E- GOVERNANCE IN EDUCATION SYSTEM – KNOWLEDGE MANAGEMENT BASED ECONOMY

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ABSTRACT

In all societies, the formation of public governance is largely dependent on its contextual parameters, including social structures, economic condition, political atmosphere, cultural pattern and technological trend. Electronic Governance or E-Governance is the latest buzzword for governments trying to involve people in administration, address transparency in the bureaucracies and make themselves more responsive to their citizens. The benefits of E-Governance are faster decision making, reduction of duplication of work, detection of corruption and illegal transaction, prevention of knowledge drain. The E-Governance will truly allow citizens to participate in the government decision making process, reflect their true needs and welfare by utilizing E-Government as a tool. E-Governance can play a major role to strengthen the technical education system by focusing on Knowledge Management (KM). This means proactive facilitation by E-governance means to evolve consensus based knowledge bank on key evaluation factors, how to combine these factors, and useful tools that offer greater value and consensus based case study knowledge. In this context we demonstrated the use of KM based Analytical Hierarchy Process (AHP) application as a useful tool for a more effective technical evaluation system.

Keywords: E-Governance; Knowledge Management (KM); Analytical Hierarchy Process (AHP); Evaluation; Facilitation

INTRODUCTION

In all societies, the formation of public governance is largely dependent on its contextual parameters, including social structures, economic condition, political atmosphere, cultural pattern and technological trend. The nature of governance often changes depending on the intensity and speed of transition in some of these surrounding factors. In the current age, one of the most significant contextual phenomena affecting public governance is the revolution in information and communicating technology (ICT).
India is one of the leading countries venturing into E-Governance. Recently, the Indian government has set the target of delivering at least 25 percent of dealings and services electronically. In this regard the Indian government major policy measures have been defined in computer density, connectivity content, cost and cyber laws. More specifically, The Indian government has decided to boost computer connectivity by improving telecommunication system based on optic fibre networks; to upgrade content by making government sources on computers readable by ordinary citizens to cover the cost of ICT by ensuring adequate allocation in the national budget and to introduce cyberlaws by adopting the Information Technology Act. Under this overall policy framework , the government has introduced various measures for e-governance, which can be categorized into national and state-level initiatives and institutions.

Electronic governance or E-Governance is the latest buzzword for governments trying to involve people in administration, address transparency in the bureaucracies and make themselves more responsive to their citizens. The benefits of E-Governance are faster decision making, reduction of duplication of work , detection of corruption and illegal transaction, prevention of knowledge drain.

Now a days E-governance occupies the topmost position in the development agenda of almost all governments in the world and lot of money is being pumped to various eGovernance initiatives. Therefore very intelligent planning is required to produced desired results.

The spectrum of E-Governance is beyond the scope of e-government. While e-government is defined as a merely delivery of basic government service and information to the general public using electronic ways, E-Governance allows direct participation of constituents in government activities. Blake harris summarizes the E-Governance as the following ; E-Governance is not just about government Website and E-Mail. It is not just about service delivery over the internet. It is not just about digital access to government information or electronic payments. It will change how citizen relate to each other. It will bring new concepts of citizenship, both in terms of needs and responsibilities. E-Governance will allow citizens to Communicate with government; participate in the government’s policy making and citizens to communicate to each other. The E-Governance will truly allow citizens to participate in the government decision making process, refelect their true needs and welfare by utilizing E-Governemnt as a tool.

LITERATURE REVIEW

Government all over the world are attempting to move from the era of efficiencies in the service sector to that of effectiveness in providing services (Satyanarayana, 2004). They are convinced that a significant transformation of governance is possible if the tools of the digital world are strategically deployed. The state government has begun to computerize most departments, especially the education department. In major city Bangalore, is known as an IT hub attracting over 1500 IT companies from advanced industrial nations and its Indian Institute of Information Technology has a very advanced infrastructure and IT facilities (Silicondia, 2001) Furthermore under its deparment of Information Technology, the government plans to create a centre of E- Governance. It recently signed a memorandum of understanding with the Microsoft Company with a view to computerizing all departments. Similarly the government of Tamil Nadu strongly committed to transforming the state into an advanced system of e-governance by computerizing all departments.

Technical Education System (TES) which at a much faster rate, creates a lot of opportunities but at the same time requires sufficient control over the technical institutes to follow the quality standards of education (Liberatore and Nydick, 1999). This need to monitor and evaluate periodically the performance of the institutes is based on several criteria. The quality evaluation of the institute’s means to decide quality factors or criteria based on critical Knowledge Management (KM) based evaluation. Saxena and Wadhwa (2004) suggest growing need for focusing on the influence of knowledge transfer in human resource development. They have given adequate direction to incorporate globalization and knowledge management in human resources development systems in order to meet digital era goals. TES is facing a huge challenge because of constraints in resources such
as finance, trained teachers, infrastructure and costly technologies (Bodin and Gass, 2003). KM provides processes to capture a part of tacit knowledge through informal methods and high percentage of explicit knowledge, reducing the loss of organizational knowledge (Nonaka and Tekeuchi, 1995).

