respondus Inc.	1000
Apixel Metamorphosis	Apixel	500

which saves time, a find & replace tool and web applications can be recorded in internet explorer for demonstration purposes. Those recorded demonstrations can be used by the users for simulated practical sessions. Events like mouse movements, verbal instruction

facilities for advanced learning. Like the previous product authors can develop highly engaging e-learning experience without prior programming or multimedia skills. Not only training related to software, soft skills can also be developed using live recording feature

of this product and create learner path for students. The effectiveness of simulation exercises can be enhanced by adding quizzes etc. Another beauty of this product lies in its compatibility of other products. After preparing the output, the file automatically gets converted to light weight SWF format compatible to Adobe Flash Player. Due to SWF output, rich content can be delivered online. The product supports SCORM 2004, SCORM 1.2, AICC so that the applications can be installed on any standard LMS.

#### 4. Product: ViewletBuilder

Though the product belongs to a small company still in terms of its magnificent product performance, ViewletBuilder has been able to enthrall users across 25000 organizations globally since its original release in 1997. Besides normal functions of an Authorware, it has patented its screen capture process wherein the product records cursor movement extremely crucial for tutorials and other virtual sessions. The product is available in different versions across platforms and allows users to demonstrations videos like the performance of a web site etc.

#### 5. Product: TurboDemo

Originally released in 1998, TurboDemo has a user base in 19000 organizations worldwide. Like the previous one, this product also allows users to create online demonstrations and software simulation by recording cursor movements. The capability to capture screen

movements facilities helps users to develop tutorials and other e-learning contents in FLASH, ASE, PDF, AVI and GIF file format where users do not require any prior programming knowledge.

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# My Experiences and Experiments in Teaching Corporate Governance and Related Ideas\*

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My experience in teaching Corporate Governance and related ideas started with introduction of a course on Indian Ethos and Human Quality Development (HQD) at WISDOM (Women's Institute for Studies in Development Oriented Management), Banasthali University, Banasthali, Rajasthan, in 1996. Banasthali University is based on the vision of synthesis of the spiritual values and scientific achievements of both East and West. WISDOM was founded at Banasthali University in 1996 and a course on Indian Ethos was introduced right from its creation stage. This course dealt with inter-linkages between Individuals, Society and Corporations within the general framework of Indian Ethos and Development Oriented Management. My book, 'Management in New Age: Western

Windows Eastern Doors' published in 1996 was the foundational book for this course and became known as 'Book of Wisdom'. This book for the first time introduced the concept of HQD (Human Quality Development) as a distinctive Indian contribution to Management Thought and this idea was introduced at WISDOM right from its foundation stage. Now this book is used in many Universities and institutions as a reference book in courses related to Human Values, Business Ethics, Corporate Governance, CSR etc. In 2012, United Nations document on Principles for Responsible Management Education (PRME) included it as part of reference material for the Anti-Corruption Guidelines ("Tool Kit") for MBA Curriculum Change.

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*\*An extended version of the presentation at the Workshop on the Teaching and Training of Corporate Governance (Ethics and Responsible Business) in India, held at the Indian Institute of Management (IIM) Bangalore, March 27- 28, 2012.*

Drawing from the experience of WISDOM, nearly a decade later at Indus Business Academy (IBA), Bangalore and Greater Noida, in 2006, I developed a course titled as Management Perspectives (MP) in terms MP (Management Perspectives) - I and MP (Management Perspectives) – II. Purpose of this course is to lead students in the direction of 'Enlightened Professionals' who will practice 'Holistic Corporate Management' (HCM) in their future endeavors. At IBA Greater Noida, this course was introduced right from its foundation stage in 2006.

Management Perspectives course addresses the concepts of Self Development & Management (SDM) and Holistic Corporate Management (HCM) and thereby the issues of Self evolution, Ethics and Values, Corporate Governance, Social Responsibility and Environment/ Ecological awareness at three levels:

1. Ontological level
2. Epistemological level
3. Practical / Operational / Application level

Further, Management Perspectives course is rooted in 4 Ps model of Professional excellence developed at IBA wherein 4 Ps stand for Principles, Practices, Perspectives and Philosophy of the Profession with roots in Managerial SAW (Science, Art and Wisdom). An 'Enlightened Professional' should have a proper understanding of these 4 Ps and their inter-linkages. Idea of MP-I and MP-II is to prepare the students to evolve as 'Enlightened Masters of Corporate Management' (EMCM) in their future career. For this, a new idea of CEO (Creative, Enlightened Organic) leader was developed as an inspirational and aspirational model who in future may evolve as 'Corporate Rishi' with high ability to see and re-see events, threats and opportunities in new ways.

