

Towards Sustainable KM in High-Performance Sport

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Abstract: For knowledge management initiatives to be successful and provide sustainable competitive advantage, it is imperative that they are rooted in the organisation's context. This paper presents a knowledge management audit methodology for conducting a systemic inquiry into the multiple factors within an organisational context that can impact on the success of the KM strategy. Drawing from the practice-based perspective, the KM audit is proposed to study the organisational objectives, identify the strengths and barriers in the context and highlight the existing knowledge resources and processes. As opposed to the existing audit methodologies in the literature that present a snapshot evaluation of the context, the present audit methodology will adopt the iterative approach of the action research process; the data collection and analysis phases will be conducted simultaneously, progressively developing insight and meaning. Further, the findings will be continuously fed back to the organisation and used directly to inform the KM strategy through forming a working relationship with the current Knowledge Manager in the organisation. The overall aim is to inform a KM strategy that will strategically align to the organisational context whilst utilising the available resources. It is expected that this approach will result in a KM strategy that will foster a long-term focus on KM in the organisation, provide sustainable competitive advantage and be robust in the face of dynamic organisational climates. This work-in-progress study is being conducted in a not-for-profit, knowledge intensive, high-performance sport organisation to illustrate the KM audit in practice. This paper presents the audit methodology and discusses the rationale and benefits of conducting a KM audit, along with preliminary findings and reflections from the audit process at the case study organisation.

Keywords: Knowledge management audit, knowledge strategy, high-performance sport.

1. Introduction

An organisation's ability to efficiently manage its knowledge has been proposed as a significant source of strategic advantage. However, despite the promise of strategic advantage, attempts at introducing knowledge management (KM) initiatives in organisations have sometimes been unsuccessful (Hylton, 2002). Stewart (2002) reasoned that often organisations implement KM strategies without first understanding what knowledge they need and how to manage it. Accordingly, knowledge audits (KA) are stressed as a critical first step in designing and implementing a KM strategy in an organisation. KA are instrumental in understanding the organisation's culture and context, highlighting the KM needs and defining KM goals.

In addition to being successful, for KM initiatives to provide continued strategic advantage, it is imperative that they are sustainable against the complex and dynamic context of an organisation. Okunoye (2002) stressed the need to study the organisational context, and the pertaining socio-cultural and organisational issues to design KM initiatives that are sustainable. Further, Bhatt (2001) emphasised that sustainable KM involves creating an enabling culture where people, processes and technology interact to manage an organisation's knowledge and provide sustainable competitive advantage. This suggests that careful consideration of multiple factors in an organisation's context and the interaction between them is required to design a KM strategy that is successful and sustainable.

This study proposes a knowledge management audit methodology for conducting a systemic inquiry into an organisational context to inform a KM strategy that is aligned to the strategic organisational objectives and

provides sustainable competitive advantage. In this instance, the study is based at a high-performance sport organisation that can be classed as a not-for-profit, knowledge-intensive firm. The study attempts to extend understanding of knowledge audits in the previously less explored sport sector. The paper presents a review and critique of the current KA literature, highlighting the gaps. Following on from this, the case study organisation where the audit is to be conducted is introduced, highlighting the relevance of knowledge management efforts and the rationale for conducting the audit. Finally, the knowledge management audit methodology is presented, with a specific discussion around addressing the gaps in the literature and the various phases involved in conducting the audit.

2. Knowledge audits: Literature review

Early research on KA made references to information audits (e.g., Orna, 1999; Henczel, 2000) and focused predominantly on identifying existing knowledge resources and future knowledge needs (e.g., Debenham and Clark, 1994). This appears to mirror the early conceptualisation of knowledge, and the focus of KM literature on the management of knowledge resources. As the field of KM progressed, the focus shifted onto the impact of organisational context, leadership and interpersonal interaction on knowledge creation, transfer and application (e.g., Nonaka and Takeuchi, 1995; Nonaka, von Krogh and Voelpel, 2006). Accordingly, the focus of knowledge audits expanded to include a study of the larger organisational context.

