"A STUDY THE ROLE OF AN INTEGRATED ERP SYSTEM IN EDUCATIONAL INSTITUTES TO ACHIEVE THEIR GOALS-PRIORITY TO USE ENHANCED LEARNING MODEL"

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ABSTRACT

Information and communication technologies (ICTs) are a "diverse set of tools and resources used to communicate, create, disseminate, store, and manage information. These technologies include computers, the Internet, broadcasting technologies (radio and television), and telephony. This research gives insight on increasing interest in how computers and the internet can improve education at all levels, in both formal and non-formal settings. Older ICT technologies, such as radio and television, have for over forty years been used for open and distance learning, although print remains the cheapest, most accessible and therefore most dominant delivery mechanism in both developed and developing countries.. In addition to classroom application and growth of e-learning opportunities for knowledge attainment, educators involved in student affairs programming have recognized the increasing importance of computer usage with data generation for and about students. It is also on motivation and retention counselors, along with faculty and administrators, can impact the potential academic success of students by provision of technology based experiences in the University setting.

Keywords: ICT-Information Communication Technology, IT-Information Technology

I. Role of ICT in Designing and Framing Educational System

Information and communication technologies (ICTs) are a "diverse set of tools and resources used to communicate, create, disseminate, store, and manage information. These technologies include computers, the Internet, broadcasting technologies (radio and television), and telephony. There is increasing interest in how computers and the Internet can improve education at all levels, in both formal and non-formal settings.. Older ICT technologies, such as radio and television, have for over forty years been used for open and distance learning, although print remains the cheapest, most accessible and therefore most dominant delivery mechanism in both developed and developing countries.. In addition to classroom application and growth of e-learning opportunities for knowledge attainment, educators involved in student affairs programming have recognized the increasing importance of computer usage with data generation for and about students. Motivation and retention counselors, along with faculty and administrators, can impact the potential academic success of students by provision of technology based experiences in the University setting.

ICT is basically an umbrella term that encompasses all communication technologies such as internet, wireless networks, cell phones, satellite communications, digital television etc. that provide access to information. During the past few decades, ICT has provided society with a vast array of new communication capabilities and has fundamentally changed the way we live now. We find a world of difference in the practices and procedures of various fields such as medicine, tourism, banking, business, engineering, etc. as they operate now in comparison to how they operated two decades ago. In contrast, the impact of ICT on education in India, however, has been far less and slow.

The growth of ICTs is taking place all over the world. They have emerged as powerful tools for diffusion of knowledge and information. Their introduction and unprecedented use in the higher education has generated varied response. On the one hand there is acceptance of its potential benefits to knowledge creation i.e. field of research and its dissemination and on the other extreme it is feared that there use will further the digital divide/ inequity. It is inevitable that their increasing use in education system will also raise issues regarding what kind of technologies, in what quantity, at what level and for what purpose they need to be introduced. The concerns such as who will manage this process develop policy guidelines and strategies also require consideration. It will not be wise to ignore the issues related to equity, cultural integrity, and the negative aspects of technology in economic and social development. Nevertheless, the opportunities and challenges raised at different platforms can be categorized as the aspects relating to role of ICT for access and equity in education, role in management and efficiency in education, their role in

pedagogy for quality learning and teaching at higher education level and in inducing innovations in approaches and programs.

Increasing usage of technology; we are one of the biggest users of ICT (Information and Communication Technology) tools besides the learning management system that we are using today. We have also implemented SAP (System Application & Products) which is an ERP (Enterprise Resource Planning) system which is helping us in integrating academic and administrative systems. We are going to be expanding our operations; we are going to leverage ICT for the purpose of reaching out to a large segment of society which cannot access our learning resources. We are going to come up with lot of diploma and post graduate programmes and we are going to take it to the community through the internet a completely online education system. It will be backed up with video based learning. The Indian policy for developing ICTs as a vehicle for promoting education is visible since the use of satellite in early 1970s. The long road traversed till now has led to launching of dedicated satellite for education. Presently, India ranks 45 in the Network Readiness Index. Although the number of Internet users and penetration of PCs is in fractions online educational enterprise started emerging in early 1990s. In addition the National Task Force on Information Technology and Software Development: IT Action Plan Part III- Long Term National IT Policy (GOI, 1999) constituted by the then Prime Minister of India in 1998 gave fillip to efforts for exploiting rapidly emerging new technologies. Major emphasis of the Policy was on expansion of IT education at school and university level including all national level institutions. Consequently, numbers of programmes were developed and initiated for instance Virtual Campus Initiatives of IGNOU in government sector and NIIT Net-varsity in private sector. Recognizing the existing strong educational infrastructure particularly at higher education level consisting of 18064 colleges/institutions and 378 universities, promotion of use and integration of ICTs in education would immensely benefit the socio-economic development of the country (11th FYP).

