

## TECHNOLOGY INTEGRATION IN MANAGEMENT EDUCATION



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**Abstract:** Technologies at present are influencing each and every aspect of human life. They are playing salient roles in work places, business, education, and entertainment. Technological innovation may now be changing the very way the academicians teach and students learn. Education reform is occurring throughout the world and one of the tenets of the reform is the introduction and integration of technology in the education system.

In today's technology-enabled knowledge economy, management education system is also facing a new challenge that is how not only to equip students with an adequate education in their field of study, but also to arm them with the skills and knowledge required leveraging technology effectively in the workplace.

Today, the business environment has become highly turbulent facing numerous market related risks and competition. This has lead to the need for dynamic and competent managers who are not only skilled in management tactics but are also technology savvy. The system of management education should be such that it prepares students in conceptual skills as well as in technical skills to suit the changing requirements of the industry .Technology certainly has the potential to make the delivery of higher education in management more flexible, interactive, collaborative and mobile, all of which present strategic choices for the institutional leaders.

This paper aims at studying the challenges of introducing technological advancement in higher education sector with special reference to management discipline. The emphasis is on how technology is changing today's teaching and learning methodology in the B schools to produce better equipped, technology savvy, dynamic managers. It further highlights the main inhibitors to technology integration in management education.

**Keywords:** Technology, Management Education, Industry.

## INTRODUCTION TO TECHNOLOGY INTEGRATION

Technology integration no longer involves only the knowing of the computer related technologies and software but it involves the way teachers and students approach learning. The amount of primary and secondary information available to the educational institutes and how that information can be organized, thought about and presented requires new skills for both teachers and students are an important part of technology integration. Technology provides a motivating learning environment whereby learners are given the opportunity to be constructively engaged with instruction. It has fundamentally altered the way we access, generate, analyze, distribute and share knowledge. Integration of technology in education has transformed education in two ways. Firstly, by offering new resources to engage students in learning, and secondly, by giving them an opportunity to learn about new technological fields, resulting in better job generation and enhancing their understanding of how these fields influence the global economy.

Information Communication Technology (ICT) increases the flexibility of delivery of education so that learners can access knowledge anytime and from anywhere. It can influence the way students are taught and how they learn as now the processes are learner driven and not by teachers. This in turn would better prepare the learners for lifelong learning as well as to contribute to the industry

## CHALLENGES BEFORE THE EDUCATION SYSTEM IN INDIA

India, like any other knowledge economy, depends on the development of its educational sector. Overall state of higher education is dismal in the country. There is a severe constraint on the availability of skilled labor (Agarwal, 2006). There exist socio-economic, cultural, time and geographical barriers for people who wish to pursue higher education (Bhattacharya and Sharma, 2007). Further the as regards the resources allocated Central and State Governments reserve only about 3.5% of GDP for education as compared to the 6% that has been aimed (Ministry of Human Resource Development, 2007). There exist drawbacks in general education in India as well as all over the world like lack of learning materials, teachers, remoteness of education facilities, high dropout rate etc (UNESCO, 2002).

However the last two decades have witnessed a revolution caused by the rapid development of Information and Communication Technology (ICT). ICT has changed the dynamics of various industries as well as influenced the way people interact and work in the society (UNESCO, 2002; Bhattacharya and Sharma, 2007; Chandra and Patkar, 2007). ICT has the potential to remove the barriers that are causing the problems of low rate of education in any country. It can be used as a tool to overcome the issues of cost, less number of teachers, and poor quality of education as well as to overcome time and distance barriers (McGorry, 2002).

## TECHNOLOGY IN MANAGEMENT EDUCATION

Management is an art of getting things done through people, efficiently and effectively. Managers must develop an in-depth knowledge of past and present models, theories and processes to manage effectively and intelligently. The increasing demand for management education, change in nature of business and industry within the newly created borderless market environment, and the revolution in information technology provide an opportunity to change the curricula and delivery system of management education

It provides prospective managers an edge to successfully face the challenge in globally competitive setting. Computer based learning or E-learning provides them an opportunity for self growth rather than being taught which stimulates the as they themselves make an appraisal of their achievements in the learning process. According to Polka (1999) educational technologies will have a profound impact on curriculum and on teaching and learning methodologies in the new millennium. In order to survive, colleges will have to rethink where, what, when and how students learn.