Thus, Corporate Governance and related issues are integrated as part of Self evolution and 'Holistic Corporate Management' rather than as stand alone issues or stand alone course.

In 2008, Calcutta Business School (CBS), Kolkatta was established and introduced a course on Human and Organizational Behavior - Psycho Philosophical Approach, for which I was invited to teach a module of 6 sessions based on integrating 'Best of the East and West' in the field of Management. My module was based on my experience of teaching, Indian Ethos and HQD (Human Quality Development) at WISDOM, Banasthali University, Banasthali and Management Perspectives course at IBA, Bangalore and Greater Noida.

Management Perspectives (MP) course developed at IBA was also adopted and adapted in 2010 by GITAM School of International Business (GSIB), GITAM University, Visakhapatnam, and I was invited to teach it. A Faculty member was inducted to teach it in future. GSIB now offers it as part of its MBA syllabus.

At IBA Greater Noida, Management Perspectives course has been institutionalized and is now taught by Dr. Divya Kirti who has been associated with this course right from the beginning in 2006. I provide mentoring advice and give supplementing talks during my visits to IBA Greater Noida.

Some other institutions have also drawn inspiration from these experiments and have introduced Management Perspectives course and in some cases it supplements the Principles of Management course such as at Jaypee Business School, Jaypee Institute of Information Technology (JIIT), a Deemed University, Noida .

Thus, a teaching and learning experiment started at WISDOM and IBA, has been institutionalized not only at WISDOM and IBA but also in varying forms in different institutions.

### **Innovations in Pedagogy**

In India there have been several thinkers to give a new direction to education depending



upon the needs of the times. Swami Vivekananda suggested the need for blending the best of the East and West (SVYASA University in Bangalore is based on this philosophy), Swami Dayananda established Anglo-Vedic approach to education (DAV Colleges were conceptualized around this idea), Madan Mohan Malviya founded Banaras Hindu University (BHU) on the idea of Sarvavidya (Holistic Education) and Sri Aurobindo suggested the need for Integral Education, Banasthali University, Banasthali, Rajasthan, is based on 'synthesis of the spiritual values and scientific achievements of both East and West'. Establishment of WISDOM at Banasthali University in 1996 led to Wisdom model of education based on Wisdom equation:  $Wisdom (W) = Reason (R) + Intuition (I)$ . This model is also represented by the Sanskrit phrase, Gyanam-Vigyanam-Pragyanam. Pragya (Wisdom) is represented by integration of Gyan and Vigyan. On the basis of these and related ideas from the East and the West, I developed and experimented with CH<sup>3</sup> (Consciousness, Head, Heart, Hand) model of 'holistic education' in the field of Management and Leadership. It may be indicated that in this formula, C also implies Creativity and Creation and thus it also can be considered as a foundational concept for Entrepreneurship ('Creation from Shunya'). In fact, CH<sup>3</sup> can be considered as a new foundational model for education in general and Management education in particular.

To implement CH<sup>3</sup> several innovations in pedagogy were experimented. 3D (Discussion, Dialogue and Discourse) model of learning was developed at WISDOM, Banasthali University and IBA, Bangalore and Greater Noida and was tested in these institutions. This learning model with its roots in democratic world view leads to development of left brain and right brain capabilities. It also helps in development of democratic spirit and democratic approach to decision making, problem solving and solution finding. Further, this model also facilitates 'grounded praxis' approach to understanding linkages