A review of the KA literature highlighted a lack of a standard methodology for conducting knowledge audits. It appears that researchers generally sort through the existing theoretical and empirical literature and select methodologies, tools and techniques to suit the context of their organisation. Thus, several different KA methodologies have been presented in an attempt to address this gap (e.g., Liebowitz et al, 2000; Burnett, Illingworth and Webster, 2004; Perez-Soltero et al, 2006; Cheung et al, 2007; Burnett, Williams and Illingworth, 2013). In addition to the KA methodologies, a series of KA case studies have been published in the literature (e.g., Bontis, Fearon and Hishon, 2003; Mearns and du Toit, 2008; Huck, Al and Rathi, 2011). A majority of these studies have not followed a systematic methodology but have adopted various KA tools and activities to study their respective case study organisation.

Analysis of the KA methodologies revealed some similarities and common tools and techniques used. Firstly, the authors generally recommended starting with identifying the organisational objectives and processes of strategic importance on which to focus the audit efforts. Across all methodologies, knowledge inventories and maps were developed to highlight the current knowledge flow and resources. This was followed by conducting a gap analysis, that is, comparing the existing knowledge health of the organisation against what they require to operate more effectively. Thereafter, audit reports were prepared to communicate the findings and make recommendations for the KM strategy. Finally, the authors asked for re-audit to continuously monitor the KM initiatives in the organisation. These reflections are also supported by the Levantakis, Helms and Spruit's (2008) review of KA literature.

Reflecting on the KA methodologies and case studies in the literature, it is clear that the knowledge audit is a critical first step in informing and developing a knowledge management strategy that is to become embedded in the culture of the organisation leading to sustainable competitive advantage. As Bloice and Burnett (2016) discussed, KM endeavours need to be moulded and adapted to the context in question. Direct application of KM initiatives without understanding the context could be prone to failure, costing the organisation significant time and resources. The knowledge audit will be instrumental in understanding the context, its strengths, constraints and requirements, giving direction to the KM strategy in the organisation.

3. Knowledge audits: Critique

A review of the KA case studies highlighted certain gaps in the literature. Primarily, a majority of the authors have stressed the need to continuously assess the KM environment (e.g., Perez-Soltero et al, 2006; Cheung et al, 2007). However, the existing KA methodologies are generally described as a snapshot evaluation of the KM environment in an organisation (Wei, Choy and Yeow, 2006; Burnett et al, 2013). This indicates a disparity between the theoretical principles and the practice of knowledge audits. Furthermore, the existing methodologies appear to be progressing systematically, in a structured and hierarchical manner. There are uncertainties about the application of such methodologies in organisations where established KM practices are being carried out simultaneously.

Knowledge audits are considered as a crucial starting point for an organisation's KM strategy, and continuous assessment of the environment is deemed important to ensure success of the KM initiatives. Therefore, KA should be considered an important responsibility of the KM managers. However, a review of the case studies suggests that most the audits were conducted periodically by an external consultant or researcher. This approach poses questions about the quality of the data collected during the audit and their applicability for the resultant KM strategy. Specifically, drawing from the practice-based perspective, where knowledge is considered inseparable from the context (Gherardi, 2006), a periodic evaluation of the organisation by an external consultant may appear superficial. A more embedded approach that involves ethnographic understanding of the context and culture may help design a KM strategy that is strategically aligned to meet the organisation's KM needs.

Knowledge audits can be considered as a bridge between the practical needs of an organisation and the specific theoretical literature on KM suited to address those needs. However, a significant gap in the existing literature appears to be the limited discussion on how audit findings were used to develop a KM strategy for the organisation. Finally, the general trend amongst the KA methodologies has been to adopt the existing KA literature and techniques to suit the specific context. However, again there has been limited mention of how the audit process was designed or why the specific KA tools were adopted, particularly as aligned to the strategic objectives of the organisation. A more explicit review and statement of the rationale behind the audit design will help align the KA to the specific needs of the organisation.

