

Examining Risks in ERP Projects: Mixed Indigenous \ Euro-Centric Methodological Considerations

Mark Van der klei
University of Canterbury
Christchurch
New Zealand

mark.vanderklei@canterbury.ac.nz

Trevor Nesbit
University of Canterbury
Christchurch
New Zealand

trevor.nesbit@canterbury.ac.nz

Tyron Love
University of Canterbury
Christchurch
New Zealand

ABSTRACT

This poster presents a summary of a proposed mixed Indigenous / Euro-Centric research methodology to be used by a PhD student examining risk management issues in complex Enterprise Resource Planning (ERP) projects.

Examples of failed ERP projects include Novapay (approx. \$105 million and rising), Queensland Health in Australia (approx. \$1.3 billion), and the National Health Service (NHS) in the UK (approx. £12 billion). A number of different theories and corresponding methodologies have been used to increase our understanding of the interconnected nature of risks in these projects and decrease subsequent ERP installation failures, but with limited success. By examining an Indigenous Research Paradigm, the researcher will identify how these components interrelate and the benefits that can be made by indigenous researchers when adopting indigenous methodologies in the examination of risk management issues in technological projects.

Keywords: ERP, Risk Management, Indigenous Research Paradigm,

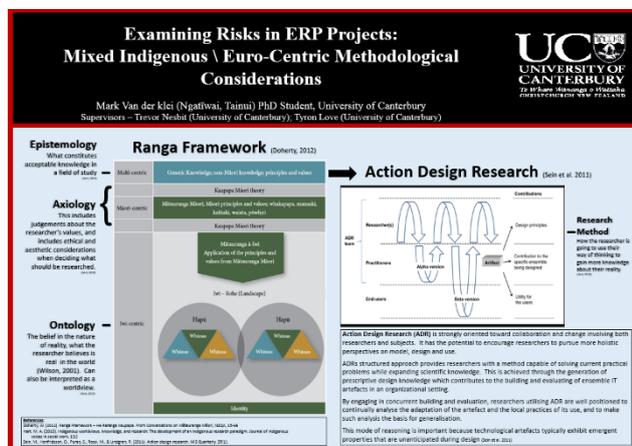
1. INTRODUCTION AND BACKGROUND

Enterprise Resource Planning (ERP) solutions offer organisations significant benefits regarding resource planning, allocation, and strategic reporting functionality. However, before these benefits can be realised these systems must first be installed. Although systems that integrate multiple organisational units (i.e. ERPs) have been in existence for over three decades, an inability to manage ERP risks during installation remains at the forefront of ERP project management issues. More than 60% of companies still fail to realise the business benefits promised before installation (Panorama Consulting Group, 2015). Managing risks in these integrated software installations is vital if failure rates are to be reduced.

This research adopts the concept of IT-related risk to ERP implementations (Markus, 2000), and aims to examine the control of risks at the project implementation level as this has been identified as an ongoing reason for ERP implementation failures (Aloini et al., 2007).

Here risk is defined as a problem that has not yet happened but may cause an organisation to experience significant negative impacts (e.g. technical, financial, human, operational, or business loss) in the course of implementing an ERP system (Sumner, 2000). Methods of controlling risks in ERP implementations are still in the formative stages with studies having concentrated on either risk mitigation at the strategic level (Finney and Corbett, 2007) or risk identification and prioritisation at the tactical and operational levels (Sumner, 2000). Part of this can be attributed to the complex interconnected nature of ERP risk factors, where risks occurring early in an implementation have the potential to influence different risks later in that same implementation (Aloini et al., 2012). In addition, contrary findings about how risks can be controlled (which includes singular and portfolios of control) have contributed to the formative state of theory-based research examining the relationship between risks and controls at the project implementation level (Gopal and Gosain, 2009).

With this in mind, risk and control have been likened to two sides of the same coin and analysis of one without the other fails to fully address risk mitigation within ERP projects. Indeed the purpose of controls is to mitigate and reduce risks so that they are within acceptable limits (Albadri and Jordan 2003). So far, research addressing risks and controls has focused on IS development teams and individual software development projects (Choudhury and Sabherwal 2003). All of these studies identified a common link between risk assessment, control of those risks and the effects on organisational performance. However, apart from two exploratory conference papers (Vanderklei, 2013), there is little on risk and control within the context of ERP projects with its specific characteristics as outlined above. Investigating risk controls is further complicated because, during IT projects, risks do not remain static but change as a function of prior decisions and behaviour (Markus 2000). To further complicate matters, the dynamic nature of risks does not easily lead to a stable risk pattern, as second-order consequences of human problem-solving behaviour might lead people to misdiagnose the causes of problems and apply attempted (control) solutions that actually make the situation worse (Markus and Tanis, 2000).



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2. METHODOLOGY

An indigenous research methodology was created in direct opposition to one of the concepts of empiricism; the accumulation of “facts” is a legitimate goal. These goals were based on traditional University-based knowledge models which were primarily driven by academic agenda; tended to build on existing knowledge in a linear fashion; made the distinction between theoretically pure and applied knowledge (where theoretical knowledge is translated into practice); and only placed limited emphasis on practical dissemination of knowledge as the academic community was defined as the most important audience or consumer of this type of knowledge (Bryman and Bell, 2007).

Indigenous research methodologies evolved in stark contrast to this in an effort to move away from those being researched to those doing the research (Smith, 2012). This has evolved over time and can be articulated by examining and defining what constitutes an Indigenous Research Paradigm. An indigenous research paradigm consists of four components:

Table 1: Indigenous Research Paradigm

Components	Definition
Ontology	The belief in the nature of reality, what the researcher believes is real in the world (Wilson, 2001). Ontology can also be interpreted as a worldview (Hart, 2010)
Epistemology	What constitutes acceptable knowledge in a field of study
Axiology	Judgements about the researcher’s values, and includes ethical and aesthetic considerations when deciding what should be researched
Research method	How the researcher is going to use their way of thinking (epistemology) to gain more knowledge about their reality (Hart, 2010)

This research will use the Ranga Framework (Doherty, 2012) which links generic or non-Māori knowledge to Māori principles and values via a Kaupapa Māori theoretical lens. The euro-centric component to be incorporated into this work will be Action Design Research (ADR) which will be used as the research method. ADR conceptually has much in common with Kaupapa Māori theory. Both ADR and Kaupapa Māori are strongly oriented toward collaboration, and encourage researchers to pursue more holistic perspectives. Key to ADR are the need to work from within the ADR team, and to test and deliver solutions as a member of that same team (Sein et al. 2011).

ADRs structured approach provides researchers with a method capable of solving current practical problems while expanding scientific knowledge. This is achieved through the generation of prescriptive design knowledge which contributes to the building and evaluating of ensemble IT artefacts in an organizational setting. By engaging in concurrent building and evaluation, researchers utilising ADR are well positioned to continually analyse the adaptation of the artefact and the local practices of its use, and to make such analysis the basis for generalisation.

3. OUTCOMES

A desired outcome of this research is to highlight the benefits that can be made by indigenous researchers when adopting indigenous

methodologies in non-traditional areas of research. This has the added benefit of encapsulating the research in an ethical framework which specifies the need to be respectful in how data is gathered and for whom the research is to be of benefit. Additionally, it is hoped that this can be presented as a viable method to enable otherwise disconnected Māori researchers the opportunity to not only engage in meaningful high level research, but also to reconnect and add value to their whānau, hapū and iwi in areas where this would not normally be considered possible.

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