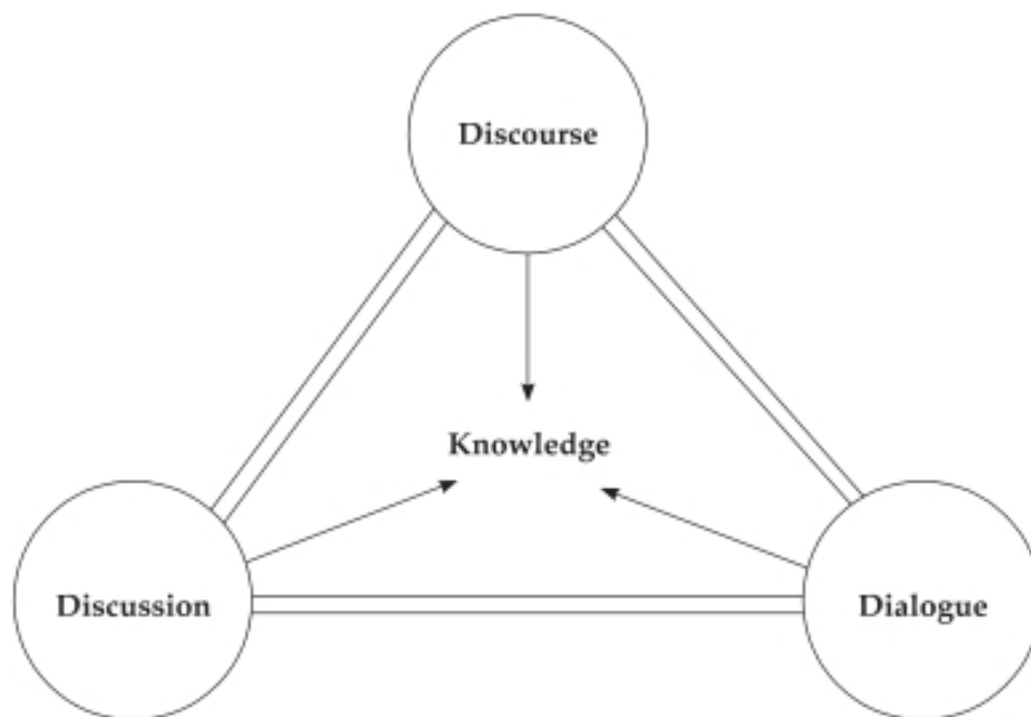
between ontological, epistemological and practical aspects of management perspectives and thereby facilitates implementation of new ideas. In 'grounded praxis' approach there is an integration of Thought, Theory and Practice of Management. 3D model of learning helps in this integration. Further, the grounded praxis approach also helps students to understand the linkages between top down and bottom up approaches, micro and macro realities, Global to Local (Glocal approach) and Local to Global (Capillary action) models of management and leadership.

3D model of learning also represents knowledge creation through Discussion, Dialogue and Discourse. Fig. 1 presents this model of knowledge creation and learning. In this diagram, two lines connecting Discussion, Dialogue and Discourse circles represent mutual influence of these three aspects of knowledge creation and learning.

'Omega circle' model of learning based on Syadvad philosophy from Jainism, is used to create the idea of multiple perspectives and learning from different dialectical positions. 'Issues analysis' approach used in this course is based on this model.

Innovations included 'Shunya creations' approach reflected through Poetic Methodology/ Corporate Rhymes, Group Chanting and Shunya Music approach to teach concepts of Self Evolution, Ethics and Values, Corporate Governance and CSR. Theme papers based on self reflection on poems related to such themes constituted an important innovation. At WISDOM, my poem, 'Light in My Heart' (song of creativity and spirituality) from my book, 'Creation from Shunya' (1993), was adopted by WISDOM students in 1996 as WISDOM Song by adding a few lines to the original poem. Similarly at IBA, my poem, 'Step-by-Step' (song of success and development) from my book, Arrows of Time (2001) was adopted as IBA Song. These songs relate to self evolution and professional success along with happiness ('Holistic





**Fig. 1: 3D Model of Knowledge Creation and Learning**

Success'). It may be indicated that my three corporate rhymes, viz. Step by Step, Churning of the Ocean and Light in My Heart capture the essence of the New Consciousness in Holistic Education in general and Management Education in particular.

'Shunya creations' also implies entrepreneurship (starting from scratch, taking a new initiative, incubating a new idea, taking new step from zero base etc.), creativity and spirituality. These three dimensions of 'shunya creations' constitute three important aspects of self evolution of leader viz. entrepreneurial spirit, creative solution seeking and creating synergy through spiritual approach. For becoming enlightened professionals and Creative, Enlightened, Organic (CEO) leaders all the three dimensions are important. It may be once again be reiterated that 'Step- by- Step', 'Churning of the Ocean' and 'Light in My Heart' are essentially CEO songs as they teach us the lessons of entrepreneurship, creativity and spirituality.

