AN APPLICATION OF CONTEXTUALISED KNOWLEDGE ELICITATION IN THE DEVELOPMENT OF KNOWLEDGE MANAGEMENT SYSTEMS BASED ON IDENTIFIED CRITICAL SUCCESS FACTORS

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ABSTRACT

A significant number of ineffective Knowledge Management Systems inundating the marketplace today necessitates the identification of critical success factors prior to the development of successful Knowledge Management Systems. Critical Success Factors (CSF) that embody contextual elements are investigated and determined to form a contextual-based framework that would be useful for KMS developer in building a KMS while taking into consideration of elements beyond merely technical dimensions. The framework guides the knowledge elicitation process to acquire contextual aspects from knowledge workers among others. In building the framework, a mixed mode data gathering method was adopted to investigate KM practices and KMS implementations across five organisations from various industries. A purposive sampling was used for the survey followed by semi-structured interviews. The findings led to a refined list of six (6) Critical Success Factors governing contextual knowledge elicitation namely KM Strategy, Knowledge Repository, KM Measurement Metrics, Core KM Features, Motivational Factors and KM Governance. In order to formulate the theoretical framework, activity theory and knowledge value added were used as the theoretical underpinning. The outcome of the theoretical contributions are the KMS-AT Development Framework, the Knowledge Asset Value Stream Model, the KM-AT Model and the KM Measurement Metrics. The practical contributions of this research include the KMS Business Case Blueprint and the KMS Requirements Blueprint. The culmination of the research is the validation of the KMS-AT Development Framework through the development and deployment of a prototype knowledge elicitation tool for acquiring contextual knowledge in building Knowledge Management Systems.

APPROVAL PAGE

I certify that I have supervised / read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is full adequate, in quality and scope as a thesis for the fulfilment of the requirements for the degree of Doctor Philosophy.

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DECLARATION

I hereby declare that the thesis submitted in fulfilment of the PhD degree is my own work and that all contributions from any other persons or sources are properly and duly cited. I further declare that the material has not been submitted either in whole or in part, for a degree at this or any other university. In making this declaration, I understand and acknowledge any breaches in this declaration constitute academic misconduct, which may result in my expulsion from the programme and/or exclusion from the award of the degree.

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INTRODUCTION

1.1 Overview

Organisations need knowledge to make business decisions and so Knowledge Management is arguably an essential ingredient of success. Traditional methods of eliciting knowledge have proven to be ineffective as they more often than not fail to contribute to an organisation's success (Fuentes-Fernández, Gómez-Sanz, & Pavón, 2010; Gavrilova & Andreeva, 2012). In an ideal setting, a Knowledge Management (KM) initiative in place may offer the opportunity for employees to achieve greater quality of work outcomes given that best practices (knowledge) can now be seamlessly elicited and consequently leveraged. However, this is easily said that done. Managers are often bombarded with an almost constant stream of data and information on a daily basis if not constantly. It is therefore important that there are measures in place to ensure knowledge is effectively elicited before it is disseminated. This phenomena is synonymous to the old adage, *garbage in garbage out.*

Knowledge elicitation is central to any KM initiative. Despite the growing number of literatures inundating the marketplace, the elicitation of knowledge within the realms of organizations and individuals alike is difficult (Dalkir & Liebowitz, 2011; Murray E., Stefan, & David, 2014). Prominent authors like Davenport and Prusak (1998) in their seminal paper have espoused the challenges involved in eliciting tacit knowledge. Others like Jayasingam, Ansari, Ramayah, and Jantan (2013) and Gavrilova and Andreeva (2012) have concurred with Davenport and Prusak of the difficulties involved in eliciting tacit knowledge particularly in the

context of Knowledge Management Systems (KMS). The difficulty is compounded by today's world that is characterized by changing markets, evolving products, emerging new technologies, intense competition, increasing regulations, and changing societies toward innovation and growth. Given these new technological development and societal advancements, it is not far-fetched to note that knowledge elicitation is a key component of KM and an important source of sustainable competitive advantage in a knowledge-driven economy (Daniel & Kavitha, 2009; Yusoff, Mahmood, Jaafar, & Salak, 2012).