4. Knowledge management audit: Addressing the gaps

This study proposed a knowledge management audit methodology to address these gaps in the literature. A major emphasis of existing KA methodologies has been on identifying the knowledge gaps and needs, drawing from information audits. The term 'knowledge management audit' has been used instead to stress towards a holistic KM strategy for managing the people, processes and culture to indirectly manage the organisational knowledge. The methodology adopted the practice-based perspective of KM, which understands knowledge as being embedded in the context, processes and people (see Hislop, 2013). Accordingly, the audit process emphasized on a comprehensive exploration of multiple factors in the organisational context that can have a potential impact on KM initiatives. These included organisational objectives, key business operations, culture, staff attitude, technological resources and external climate, in addition to the knowledge resources and needs. This approach was expected to facilitate the development of a KM strategy that is sustainable and embedded in the organisation.

As opposed to the structured and systematic approach often followed in the existing KA methodologies, the study adopted the interpretive framework to explore the dynamic and complex organisational context. Within the interpretive framework, the participant's worldview is sought to construct their reality (Creswell, 2013). Rather than an evaluation of the context, an iterative approach was followed to study multiple factors in the KM environment systemically, and provide a holistic understanding of the context. These factors included the context and culture of the organisation, the knowledge workers, knowledge resources, KM processes and cultural barriers and enablers, along with their role in the KM strategy for the organisation. Specifically, the data collection and analysis phases were proposed to progress simultaneously as "inextricably linked" rather than as distinct phases (O'Reilly, 2012, pp. 30). Srivastava and Hopwood (2009) stressed the reflexive process within the iterative approach to data analysis. Specifically, reflexive iteration allows the researcher to revisit and engage with the data to progressively develop insight and meaning. As the audit process progressed, the iterative approach helped shape the researcher's understanding of the multiple factors that can impact on the KM strategy.

KA in the literature are generally conducted by external consultants. This approach could be perceived as an exercise in performance management; it is possible that the employees of the organisation feel that their performance is being reviewed and evaluated, thereby affecting the quality of the data collected. The present study, on the other hand, adopted the ethnographic approach (Creswell, 2013; O'Reilly, 2012) and stressed the embeddedness of the auditor in the context. This approach was expected to provide rich insight into the context, resulting in a more robust KM strategy. Additionally, it highlighted collaborative practice between the auditor and the employees, aimed to result in solutions and recommendations that would benefit the organisation. Further, this approach would inform applied practice wherein the KM manager can incorporate KA into their daily role, continuously and regularly assessing the context, designing relevant KM practices and

evaluating their impact. The present study further acknowledged that due to the presence and participation of the researcher in the context, the audit would not be conducted in a vacuum. During the audit process, conversations about KM could influence the staff's perceptions and facilitate adoption of KM behaviours in their daily work. The iterative approach was thus proposed to identify and analyse any changes that may take place in the context throughout the audit process (Ragsdell et al, 2014).

5. Case study organisation

The study is based in a not-for-profit, high-performance sport organisation. The organisation's key business objectives include delivery of sport science, medicine and technology (SSM) to elite athletes for enhanced performance impact. This strategic support is provided by the SSM practitioners who are contracted by the organisation to work with various sport governing bodies. The organisation is in turn committed to support the development of the practitioners' knowledge and create a nationwide network of expertise within the UK high-performance sport system. Due to the knowledge-intensive nature of its key objectives and operations, the organisation has formalised knowledge management within the structure with the appointment of a Knowledge Manager. The audit process was thus proposed in collaboration with the Manager to inform the KM strategy and align KM initiatives to the strategic organisational objectives.

Knowledge management was initially introduced in the organisation to improve knowledge sharing amongst the practitioners and with strategic partners to strengthen the overall high-performance sport network. Considering the KA literature, it was decided that KM solutions that are tailored to the needs and objectives of the organisation will be suitable to provide sustainable competitive advantage. The audit was thus proposed to understand the complexities and intricacies of the organisation within the high-performance sport context. The audit has been designed to progressively develop an understanding of the organisational structure, culture and objectives within which the subsequent KM strategy and initiatives will be outlined and implemented. Thus, following this brief introduction of the organisation, a more comprehensive discussion on the organisational context as a critical success factor for KM initiatives will be presented as the audit progresses.