'Osmotic Meditation' for mind expansion constituted another innovation. I designed

some Osmotic Meditation exercises that aim at raising consciousness to higher levels and sensitize students towards HOPE – Higher Order Purpose of Existence. These exercises have been experimented and have been found to be very useful in expanding one's circle of consciousness.

'Candle Light Experiment for Inner Invocation' has been another breakthrough innovation for teaching ideas and concepts related to HQD and Management Perspectives. I conducted it first time for the MBA students at WISDOM in 1997. Since then nearly 3000 MBA students ( WISDOM students from 1997 onwards, IBA students at Bangalore and Greater Noida, from 2006 onwards and students from other institutions with which I am associated) and corporate executives (during Management Development Programs) have participated in these experiments. Cue and inspiration for this innovative experiment came from my blackout experience in 1997 as well as from two unrelated fields viz. Chemistry and Consciousness (Spirituality/ Yoga & Meditation). Inner Qualities Development

(IQD) through 'Inner Invocation' is an important dimension of self evolution and candle light experiment sensitizes students towards the idea of 'Inner Invocation' leading to a better understanding of spiritual synergy inherent in every individual.

Other experiments such as Broken glass experiment and Rhymes creation experiments supplemented the learning. These experiments invoke creativity and new ways of understanding reality around us leading to development of new perspectives.

In essence the innovations included 'Soft Model Osmotic Learning' based on 'Domination Free' methodology, where in a Teacher is not imposing his/her viewpoint but creating conditions for students to learn about different perspectives. Classroom discussions are supported with a number of classroom exercises and experiments to facilitate experiential learning. Exhibit I provides an illustrative list of experiential exercises and their learning objective. Learning is further reinforced through Field exercises and additional group exercises. Exhibit II provides a list of the same.

At IBA cultural symbols were created at the campus both at IBA Bangalore and Greater Noida with a view to create an ambience for 'Osmotic immersion' of these innovations. These symbols include 3D Centre that provides physical space to students to have group discussions in formal and informal discussion sessions, Omega Circle, Steps towards library/ Knowledge Management Centre are indicative of Knowledge steps as well as Step by Step song, a Corporate Flag with three colors viz. Green, Red and Saffron symbolizing Profit, CSR and Good Governance. This flag has become well known as IBA Flag. Every year at IBA Bangalore on Aug. 20 (day of start of the first batch), HOPE Day is celebrated to celebrate the HOPE – Higher Order Purpose of Existence. At IBA Greater Noida, Development Day is celebrated on July 30, the day of campus inauguration. These symbols

facilitate not only internalization of the ideas by students but have also institutionalized the innovations.

Both at WISDOM and IBA, above discussed ideas and innovations have been institutionalized and from such institutionalization has emerged a new philosophy of Development viz. Development with Hope and Wisdom symbolized by Development day, Hope and Wisdom day. This philosophy of development is applicable at the level of Self, Organization, Nation and the World. In fact in all Shunya creations (Creations from Shunya) that become successful there is an underlying integration of development, hope and wisdom. In corporate context, it also represents the essence of Holistic Corporate Management (HCM) through Corporate Governance, CSR and New Leadership ( CEO - Creative, Enlightened, Organic leadership).

As Founding Director, Indian Institute of Plantation Management, Bangalore, during my tenure, I also experimented with some of the above discussed innovations and the lessons learnt were carried forward to further develop the ideas. I also tested them at Management & Yoga Division of SVYASA (Swami Vivekananda Yoga Anusandhana Samsthana) University, Bangalore. On different occasions, I was also invited by Department of Management Studies, Goa University and Institute of Business Management, Veer Bahadur Singh Purvanchal University, Jaunpur, UP, to teach modules related to these ideas. Further, these ideas and innovations were also tested at many other B Schools and in Corporate interactions during invited talks and presentations within and outside India. In these experience sharing talks they generated considerable interest. Such talks have helped in spreading these ideas to other colleges, institutes and also in the corporate world.