This preceding paragraphs encapsulates the focus of the research in broad terms. In essence, the main goal of the research is the identification of critical success factors to effectively elicit contextual knowledge from subject matter experts to achieve organisation-wide dissemination of critical knowledge.

1.2 Background of the Research

It is difficult to define knowledge because what is perceived as knowledge by one person can be an information for the other (Girard & Girard, 2015). Given the preceding challenges involved in defining knowledge, it is equally challenging to elicit knowledge let alone document and disseminate knowledge.

Organisations have begun to recognise the importance of eliciting critical knowledge as an important resource (albeit tangible) for corporate success ((Anvari, Alipourian, Moghimi, & Baktash, 2011). Similar views were echoed by Ehsan, Mohammad, H. Sabet, Z. Seyed, and Mahmoud (2012) who stated that organisations have increasingly recognised knowledge as an important resource, and the ability to elicit and deploy knowledge across the organisation is an important source of organisational advantage. These observations indicate heightened levels of interest

shown by organisations that regard knowledge as a strategic resource (Albers, 2009; Omotayo, 2015). The aforementioned authors' emphasis on knowledge as the strategic asset suggests that managing knowledge in general and eliciting knowledge in the context of a KMS should therefore assume greater significance and priority in attaining competitive advantage and improved productivity.

Although organisations realise the importance of "knowing what they know", i.e. best practices, there are many problems associated with eliciting these knowledge assets and being able to leverage them for organisational gains (Karabag, 2010). Regardless of the approach taken, organisations in general have started giving increasing prominence to the importance of knowledge utilisation in general whilst embarking on enterprise-wide KM and KMS implementation (Karabag, 2010). Moving forward, it is time organisations facilitate an environment to enable and encourage knowledge contributions from its employees (knowledge workers) in a contextualised yet purposeful manner as this is by far the easiest way to achieve KM (Moshari, 2013). As organisations continue to embrace the knowledge economy in the wake of global competition, such a transition will surely become a necessity.

Organisations can gain numerous benefits from the implementation of KM initiatives in general and KMS in particular. Some of the benefits that organisations obtain include better decision-making capability, better product and service offerings, improved responsiveness to the needs of customers, improvement in the effectiveness of employees, better flow of operations and processes which leads to performance improvement (Azmi, 2010; Murray E. et al., 2014). Other documented benefits of implementing an organisational-wide KMS are increased innovation and efficiency of its internal and external supply chain networks resulting in increased productivity (McIver & Wang, 2016).

Knowledge Management initiatives should not be seen merely as an attempt to alleviate some of the problems of poor control and poor use of knowledge and information resources in the face of increasing complexity but also as a means for organisations to have better leverage on what it does best. A holistic implementation of a KM initiative and the deployment of a KMS is necessary so that such an initiative does not disrupt existing work processes, but adds value to its operations leading to improved productivity and overall organisation performance.

For knowledge to reach levels for it to gain substantial competitive advantage, it must be effectively elicited. Suffice to say that knowledge elicitation is central to any Knowledge Management initiative (Gavrilova & Andreeva, 2012). However, as much as elicitation of knowledge is important for KM to succeed, the irony is that elicitation of knowledge within the realm of employees of an organisations remains a difficult exercise (Basir & Salam, 2015). This challenge if unresolved could derail KM efforts and one that organisations must deal with. Organisations embarking on KM initiatives in general and knowledge elicitation in particular are confronted with issues on how to effectively capture knowledge and experiences of its employees with the aim of garnering measurable results (Albers, 2009; Sukumaran & Chandran, 2014). The added challenge is how to extend the aforementioned in the realm of KMS.

Given the above-mentioned findings, KM implementations must therefore be approached differently. There is a need to capture tacit knowledge (experiential) as opposed to explicit knowledge alone. In any case, it is imperative that for knowledge to be disseminated organisation-wide, a Knowledge Management System (KMS) ought to be deployed utilising tents of information and communication technology (Kaptelinin & Nardi). Nonetheless, the panacea is not in the deployment of a KMS