6. Knowledge management audit: Methodology

The existing KA methodologies, tools and techniques were adapted to develop the knowledge management audit methodology proposed in the study. To make explicit the rationale for the audit design, an initial Pre-Audit phase was proposed. Here the context, culture and core business processes of the organisation were explored to define the scope of the audit, linked to the strategic organisational objectives. Following this, to engender a holistic understanding of the context, the methodology was further divided into two parts (Figure 1). The Focused Audit part was proposed to progress systematically to collect data on the strategic organisational objectives, their vision for KM strategy, barriers and enablers in the context, best practices and specific needs for KM initiatives. The purpose of this part of the audit was to establish the link between the organisation's strategic objectives and the KM strategy by identifying specific solutions that can be implemented to foster a long-term focus on KM.

The second part, Ongoing Audit, was proposed to proceed throughout the audit process to reflect the iterative approach. In addition to exploring the complex reality of the organisation, this approach was devised to help assess the current KM environment and ongoing KM practices in the organisation and any changes that result out of the audit process. Furthermore, the Ongoing Audit allowed for regular feedback on audit findings and informed recommendations to be made to the Knowledge Manager. This approach, conceptualised as an action research approach, was also adopted by Burnett et al (2013). The Ongoing Audit was proposed to observe and understand the culture, inform action and assess the impact of those actions in a continuous and cyclical manner. This was deemed beneficial for the dynamic context of the organisation. Rather than waiting for the audit report at the end of the project, this approach would help apply actions that are relevant to the context at the time and assess the impact thereof.

6.1 Phase: Context

Following the recommendations made by various KA authors (Burnett et al, 2004; Cheung et al, 2007), the first phase of the audit emphasised an inquiry into the context of the organisation, within the wider high-performance sport system (Figure 1). Specifically, interviews with the senior management team (SMT) and document analysis of key strategy documents were proposed to identify the organisation's strategic

objectives, understand the SMT’s conceptualisation and vision for KM and gauge the organisation’s receptivity towards KM.

6.2 Phase: Current KM strategy

The next phase focused on understanding the existing KM strategy and initiatives (Burnett et al, 2004; Perez-Soltero et al, 2006). Multiple, in-depth interviews were proposed with the Knowledge Manager to analyse the past and current KM initiatives and future focus of the KM strategy. This was expected to establish a collective understanding of the history of KM in the organisation, assess the existing KM initiatives and identify a suitable way to proceed.