These innovations have also received wide media attention and have also been documented in my books and writings e.g. Management in New Age: Western Windows



Eastern Doors (1996 & 2006), New Mantras in Corporate Corridors (2007), Shunya Poems: My Experiments with Corporate Rhymes (2010) and in several research articles and presentations. Some of the 'Corporate Rhymes' have also been recorded at Radio Banasthali, Banasthali University, Rajasthan, in the voice of WISDOM- MBA students. Exhibit III & Exhibit IV present two newspaper reports published in Times of India, Bangalore on Nov. 19, 2007 and March 10, 2008. Television media (Headlines Today) also covered it as a news item on Nov. 23, 2008. The same is available on you tube ([www.youtube.com/watch?v=ZeuKArtwVvY](http://www.youtube.com/watch?v=ZeuKArtwVvY)) under the title, 'From Nursery Rhymes to Corporate Rhymes' ([www.youtube.com/watch?v=ZeuKArtwVvY](http://www.youtube.com/watch?v=ZeuKArtwVvY)).

Feedback from students from WISDOM, Banasthali, GSIB, GITAM, Visakhapatnam, Calcutta Business School, Kolkatta and IBA, Bangalore and IBA, Greater Noida has been very good. As per feedback, students enjoy the domination free 'soft model osmotic approach' represented by Step by Step approach. Many also report an inner transformation, change in their outlook and vision and a feeling of self-empowerment at the end of the course.

Recently at Calcutta Business School, Kolkatta (in Feb 2012), I also experimented with these ideas with Corporate Executives in a Management Development Program (of 4 weeks duration). Feedback was excellent and participants wanted to learn more about these ideas on 'Holistic Corporate Management' and they could appreciate the importance of Corporate Governance, CSR and related issues. Dr. Nishigandha Bhuyan, Faculty Member, Business Ethics and Communication Group, Indian Institute of Management (IIM) Calcutta, also attended one of my sessions in this MDP and documented her experience of sitting through the session. The same is presented in Exhibit V.

WISDOM has also emerged as a leading Centre for research on Indian Ethos, HQD and Management Perspectives. From 2005

onwards, under my guidance, six students have completed their Ph. D. from WISDOM, Banasthali University, on themes related to Indian Ethos, HQD and Indian Management. Other seven students are in varying stages of their research. Research findings from such doctoral research are brought to the MBA class discussions and thereby classroom discussion gets enriched.

In 2011 Management Development Institute (MDI), Gurgaon invited me to offer a workshop for the doctoral students interested in the theme of Spirituality in Management. This workshop was designed on the basis of my experience of teaching Indian Ethos, HQD, Management Perspectives and related ideas. It opened some new frontiers of thinking and research such as 'Creative-Meditative approach' to research.

### **Towards New Consciousness in Management Education**

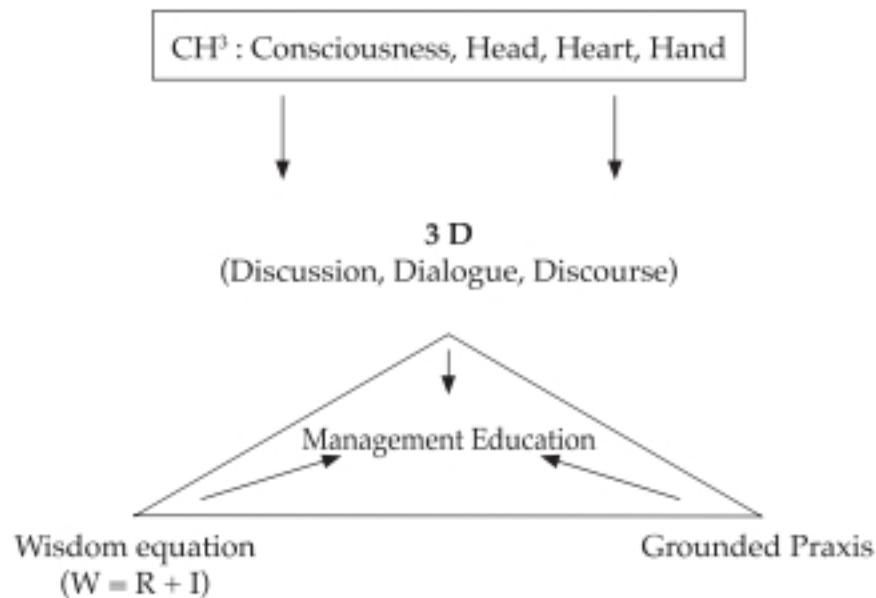
The ideas and experiences tested in different institutions lead us to a new model of management education, that can also be applied to education in general. This model is based on integration of three ideas viz. 3 D model, Wisdom equation leading to development of left brain and right brain capabilities, and grounded praxis approach. This model of management education is presented in Fig. 2.

