# Chapter 2
# A Comparative Evaluation of ERP Implementation Factors in Higher Education

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## ABSTRACT

*Extensive research has been conducted in identifying the critical issues and the implementation challenges involved in an ERP project in higher education. But limited studies investigated the implementation issues in the context of higher education institutions. The authors attempt to observe and compare two different higher education institutions in South Africa and India with the objective of bringing out the practical determinants of roadblocks to a successful ERP project implementation and subsequently provide the readers with possible solutions. The findings suggest implementation issues broadly evolve from three major areas, namely, project management issues, which involve the technical as well as the functional aspects; issues concerning the improper application of software development life cycle phases; and human capital issues which involve beliefs and attitudes. The authors strongly believe that the learning received from the case studies significantly contribute to the organizational knowledge concerning technology and business process reengineering.*

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## INTRODUCTION AND LITERATURE REVIEW

The study considers the implementation of Enterprise Resource Planning (ERP) in different business functions of an organization. The ERP system has become the pillar of IT industry in most medium and large scale organizations across the world (Morton & Hu, 2008). ERP can be considered as a company-wide data framework that incorporates all parts of the business. It guarantees that there will be a single database, single application, and a unified interface across the whole enterprise. It is advantageous for the organizations as it promotes quick response to market opportunities, adaptable product configurations, reduced stocks and improved supply-chain links, etc. (Bingi et al., 2006). Considering the evidence of the positive impact of ERP for a business enterprise, the challenges remain on successful implementation of ERP in different contextual business functions. Some concerns regarding the ERP implementation are as follows: Lack of commitment from top management, Business Process Re-engineering and integration with other applications, Absence of competent ERP consultants, Time-consuming implementation, and High fixed and operational costs (Bingi et al., 2006).

Let us first understand the literature in brief. Schlichter and Kraemmergaard (2010) conducted a thorough literature review that comprised 885 peer reviewed articles on ERP from 2000 to 2009. The classification of papers was based on a number of relevant factors such as research discipline, research topic, and research methodologies. The most important finding associated with the synthesis of literature was the division of subject areas in the context of ERP. Therefore, the literature was divided into seven specific areas: implementation, post implementation, organizational change and managerial implications, training and education, the target market of ERP in the industrial context, supply chain management, and the ERP system as a separate entity. The earlier literature review papers either lack conceptual frameworks or have considered frameworks from the IS literature only. It is crucial that research on ERP be observed also through the lens of other disciplines. Amani and Fadlalla (2016) bridged this gap by conducting a literature review of 543 articles published from 2000 to 2014 on the basis of a marketing conceptual framework (Macinnis, 2011), which ensured a knowledge-centric approach for gathering insights from a macro-level perspective. Very few papers combine the multi dimensionality nature of ERP systems, which is more relevant upon viewing through the lens of project management. To elaborate further, Wickramasinghe and Gunawardena (2010) discussed the determinants that differentiates a successful project from an unsuccessful one. The key findings have been user involvement, project management, testing and troubleshooting, software development, etc. However, discussing about ERP projects, they tend to talk about these micro level factors on a generic level. For example, Laukkanen et al. (2007) discussed in depth about the key issues of ERP implementation with increase in the firm size. Similarly, Alshawi et al. (2004) conducted a case study showing how the diverse ERP system implementation in the form of customization presents a challenge to the ERP consultants. Soja (2006) extended the same view and provided a detailed account of the ERP implementation success factors from the world of practitioners.

Although studies have been carried out in different business contexts (Almajali et al., 2016), probably none of the studies has conducted a comparative analysis of the success and failure of the ERP implementation in two different countries. This paper argues that a good comparison can only be made upon comparing two similar projects in different environments. The authors considered the higher education sector as their research sample, primarily for two reasons. First, to the best of knowledge, very limited research has been conducted in the context of ERP implementation in higher education (Abugabah & Sanzogni, 2010; Abugabah et al., 2015; Noaman & Ahmed, 2015), especially related to comparing projects implemented across different nations. Second, the reports suggest that the higher education