## REVIEW OF LITERATURE

Olcott & Wright (1995) observed that faculty is reluctant to use new technologies despite the growing trend of more courses offered online and the use of online technologies, but the reasons for this are somewhat elusive. Further Nantz & Lundgren (1998) found that faculty is limited in exploiting the potential of new technologies. Later Emerson & Mosteller (1998a, 1998b) found that computer-assisted instruction is associated with positive student attitudes and shortened instructional time. They also observed that the use of computer software is linked to learning gains and increased learning efficiency, but

are still not replacements for creative and dedicated teachers. McInnis (2002) argued that OLEs increase the opportunities for faculty to organize student groups, instruct students and support student learning, and evaluate student performance. Later Thompson (2002) reported that faculty generally appears to be enthusiastic and satisfied about the benefits of and experiences with online educational technologies even though they identify several possible drawbacks. Several possible reasons that may explain a faculty member's reluctance to teach online technologies include lack of instructional support, increased workloads, and lack of monetary compensation (Carr, 2000; Thompson, 2002).

### NEED OF THE STUDY

After getting degree in management, students expect employment in industry, banking and service sector. Employers also aspire that the perspective managers should not only be proficient in different functional areas of management but also be technology savvy, technically sound and well equipped to face the challenges of the business world. This paper emphasis on the benefits offered by Information Communication Technology and its tools and techniques in higher management education and its role in enhancing students learning for meeting the changing business and industry requirements. It also contributes in identifying the prime challenges and inhibitors in adopting technology in management education, despite its numerous benefits. The potential drawbacks of incorporating technology are also highlighted.

### Motivation of Adopting Technology Supported Teaching and Learning

Changes in the teaching and practice of business have also been brought about by technology in the US, UK and elsewhere (Long, MacGregor and Willett, 1998; Green, 1999). Despite such curricular and technological developments, tertiary educators in accounting and economics appear to have lagged behind other disciplines in adopting new teaching and learning strategies (Becker and Watts, 1999; Adler and Milne, 1998). Based on their evidence, they proclaim that the dominant educational model must be broken and obsolete. Chong (1997) maintains that there are two major goals of integrating technology into accounting education: to prepare students for computer usage in their prospective workplace and to enhance student learning. Alexander and McKenzie (1998) identified two further popular motivations for integrating technology: to enhance departmental or institutional reputation and to improve productivity and enhance learning for students, academics and departments.

### Benefits of Technologies to Higher Education in Management

The use of Information, Communication and Technology opens a new world of potential. With the use of technology, education can surpass the physical boundaries of the classroom and provide students the opportunity to experience more. One of the most important contributions of the Information Communication Technology (ICT) is E-Learning providing teachers the opportunity for global cooperation and International teaching and learning. By using the internet tools, students from different parts of the world, learning together, reading each other's ideas and views, can discuss common concerns and learn better. Technology can benefit learning in so many ways like:

- Enhance the clarity of the concepts
- Students experience new procedures and situations
- Help students visualize problems they will encounter in industry
- Help students gain access to a wide range of information
- Motivate Learner's Participation
- Reach students with different learning styles, including visual, Auditory and experiential learners
- Help students gain experience with a process or skill
- Encourage students to interact with material
- Facilitate effective teamwork
- Encourages Self-Learning
- Enable students to add more details.
- Ready notes for students
- Extend Information Access
- Increase communication among teachers and students
- Improve access to educational resources

Provide feedback  
 Bring the World into the Classroom  
 Enable students to interact with authentic data  
 Help in Administrative Tasks  
 Develops teacher student relationship  
 No need for extensive photocopying.

Debates arise at our higher education institutions about the value of educational technologies and online learning environments (OLEs) as this technology infiltrates our classrooms and demands persist that our students become technologically literate. The push for a “wired” campus has become the norm (Myers, 2004). Incorporating technology into the classroom outranked other challenges, such as user support, replacing outdated hardware or software, providing distance education online, and integrating e-commerce on campus web sites (Carlson, 2000).