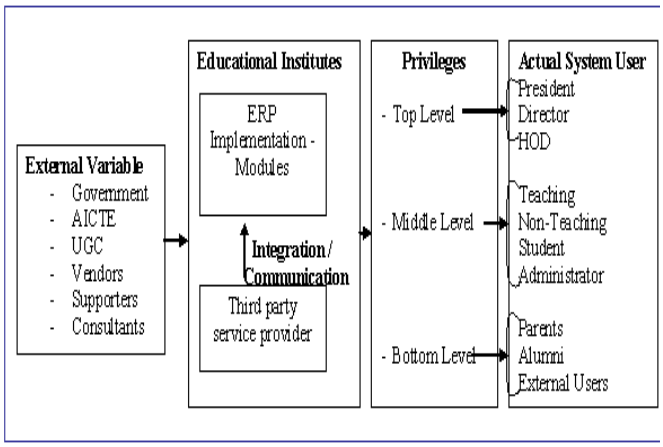
Nevertheless, introduction of ICTs in the higher education has profound implications for the whole education process ranging from investment to use of technologies in dealing with key issues of access, equity, management, efficiency, pedagogy, quality, research and innovation. Therefore, the next section attempts to delineate the role of ICTs in higher education sector.

I. Environment of Educational ERP System

An Education ERP system is developed after an in-depth analysis of the requirements of the educational institution and in close coordination with the various stakeholders specifically educationists, chartered accountants and the quality management personals that help

run all the institutions in a productive and efficient manner

Fig No. 1: Environment of Educational ERP system



1. **Government** : Rules and Regulations.
2. **AICTE & UGC** : Norms and MIS Reports.
3. **Vendors** : Implementation of Educational ERP (Customized , Standardize, Business Process Reengineering)
4. **Supporters:** Sharing Knowledge, User Involvements, giving Training, providing online help and upgrade Business Process information to development team / Consultants.
5. **Consultants** : Consultants domain knowledge, Experience of executing Educational ERP, Project management, Time Management, Technical competence and Business Process Reengineering
6. **Third Party** : Integration / communication / plug-ins with Educational ERP
7. **service Provider** Systems implemented in Educational Institutes

II. Role of ERP in Educational Institutions

The ERP systems are an important element in any institution as it tightly integrates all departments and functions within a single configuration and these systems are responsible for service delivery, management and academic operations to become more professional, more responsive and more customers focused. These systems provide an integrated portfolio of application software designed to decrease cost and assist the process of change.

Educational institutions have implemented ERP systems to manage their resources and maximize the benefits derived from the usage of the ERP systems from the point of view of the organization. The ERP systems encompass various functions and therefore there is a need to understand the very concept of ERP systems functionality and the derived user satisfaction throughout its life cycle. The flexibility of the ERP system also has to be taken into account i.e. the ability of the system to be modified according to the organization's requirements and needs._ERP systems are being used in the

different organizations to facilitate change. These integrated software products are currently dominating academic and practitioner literatures. The ERP systems facilitate data integration throughout an organization which is also important in higher education institutions as well as to reduce cost and improve customer service and care. Integrated workflow, industry best practices, and reduce dependence on paper; Integration all business functions in IHL environment representing academic, administration, human resource and finance. Previously it is used and supported by separate application systems. Single integrated database shared by different business function and consequently, different business modules of a single integral information solution is a key importance. Transferring of data can be between individual processes and various users in real time. The usage of the advancement technology of ICT (Web based technology, wireless, cellular and satellite) is an additional advantages for IHL communities. Even though, implementation of ERP systems in the IHL is often described as difficult, risky and expensive, it is also sometimes unsuccessful or ineffective. Chief Information Officer at George Washington University, stated that; "Institutions, which are unlikely to switch to integrated information solutions, will find it difficult to retain their market share of students. They will sooner or later demand services, offered by other institution.

