Obstacles in IT based services in Education Management in India

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Abstract

Although IT is used in various business and management functions but it has not been able to improve the quality of education to desired level (Watty, 2006)[1]. Researchers have examined certain important issues related with the effective implementation of ICTs at all levels of education and provided suggestions to address the challenges that would help in improving quality of education (Devi, Rizwaan, & Chander, 2012)[2].

Keywords: ICT, IT, Education Management

1. Introduction

Despite of investment in ICT infrastructure, equipments and professional developments to improve education, ICT adoption in teaching and learning is limited. A number of personal, institutional and technical factors prevent teachers from ICT use (Goncalves & Sapateiro, 2008)[3]. The major barriers to ICT include lack of IT skills in teachers, lack of teachers' confidence, lack of pedagogical training, lack of suitable IT software, limited access to ICT, rigid structure of traditional education system, restrictive curricula etc. If teachers' attitude is positive towards use of educational technology adaption and integration of ICT, teaching-learning is facilitated (Albirini, 2006)[4]. Teachers should be assured that technology can make teaching interesting and easier and enjoyable to the students. Teachers' professional development is key factor to successful integration of computers in classroom teaching (Charles, 2012)[5] and (Adams & Others, 2002)[6]. The barriers in the implementation of IT services in Higher Education Institutions include (Alwani & Soomro, 2010)[7]:

- No specific budget for information technology
- No vision or Strategic plan for IT
- No instructional support for incorporating IT into teaching
- The lack of funds to get hardware
- Students don't have access to the Internet during the day
- The architecture of classrooms is not suitable for implementing IT

2. BARRIERS TO IT BASED SERVICES

Adeyemi and Olaleye (2010)[8] investigated the use of information communication and technology (ICT) for effective management of educational institutions in Ekiti State, Nigeria and detected various barriers in implementation of IT services. They found that the level of provision of ICT equipment to in the state was low. The level of Principals' management of educational institutions was also low. The intermittent disruption of electricity and inadequate funding (OECD, 2011)[9] were found as major problem in the usage of ICT equipment for the management of educational institutions in the state. It was concluded that the state government was not fully ready to imbibe ICT for the effective management of educational institutions in the state. It was recommended that the state government should supply the necessary ICT equipment to all educational institutions. Government should also improve the training of Principals, teachers and computer personnel in the use of computers and other ICT equipment through seminar, workshop and in-service training.

Aggarwal & Kaur (2011)[10] appraised the problems in implementation of IT services in engineering colleges of Punjab which have far reaching effects on implementation and sustenance of MIS. Despite use of computers and local area networks, there are a large amount of troubles and barriers basically of organizational and methodical character which are necessary to solve for successful MIS introduction. Administrative staff is trained in traditional method. Literacy of computer staff, especially senior staff, is poor due to technological phobia and conservative attitude. Poor maintenance and update culture causes frequent computers and network breakdowns and failure. Also, there is a lack of IT skills and slow process of automation due to lack of technical support.

Management support and involvement is necessary for successful implementation of IT services for adequate funds and resources. This also ensures effective implementation changes required by new system like change in organizational realignments norms, rules and regulations, work habits etc. (Carnall, 1995)[11]. User at all the levels must be explained the understanding of the system (Sarwani, 2003)[12]. Ajayi & Omirin (2007)[13] recommended that the MIS units should be adequately financed and maintained to ensure free flow of information and adequate use of MIS in decision making on long-term and short-term planning as well as budgeting. Proper orientation should be given to managers at all levels and in- service training should be imparted for secretaries to ensure proper and adequate use of MIS facilities in generating and disseminating information for better decisions.

2.1 Associated Challenges

While the potential benefits of ICTs for administration are substantial, associated challenges should be known to the decision makers before introducing ICT in education. Some of the challenges involved in the implementation of ICT in teaching and administration include (Balasubramanian, 2009)[14]:

- Reliability and security (Yang, 2001)[15]: Due to web based access to registration, course content and other students' services, reliability and security are of prime importance and the data transfer should be immune to hacking and virus attack. Strong firewall and a backup are required for seamless storage and transfer of data.
- Availability of Technology for information access: Another important consideration is how all the students will access the services provided by University or college? Communication facilities like high speed Internet should be available to the students.

- Handling Resistance to Change: As the people are not aware of benefits of ICT and have fear of losing their jobs, they don't want to adopt new technology. Proper awareness and training is needed for the workforce for adapting the change which will be in favour of organization, employees and students.

3. **A review on the suggested way s to overcome the barriers**

Goktas & Yildirim, (2009)[16] had studied the barriers and enablers to ICT integration into Teachers' Education programs. Their studies provide ideas regarding the views of deans, teacher educators, and prospective teachers pertaining to the main barriers and possible enablers for ICT integration in their institutions. To create an environment for effective ICT integration, education programs must focus on eliminating barriers. The recommendations by Goktas & Yildirim are:

a.   Technology plans should be prepared for implementation of IT services.

b.   Specific units and personnel should be allocated for peer support and organization, as well as to assist in the public use of ICT tools and study materials for ICT enhanced instruction.

c.   The teacher educators who integrate ICTs in their courses should be supported (i.e., through incentive payments).

d.   The course load of teacher educators should be decreased.

e.   Teacher educators should act as role models for prospective teachers by using ICT in their courses.

f.   In-service training in ICTs for teacher educators should be improved in both quantity and quality.

g.   Every classroom should have at least one computer with Internet access and an LCD projector.

h.   Every STE should have at least one laboratory available to students.

i.   Course content should be redesigned to acquire more benefit from ICTs.

j.   Courses could be supported by a course delivery system (e.g., LMS, course support web page).

k.   More ICT-related courses for prospective teachers should be offered.

l.   The ICT-related course should be practice-oriented.

m.   ICT-related courses should be integrated in teaching practice courses.

n.   A new ICT-related course, which must include both ICT and a field of study (e.g., maths, language, chemistry), should be integrated in the curriculum.

o.   Teacher educators and prospective teachers should be aware of the benefits of ICTs

3.1 Need for further research

Efforts have also been made to investigate the use of IT services in administrative functions e.g. what IT services can be provided in the educational institutions. However, little efforts have been made to find their efficacy. There is lack of knowledge of efficacy of various IT based services that can help organizations to ensure and improve the quality of education and administrative services in Higher Educational Institutions. Extensive literature survey shows that despite of all research and domain based assessment methods, there is absence of holistic approach on assessing the effectiveness of ICT based management of educational institutions (Kaulik, & Bangerts-Drowns, 1985)

Conclusion

ICT development generally passes through four phases, namely the emerging, applying, and transforming phases and integrated phase (UNESCO, 2002) 126. In The emerging phase, IT infrastructure is acquired and the teachers and administrators exploring the use of ICT in the institute. In the applying phase, IT services replace existing tasks. In the transformation phase, teachers begin to explore new ways of using ICT for their personal and professional practice. Finally, the last phase is realized when ICT becomes an integral part of the education system. Thus, the impact of ICT will be felt as it permeates throughout the system, changing the methodology of teaching, the physical setting and the learning process.

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