Theory versus Application: 
A Study to Determine the Right Choice in Deploying an Enterprise Resource Planning (ERP) System

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ABSTRACT

This paper discusses the critical use and lessons learned from the single case model while implementing an Enterprise Resource Planning (ERP) system at a leading university. The researcher examined one university’s business ERP in the deployment of a new enterprise system, a complex phenomenon which took place over several stages and involved different players at each stage. The paper discusses the case system inclusive of the grounded case theory, diffusion of innovation theory, innovation-process theory and their application during the ERP system implementation.

Keywords: Business Case, Critical Reflection, Diffusion of Innovations, Enterprise Resource Planning (ERP) System, ERP Study Methods, Grounded Theory, Methodological Reflection, Single-Case Study

INTRODUCTION

The normal considerations in the development of an effective Enterprise Resource Planning (ERP) system are: First, the underlying theory of ERP; secondly, the most suitable method to construct the theory; thirdly, a replication of the method(s) and the findings; and fourthly, the contributions that ERP will provide to an organization. It will contribute to, according to Weber (2003), a clear context of the overall development of an ERP system.

This paper attempts to make the highly technical development of an ERP system easier to understand. After a two-year study of a public university’s radical switch to a new ERP system, the researcher uncovered four intertwining complex issues: (i) the matchmaking stage, (ii) the business case, (iii) the perceived attributes of the innovation, and (iv) the decision points. These domains (Bhaskar, 1978) of the study were grounded in the Diffusion of Innovations (DOI) theory.

A brief summary of the actual scenario is as follows (all names have been disguised): When Craig Smith became Director of Finance for the University of Australasia, he soon noticed flaws in the university’s enterprise systems. Studying data gathered by an analyst appointed...
by his predecessor, Craig realised that the system was barely meeting user requirements and would probably have to be replaced. Since launching a new enterprise system would be a radical change, Craig hoped to make the transition as smooth as possible. Knowing that change management is a critical aspect in the implementation (Wei et al., 2005) of a new enterprise system, not underestimating the efforts required to manage change (Robey et al., 2002), and hoping to make the transition as smooth as possible, he hired Kevin Peters, of Providence Consulting, as a third-party change agent. Kevin guided the University through the structured process of Request for Information (RFI), Request for Proposal (RFP), and Business Case Development (BCD) stages. Through the RFP phase, Vendor F was chosen to provide a software package for the university. At the end of the BCD stage, Craig presented his entire business case for the approval of the University Council. The goal for the university was, obviously, to enforce quality into the methodology and to minimize risk associated with the ERP case design. The question is: Isn’t the analysis of the buying decision made after the submission of the ERP case good enough to clarify the issues of the ERP system under consideration? Why do the innovation and its adoption, rather than the organisational buying decision, provide the appropriate context for analysis? Forthcoming sections address the above mentioned considerations, utilizing several lenses to conduct the reflection.

**WHAT IS THE ERP “CASE SYSTEM”?**

**Why is the Business ERP Case System, as a Framework of Thinking, Important?**

The business case provides an explanation that is correct, adequate, and intelligible (Passmore, 1962). This explanation, taken with the story’s chain of events and chain of reasoning, satisfies additional criteria of completeness (Hume, 2004; Scarre, 1998) and relevance (Hart & Honoré, 1985).

Secondly, the focus Rogers (1962) has put on the buying decision in his process model is too “weak” (Wolf, 1994, p. 417). When the aforementioned four issues are considered properly, the story’s climax is clearly the business case. Therefore, a case study that is delimited to the buying decision cannot offer a comprehensive explanation.

Thirdly, the term business case encompasses not just the process itself, but also its outcome, the intentions and the diffusion. It could even be a thinking hat for someone who wishes to tell the complete story of a business process.

The business case construct intertwines with other constructs, such as the innovation, the diffusion process, the innovation process, and a mental representation of the perceived attributes of the innovation. The question is whether these tightly interrelated constructs is appropriate for understanding and deploying an ERP system.

Given the lack of prior knowledge concerning the business case construct in the Diffusion of Innovations theory, the knowledge learned from an instrumental case study would make practice less complex over time (Baskerville & Pries-Heje, 2001; Benbasat et al., 2002, p 370; Christenson, 1976).

Other reasons include a positive bias in favour of qualitative methodology (Benbasat et al., 2002). Only qualitative research can provide rich, sensitive, and contemporaneous contexts. Quantitative methodology, on the other hand, has to have a large sample size in order to create a generalisation, which cannot even apply to all practices. Yet while the strengths of qualitative methodology are the inverse of the weaknesses of quantitative methodology, the reverse is also true (Carr, 1994; Denzin & Lincoln, 2005b; Guba & Lincoln, 1994, 2005).

Note that the term “case study” has become a catch-all name for any method or methodology (Datta, Nov 1990; Orum et al., 1991; Yin, 1994). Stake (2005, p. 443) defines a case study as “a choice of what is to be studied” and “not
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