**OBJECTIVES OF E-GOVERNANCE IN EDUCATION SYSTEM**

1. Education system is the important service sector that needs more focus on E-Governance deployment, especially for Technical Education System (TES). TES is an important facilitator of economic development.

2. Knowledge Management Based Analytical Hierarchy Process for the Education System.

3. In order to provide potential services to students, the TES is making use of KM and E-learning as means of promotion and improving upon the quality of technology.

4. E-learning has the potential to revolutionize the basic tenets of learning by making it individual rather than institution or industry based, more concerned about TES knowledge transfer and training, eliminating clock hour measures in favor of performance and outcome measures.

**Benefits of E-Governance in Education System**

KM practice can help to share this knowledge with technical institutes on need basis. Continual efforts to grow awareness, acquire, adapt, apply and advanced environment-focused knowledge distribution as it significantly affects the TES. The e-governance framework can integrate localized knowledge sources into a single integrated system can serve as one stop for governance (Gupta et al. 2003). KM can facilitate the government to share knowledge in institutes-government integration environment.
It is based on direct observation of knowledge experts and sometimes enriched by an expert general evaluator. The evaluations process is lengthy and affected by individual expert opinion or his benchmarks. The automation of the process with the AFP based software can remove the problem satisfactorily and contribute to the improvement in quality.

PROBLEM DEFINITION

The typical problem examined by the AHP consists of a set of alternatives and set of decision criteria. Since the problem is very common in many engineering application, AHP has been a very popular decision tool. Another reason that contributes to the wide use of AHP is the development of Expert Choice Software. Furthermore, many other computer packages have been developed and are based on the principles of the AHP.

Selected real life case of four technical institutes (i.e Institute A1, Institute A2, Institute A3, Institute A4) which are evaluated on the basis of seven criteria including sub criteria and formed a hierarchy structure of interdependency. The detail classification of these factors are given below:

1. Mission, Goals and Organization (100):
   Management (50) (Mgmt.)
   Organizational Governance (50) (O&G)

2. Financial Resources and Physical Resources and their utilization (100): (FR & PR)
   Financial Resources (40): (FR)
   Physical Resources (40): (PR)
   Other resources (20): (OR)

3. Human Resources: Faculty and Staff (200) : (F & S)
   Faculty (150): (Fac)
   Supporting staff (Tech/Admin) (50): (SS)

4. Human Resources Students (100): Stud)

5. Teaching – Learning process (350)(TLP)
   Syllabus and Academic, Calendar (100): (SAC)
   Evaluation, Procedures, Feedback, Laboratory and Workshop (50): (EPF)
   Computer facilities, library, Budget for Consumables (100): (CF)

6. Supplementary Processes (50) : (SP)

7. Industry-Institute interaction and Research and Development (100): (IIRD)

The aforesaid factors evaluate the institute’s performance and finally the aggregate score is being used to compare the different alternatives. This evaluation is mostly used for institute promotion and development. This direct evaluation of the institute is more accurate and providing an absolute rating but still not feasible because of lengthy, time consuming and unjustified procedures.

FINDINGS

The potential benefit can be saves expert time, money, transparent functioning, more responsive and accountable, information of all the institutions approved becomes available on the internet, information in respect of infrastructure facilities of the institute becomes available to the general public in order to make choice for rewards, etc. In our opinion, well planned investment focusing on the judicious use of IT can maximize the value from the KM efforts in the TES domain. It is suggested that the use of IT in form of databases, expert systems, industrial engineering tools, simulation tools
and enterprise modeling tools can help in improving many similar processes. An important point for us is to learn from global experiences, but develop our own ingenious solutions for our specific needs. For example we need to position KM as a support to the TES professionals and not a replacement of the knowledgeable professionals.

**CONCLUSION**

The conventional IMS based E-Governance use a concept of knowledge centers to share knowledge. Our model of E-Governance based on knowledge management system is built on KM cycle of Knowledge capturing, Knowledge sharing, Knowledge enhancing and knowledge preserving.

E-Governance can play a major role to strengthen the technical education system by focusing on KM. This means proactive facilitation by E-governance means to evolve consensus based knowledge bank on key evaluation factors, how to combine these factors, and useful tools that offer greater value and consensus based case study knowledge. In this context we demonstrated the use of KM based AHP application as a useful tool for a more effective technical evaluation system. The direct evaluation process, which is based on the allotment of the marks, fails when the expert’s opinion is different and perception is on the basis of individual decision. We have suggested an alternative methodology to resolve this problem using KM based AHP as a multi-criteria decision support. This approach can assist experts in critical decision making and justification. In this context governance systems need to promote new ways of system evaluation. A core function of technical education system is to be an intensive knowledge sharing organization. It is, thus, essential to manage its knowledge resources more effectively. Knowledge resources are the key to a scholarly teaching learning environment. It is useful to identify the KM inputs based on government process and the knowledge sharing attributes relevant for the system under study. The KM cycle to enrich E-Governance may include knowledge awareness, knowledge acquisition, knowledge adaptation, knowledge application and knowledge advancement facilitations. E-Governance system may also encourage technical institutes to support knowledge sharing between institutes and government that will ultimately strengthen the technical education system in the country.

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