#### INHIBITORS OF TECHNOLOGY INTEGRATION

There are a number of inhibitors to technology adoption. Integrating technology in education involves more development time than what is 'normally' required. There are many reasons for the lack of deeper knowledge of technology integration by teachers, including teacher apathy, district budget limitations, lack of leadership, and lack of availability of training. Yet, the greatest inhibitor to technology integration is time. It takes many hours of use and planning to learn the possibilities of a computer software application. Further teachers' knowledge of the software application is also limited, consequently; applying it to a meaningful learning context in the classroom is a difficult task. Further lack of support, time, leadership, and collaboration and knowledge of the curriculum content leads to lack of efficacy teachers have regarding how to integrate technology into the classroom.

Ertmer (1999) suggested that barriers of technology integration exist both internally and externally to teachers themselves. First-order, or external barriers, such as lack of access to computers and administrative support, is more easily recognized and relatively easier to address. Internal barriers such as teacher's beliefs in technology integration in teaching and preferred teaching methods may require major change in teachers' beliefs to be removed.

Learning how to use new technology includes the time the teacher needs to become competent with the computer as a personal tool but also as an instructional tool. Teachers need to train and develop their skills outside of the regular school day so they can concentrate on instruction and training objectives. After the teachers become knowledgeable about using technology, they need time to transfer the skills learned into infusing technology into the curriculum (Brand, 1998). Training could come in many forms, in-services, professional development, collaborative learning and in peer coaching. Whatever methods are pursued, teachers need the time to learn at their speed and with their own learning styles (Brand, 1998). The major inhibitors include:

Some training courses provided have been skewed towards training in IT skills, not the application of IT to enhance learning and teaching.

Increased use of IT in teaching requires the re-engineering of classroom management and routines, as teachers need to tackle the interaction between machines and students while striving for results.

Some teachers have reported difficulties in making use of specific, pedagogically sound software/learning platforms in their classes due to inflexible network and management infrastructure in schools and institutes. Some teachers find it difficult to identify and select digital education resources. Thus better indexing of resources is needed. Some digital education resources, including those produced by private firms, do not meet the needs of teachers;

Teaching in virtual worlds and using digital resources presents a list of challenges. Creating classes in a virtual world requires skills that most educators don't have. Thus teachers need appropriate professional development and training

#### POTENTIAL DRAWBACKS OF USING ICT IN EDUCATION

Although ICT offers a whole lot of benefits there are some risks of using ICT in education which have to be mitigated through proper mechanisms. ICT may result in creating certain potential drawbacks in education. These may be:

Create a digital divide within class as students who are more familiar with ICT will reap more benefits and

learn faster than those who are not as technology savvy.

Shift the attention from the primary goal of the learning process to developing ICT skills, which is the secondary goal.

It can affect the bonding process between the teacher and the student as ICT becomes a communication tool rather than face to face conversation and thus the transactional distance is increased.

As all teachers are not experts with ICT they may be lax in updating the course content online which can slow down the learning among students.

The potential of plagiarism is high as student can copy information rather than learning and developing their own skills.

There is a need for training all stakeholders in ICT.

The cost of hardware and software can be very high.

### Challenges of Technology Integration for Management Faculty and Conclusion

The integration of information and communication technologies (ICT) in the pre-service teaching and learning process is progressively being acknowledged as a vital and necessary step forward. To achieve this, it is well recognized that Teacher Educators need professional development, not only in technology skills and applications, but also in new pedagogical methods of incorporating technology into the classroom. (Carlson and Gadio 2002). There will be further a challenge in dealing with new technology, and new generations of new technology, with pupils being more proficient in its use. Adapting to utilize the tools and technologies used outside the classrooms - in homes, workplaces and social spaces will become increasingly important, requiring iterative development amongst education professionals.

Thus to conclude it can be stated that the changes in the curriculum do not support fundamental economic and social transformation in the society. Such transformations require new kinds of skills, capabilities and attitudes, which can be developed by integrating ICT in education. Successful ICT integration depends on many factors as discussed earlier. There needs to be an ICT plan involving support and training to all the stakeholders involved in the integration. There is a need of shared vision among the various stakeholders and a collaborative approach should be adopted.

Once integrated successfully ICT will benefit not only the electronic delivery and wider access of management education but also increase flexibility so that learners can access the education regardless of time and geographical barriers. Thus ICT enabled education can influence the way students are taught and how they learn. It would enable development of collaborative skills as well as knowledge creation skills. This in turn would better prepare the learners for lifelong learning as well as to join the industry.

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