III. Criteria for Adopting ERP in Educational Institutions

Institution of higher learning is keen to adapt the ERP system; they must fulfill the following criteria;

1) **Integration:** Integration is important to ensure the quality of the service. The integration will not be limited to the inner applications of the institution of higher education, but will be extended to the national and international domain.
2) **Flexibility:** Managing the institution of higher learning (IHL) is too complex, so it is important for the IHL to be able to match the continuous development of their institution. Flexibility responds to changing business requirement, more informed management decision making and changes the way of doing business processes.
3) **Support in decision making:** The ERP system for institution of higher learning must provide the function of governance support processes and shows the data and analysis for the purpose of strategic planning and control.
4) **Service evolution:** The services must cover prospective student,

existing student, academic staff, researcher, and administration and support staff. These services should be a major priority and it should also be accessed from different locations.

IV. Research Justification

The continuous technological advancement and the increasing complexity of the ERP systems require the universities to regularly upgrade their systems. The ERP systems, the interfaces, administrative, educational and support systems have a limited lifespan. These systems require upgrading and modifying according to diverse and changing needs as it is essential to maximize an institution's effective use of these systems. It is very important to retain support from the software vendors for proper maintenance and modification of the ERP systems. These systems are the largest software applications adopted by universities through significant investments made in their implementation.

There is a lack of research that focuses on key factors of ERP systems from the viewpoint of its multiple stakeholders in an educational context. This research studies aspires to address these gaps. The Higher Education Institutions need to have a necessary knowledge base and guideline to enable them to carefully handle the post implementation phase and manage institutional impacts on the various stakeholders. This research study aims to develop a theoretical framework which will assist the Higher Education Institutions' in their management of the ERP systems, the impact of ERP systems on end users, benefits realization and the challenges being faced in maintaining these systems.

V. Conclusion

It is widely accepted from empirical evidence to date that the benefits from EERP systems are very significant. These benefits mostly come from the integration of all the necessary business functions across the organization, with which the organization can make its business processes more efficient and effective. However, the complex nature of EERP systems has required many organizations to commit significant organizational and financial recourses to their EERP initiatives, which in turn have encountered unexpected challenges associated with system implementation. For this reason, EERP implementation is generally considered a high cost and high risk activity that consumes a significant portion of a company's capital budget and is filled with a high level of risk and uncertainty. There have been many failure cases reported in the literature, which shows mostly abandoned implementation project with significant financial damage. Many companies have suffered from partial failures which resulted in tenuous adjustment processes for their business functions and created some disruption in their regular operations. To overcome these problems,

more extensive studies with respect to the factors affecting EERP success or failure are required to minimize EERP implementation risks. If the development of an enterprise system is not carefully controlled by management, management may soon find itself under control of the system.

The vast literature related to EERP systems in research has focused on the success or failure of EERP implementation. The identification of these factors has been mostly based on the experiences of IT professionals or senior managers, Management, Faculties students and administration in the Institutes / Universities. However, it may happen that end users do no care to use the EERP system in spite of the successful EERP implementation. In this case, the implementation cannot be regarded as successful. For these reasons, this study focuses on analyzing the EERP success from the combined point of view of amount of cost saving and user perception of benefits achieved. Based on this concept, evaluation factors will be postulated with the redefined EERP success, and then will be validated empirically through data analysis.

The results of this research can provide helpful information to the Institutes / Universities and EERP implementers where exactly the Enterprise Systems is delivering benefits and what are the weak areas? Clearly, it is critical to identify and understand the savings and benefit areas that largely the areas and analyze them according to their significance. If these weak areas are addressed properly, the EERP systems will be able to contribute to the Institutes / Universities profitability in a big way to support for Quality education. This is one of the key issues related to Enterprise Systems in the business domain, and can improve EERP systems and implementation in general.

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