Holistic model presented in Fig. 2 can bring new consciousness not only in the field of management education but also in the field of education in general. This model is not merely a theoretical proposition but has been tested in institutions such as WISDOM, IBA, Bangalore and Greater Noida and some of its components have also been adopted by other B-schools.

### **Conclusion**

This paper shares the teaching experience of the author and it may be useful to teachers involved in teaching Business Ethics, Human





**Fig. 2: A Holistic Model of Management Education**

Values, Corporate Governance, CSR and related issues that are now part of the MBA syllabus across the world. Innovations such as 3 D model of knowledge creation and learning, Grounded praxis approach to learning, Wisdom model of education, Step by Step learning, Omega circle approach, Soft learning model, Domination Free interactive model of learning etc. can be used by teachers in teaching concepts related to 'Soft Side of Management' and thereby creating a new

consciousness in management education. This new consciousness is also represented by themes such as Corporate Governance, CSR, Indian Ethos, Business Ethics, Human Values, Spirituality in Management etc. Some of these innovations are also being used by my students and participants of Faculty Development Programs, Management Development Programs and Interactive Workshops and Talks, teaching in different B-schools across the nations.

## EXHIBIT I

### Class Room Experiential Exercises in Management Perspective Course

Sl. No.	Title of the Exercise	Idea of the exercise	Purpose
1	Vision of life	Students write about their vision of life and make a presentation	To develop a perspective on different ways of understanding life and its purpose
2	My HOPE*	Students write a short paragraph about their Higher Order Purpose of Existence	To sensitize students to Higher purposes in their life and share it with class
3	Kaun-tvam: Yahoo (Ya-who) – Who are you?	To increase Self-awareness	To recall one's 'Yahoo moment' and understand its implications for creativity and achievement
4	Broken glass experiment	To understand difference between Science, Art and Wisdom & importance of 'Managerial SAW' (Science, Art, Wisdom)	Application of Science, Art and Wisdom in knowledge creation & decision making
5	Mind liberation Exercises	Shunya creations, Changing well known rhymes e.g. Pussy cat rhyme etc., to experience a new meaning	To understand the concept of 'cognitive dominance' and liberation from it
6	Creating a statue of Liberation	Create new perspective on liberation	To understand the concept of liberation from social domination
7	ViSA Exercise*	Connecting one's Vision with Strategies and action plan for one's future	To create a future for oneself
8	SWAN Analysis*	Identify Strengths, Weaknesses, Achievements and Next step and link one's Strengths with human qualities indicated by different letters of one's name	To understand strength and power of one's name (What is in a name?)
9	CINE Matrix*	Get an understanding of Controllable (C), Internal (I), Non-controllable (N), External (E) factors influencing a decision situation	Self empowerment
10	Osmotic Meditation* exercises	To experience mind expansion through expansion of one's circle of consciousness	To improve self awareness and understand cosmic context of one's vision
11	Candle Light Experiment*	'Inner Invocation' to experience inner creativity and understand Darshan (Direct perception) approach and understand	To get an understanding of different ways of viewing reality and experiencing a situation and to build teams

#### Discussion on these models is available in the following sources

- HOPE Model: Management in New Age: Western Windows Eastern Doors, Subhash Sharma, 1996 & 2006, p. 121, 127
- ViSA Model: New Mantras in Corporate Corridors, Subhash Sharma, 2007, p. 334
- SWAN Analysis: Market's Maya, Subhash Sharma, 2009, p. 5
- CINE Matrix: Quantum Rope, Subhash Sharma, 1999, pp. 133-138 and New Mantras in Corporate Corridors, Subhash Sharma, 2007, pp. 315-326
- Osmotic Meditation: A New Tool for Stress Management and Mind Expansion, 3 D ...IBA Journal of Management and Leadership, Vol. 1, No. 1, July-Dec. 2009, pp. 100-107
- Candle Light Experiment, New Mantras in Corporate Corridors, Subhash Sharma, 2007, pp. 466-470

