

Chapter 7

Extending IMPLEMENT Framework for Enterprise Information Systems Implementation to Information System Innovation

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ABSTRACT

Enterprise Information systems implementation is one of the most challenging parts of IT strategy for an organization, since implementation brings in efficiency in the system and justifies the investments made. Therefore, it becomes increasingly important to study the perspectives of implementation to understand the current dynamics. The purpose of this paper is twofold, first is to explore the type of literature that exists in information system implementation and secondly to determine the research methodologies incorporated therein for the information system field's implementation in specific. The basic content analysis is done to review the articles on information system implementation. A total of 47 articles were selected from peer reviewed journals and conferences. The study was conducted to assess the methodology used, the strategies followed along with the issues and challenges faced in the implementation. It presents an arena of the studies done in information system implementation in past 20 years (typically 1993 to 2013). The IMPLEMENT framework has been proposed to synthesize the literature finding for smooth functioning of IS implementation process. The factors influencing the adoption of information system innovation are described. The comprehensive framework for information innovation process is developed. This framework is then mapped to IMPLEMENT framework. This study would encourage the practitioners in the information systems domain to improve upon their organizational capability and incorporate other best practices.

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INTRODUCTION

Information system implementation involves the design of the framework and model, the management's role and strategies. The user's involvement in information system implementation is one of the critical aspects of information system since; it can point us to where the system can fail. Top management and training are the two most important organizational factors that are known to effect information system implementation (Hwang, Lin & Lin, 2012).

Information system implementation has been a pioneer study in the field of information systems. There has been literature on debate between the technical aspects vis-à-vis human behavioural aspects. Some authors (Keen & Scott-Morton 1978) mention that implementation is an intuitive skill and the best way to deal with implementation is to be technically competent. Whereas others (Hirschheim, 1985:158, Friedman & Cornford, 1989) mention that implementation depends on user involvement, how the prototyping is done, the information analysis done and the change agents. Implementation stage is one of the most risky stages of the information systems lifecycle. There is resistance from users and hence the role of team and the management becomes extremely important.

Some models that define IT implementation is diffusion models (Cooper & Zmud, 1990) which states that in a user community, it's an organizational effect that works towards diffusing the appropriate information technology. The other model is the Lewinian model which discusses implementation as a process of innovation and implementation brings in change for which unfreeze and freeze models would work to an extent. Pinto, J. & Millet I, 1999, mention that human processes and behavioural components are important for success of information systems. They also mention that how project prioritization, communication among people and techniques on planning and scheduling can help in dealing with the change control pressures and also deal with the system development lifecycle politics. Cross functional teams are the key according to them.

The previous studies included situational normativism philosophy (Shakun, 1975), process theory of implementation (Zand & Sorensen, 1975), theory based on user influence (Lucas, 1974), theory of implementation (Debrabander & Edstrom, 1977) and documentation as a success factor (Neal & Radnor, 1973). Some other studies are the paradigm of organization information system (Van Gigch & Le Moigne, 1990), idealized design methodology (R.L. Ackoff, 1981) and systematic enterprise theory (Eriksson, 2004). Kolb Frohman model of information system implementation was widely used in the seventies. It facilitated budget making process of the government.

This study lays its focus on core information systems implementation. Overall a diverse view is adopted by the researchers over the period of years. The earlier studies focused on the social technical aspect and organization bit as a whole, whereas, the dynamism of the environment is taken care in the recent studies.

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