

Chapter 10

Measuring Effectiveness of an E–Governance System: A Human–Centric Approach

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ABSTRACT

In the era of economic liberalisation, institutions of higher education in the government sector, particularly universities, are facing tremendous challenges in terms of academic, general, and financial administration, which need effective governance. Recently, some of the universities are trying to adopt e-governance as a platform for such a purpose. However, the design of such a system is very much important, as it has to cater to the needs of various stakeholders in the public system. In this context, the effectiveness measurement of such an e-governance system is really necessary either to improve its performance level by re-aligning its organisational culture or by providing inputs for re-designing the system in order to make it more effective. Hence, the performance of such a system can be known if a human-centric approach with multiple criteria of evaluation is considered in the governance environment. This chapter attempts to determine those criteria by multiple factor analyses carried out for the purpose of considering multiple stakeholders. Analytic hierarchical processes as well as fuzzy analytic hierarchical processes have been then employed to measure the effectiveness of e-governance systems along those criteria, taking an Indian university as a case study.

INTRODUCTION

Electronic governance (E-governance) has gained tremendous importance and popularity all over the world. In India, this has found its origin during the seventies with a focus on in-house government ap-

plications in the areas of census, defence, economic monitoring, etc., where significant improvements have been realised in terms of organisational performance. The efforts of the National Informatics Centre (NIC) of the government of India in this direction were praiseworthy. However, in the ad-

DOI: 10.4018/978-1-4666-3640-8.ch010

ministration of higher education in the government sector, particularly in university administration, it has limited applications to date. Governance is a concept that involves the interactions among structures, processes and traditions that determine how power is exercised, how decisions are taken and how their say has been utilised by citizens or other stakeholders (Davidson, 2005). E-governance is the public sectors' use of information and communication technologies with the aim of improving information and service delivery encouraging users' participation in the decision-making process and making organisations more accountable, transparent and effective. The issues include function and data requirements within an organisation (i.e., actors, responsibilities), the need of information management strategies (i.e., key elements, actors, the structure and mission/business objectives of an organisation and data requirements), the factors of modern information-based organisations and the critical factors of success (Davidson, 2005). The last few years have seen the spread of e-governance in India with the help of government incentives. It has enabled the delivery of government services to a large base of people across different segments and geographical locations. Its effective use in the government administration has generally enhanced existing efficiencies, reduced communication costs to a greater extent and increased transparency in the functioning of various departments. In addition to simplifying the process of data collection, analysis and audits making it less tedious, the government has also benefitted from reduced duplication of work. It has helped the government in cutting red-tapism, avoiding corruption and reaching citizens directly. The government has changed its role from "an implementer to facilitator and regulator". It has also given to its citizens' the easy access to tangible benefits be it through simple application such as online form-filling, bill securing and payments, booking tickets or complex application such as distance education and tele-medicine. Hence, e-governance is now no longer looked at

as an option; rather a necessity for organisations aiming for good governance. However, people and organisational culture play a dominant role in making e-governance a success. Successful organisations try to measure the effectiveness of such systems from time to time for educating their employees on performance measures and uses as they are benefitted from the processes which e-governance systems deliver and, if necessary, bring changes in the design aspects of such systems. But for the measurement of performance, human aspect is most vital as users mostly decide the success of such systems. They use their experiences, expertise and have their own expectations which are mostly culture-specific and hence, a human-centric evaluation is quite meaningful in performance measurement of such systems.

In an e-governance approach, the technology involves automation and computerisation of existing paper-based procedures that is prompting new style of leadership, new ways of debating and deciding strategies, new methods of transacting the governance, new techniques of listening to users and new strategies for organising and delivering information. Therefore, e-governance should not be viewed as a new type of government; rather a new tool of governance through the use of technology. In India, the National e-governance plan was initiated in 2003 which reflected the strategic intent of government of India in the right perspective. Many projects were earmarked under the plan with the government trying to address the digital divide. The World Bank, the Asian Development Bank, and the United Nations had been approached and in response they have funded e-governance projects in India. The IT policy of state of Odisha in India has been replaced by ICT policy of Orissa in 2004. This policy was designed to unleash the power of IT for the betterment of common citizens through e-governance and provide easy and comfortable access to information by public. A number of core ICT projects have been implemented in the state to establish the basic technological infrastructure. Some of

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