## EXHIBIT II Field and Group Exercises

Sl. No.	Exercise	Objective
1	CEO Interview: Interview a CEO or Senior Manager to understand their overall role and use of Theory K in managing a large organization	To gain an understanding of CEO role in terms of Creative, Enlightened & Organic relationship dimensions
2	Applying Division, D-Vision and Direct vision Approaches to problem Solving (Apply these approaches to 3 to 4 critical problems world is facing)	To develop Darshan (Direct vision) competence to arrive at Direct Vision solutions to problems
3	Five Modes of Thinking and their influence in different societies through Spider Diagram for Self and Society	To understand impact of various modes of thinking on nations and corporations
4	Biography Analysis of some Corporate Rishi*	To understand making of Corporate Rishi
5	VSP Yantra Analysis* (VSP: Vision, Strategy, Purpose)	To get an understanding of Holistic view of institutions and Business Organizations through nine dimensions of Management & Leadership represented by VSP yantra

For discussion on Theory K, Five Modes of Thinking framework, Darshan approach to decision making, Corporate Rishi and VSP Yantra, see, *Management in New Age: Western Windows Eastern Doors*, Subhash Sharma, 1996 & 2006 and *New Mantras in Corporate Corridors*, Subhash Sharma, 2007 and related writings.

## EXHIBIT III

Report in Times of India, Bangalore, Nov. 19, 2007

# MBA students sing rhymes now

Geetha Rao | TNN

**Bangalore:** It's all rhyme and reason at these management development sessions by Subhash Sharma. Step into one of his classes, and you'll see participants scribbling away furiously writing poems and singing with gusto, indirectly learning leadership, motivation, decision-making.

For, this is Sharma's 'poetic methodology for language learning' module. The B-students quantum-leap from the nursery rhymes they sang years ago to what he calls 'corporate rhymes'.

But why rhymes? Sharma believes they help students to internalise ideas. "Poetry develops the right brain and unfolds a person's creativity."

In class, he gives participants an open-ended poem, lets them reflect on it, prepare a theme paper on the management concepts it holds, add lines to it or complete the poem.

The simple poems which read like free verse deal with management con-



ALL SONG AND DANCE

cepts like leadership, motivation and communication. Sharma told *The Times of India*: "They bring in their own metaphors. I use poems to expand their mental horizons. Because management is not just about the technical — it has a broader perspective too. Students draw on personal and social experience and bring them into the context of management concepts."

His poem, 'Light in My Heart: Song of Creativity' — completed by the students of Women's Institute for Studies

in Development Oriented Management (WISDOM), Banasthali, Rajasthan — became the WISDOM song. 'Step by Step: Song of Success' is now the Indian Business Academy song. Yet another popular song is 'Churning of the Ocean' by the Quantum Rope: Song of Leadership. Sharma and his students set the tunes to the poems.

Sharma says the 'churning' song makes participants feel charged. Goals earlier seemed tough to achieve now appear easy. Group-chanting and singing inspire them, ebbing their tension. "I use this method instead of meditation. They start looking at creative solutions to problems."

IIM-A alumnus Sharma, who did his PhD from the University of southern California, Los Angeles, started writing science and management poems in 1990. Now dean at Indian Business Academy Bangalore, Sharma has penned 350 poems and has three collections published so far.

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## EXHIBIT IV

### Beyond Convention

Report by Geetha Rao in Times of India, Bangalore, March 10, 2008

The words 'teaching' and 'learning' project different images to different people. Conventionally, these were perceived as dull and tedious tasks, but that is far from truth, especially now. The world over there are academicians, who thrive on making the whole procedure of teaching and learning, a stimulating and inspiring experience. To them innovation is the name of the game and they strive to bring excitement into everyday classroom with their novel methods.

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Closer to home, at Women's Institute for Studies in Development Oriented Management (WISDOM), Rajasthan, students were given an open ended poem by Subhash Sharma of Indian Business Academy to which they added their lines. This became the WISDOM college song. Sharma explains, "Poetry develops the right brain and unfolds creativity. I use poetry to expand the students' mental horizon because management goes beyond technical know how."

Sharma has penned another 'corporate rhyme' called Churning of the Ocean by the Quantum Rope, and set to a tune which students sing. He believes it gets students charged up. "Goals that earlier appeared tough now seem easy. The group chanting energises them and fight negative emotions," reveals Sharma.

## EXHIBIT V

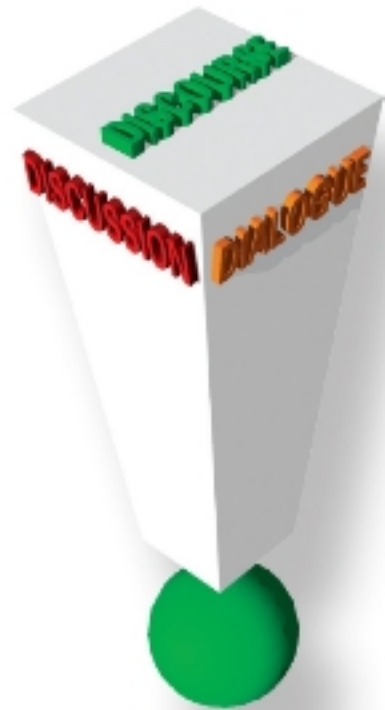
### An Experience in Prof. Subhash Sharma's Class

**Dr. Nishigandha Bhuyan**

*Assistant Professor, Business Ethics & Communication Group  
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Introducing a course on Business Ethics or Corporate Social Responsibility in Business School curriculum is more of a market requirement than of a felt need to improve the ethical quotient of managers and individuals. If the mechanism of market is what works then of course there is nothing to worry as the market will take care of the necessity of human values and ethics. But that is not only too optimistic but also seems ironical. So much is going around in the air about inculcation of ethical behaviour in individuals but ask a teacher to know how difficult is the job of teaching ethics and more so teaching ethics to the managers. The difficulty is not because of the fact that the subject is so difficult but simply because of the attitude of indifference in the receiving end. This indifference is caused by conflicting requirements: first, there is the market requirement of enrolling in the course; second, this is not what they are actually expected to do when they practise as managers. As one colleague of mine once jokingly said that if out of the total 30 hours of instruction twenty nine hours are spent in talking about increasing efficiency and one hour about values and ethics then how can we expect or prepare them to be ethical. He is right that ethics is to be incorporated into all the thirty hours of Instruction. It cannot be just one hour business. As an Instructor I have felt one specific problem: my firm believe in ethics is actually very closely related to my believe in the higher order purpose of human existence and I also believe that is the foundation stone for the discipline of ethics. The challenge however is to convince to the materialists the higher order purpose of human existence. Most of them believe that life is about success, achievement, enjoyment, possession, glamour. They do not want to admit that basic needs of every human being are alike even though some of them cannot contribute to fulfill their own needs. Forget about equality and equal rights they insist on no share without contribution.

Having said all this I want to share with you an experience of an ethics classroom at the receiving end. It was Prof. Subhash Sharma's class on Feb. 17, 2012 for the MDP participants at Calcutta Business School (CBS), Kolkata. I had read his books earlier and many of his ideas were very close to my thinking about ethics and spirituality. However, in absence of earlier contact and discussions with him, I had not fully grasped the models, metrics and figures he ends up with and this was creating some discomfort. But it was a completely different experience in his class. He used these models with so much ease and elegance that helped understand the entire notion and the requirements of ethics beautifully to these participants. There did not seem to be any extra effort to convince these students about their duties and responsibilities to society while being an economic being. The road from Market through Society to Self was easily drawn. All of them were not only participating in the discussion but also contributing to enrich the classroom discussion. There were no second opinions but only unanimity about the Individual's ethical behaviour. Core Competence is not the call of the time but Character Competence is. There were no disagreements that Core Competence is not sustainable without Character Competence. So much was their interest that they insisted on an exercise for 'Synergy in' and 'Negergy out' and ended the session singing a rhyme from Prof. Sharma's, Shunya Poems. This felt like a great going. Ordinarily individuals get so much attached to their body consciousness that they do not make any effort to rise above the body and ego defined success. The only thing that I hope now is their enthusiasm of the classroom remains same in the workplace and then the world will be a different place to live in.



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