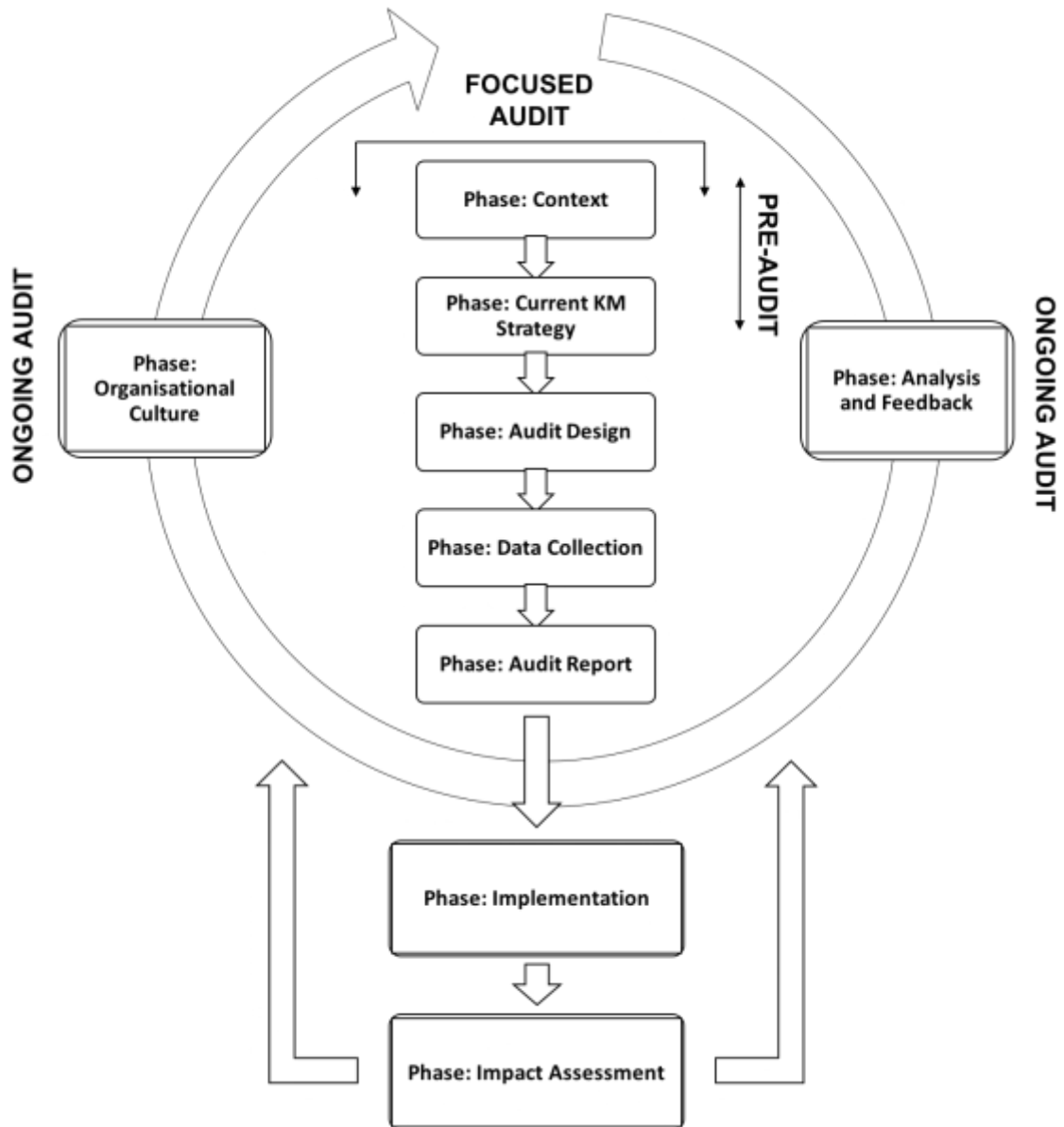


Figure 1: Knowledge management audit methodology

6.3 Ongoing Audit – Phase: Organisational Culture and Phase: Analysis and Feedback

The Ongoing Audit consisted of ethnographic observations whereby the researcher engaged with the people and processes in the organisation to provide a rich insight into the context and knowledge environment of the organisation. Further, a close collaborative relationship was stressed with the Knowledge Manager to

continuously feedback audit findings and assess the ongoing KM processes in the organisation. This acknowledged that the audit would not be conducted in a vacuum and KM processes are expected to operate simultaneously.

6.4 Phase: Audit Design

The initial phases of the audit were expected to contribute towards defining the scope of the audit (Henzcel, 2001). Specifically, working in collaboration with the Knowledge Manager, Phase: Audit Design was proposed to identify the strategic focus of KM for the organisation and design the subsequent phases of the audit, aligned to the organisation's objectives. Additionally, specific KA tools to be adopted were identified considering the practical and cultural constraints and availability of resources.

6.5 Phase: Data Collection

Upon finalising the KA methodology, the next phase included in-depth data collection and investigation into the organisation's context and culture. The data was collected from staff across the organisational structure to form a representative understanding of the specific strengths, weaknesses, best practices, challenges, opportunities and requirements in the organisational context with regards to KM processes.

6.6 Phase: Audit Report and Phase: Implementation

Upon conducting the data collection, the next phase was proposed to develop an audit report and action plan for the organisation. Following Rubenstein-Montano, et al.'s (2001) recommendations, the audit report would be developed considering multiple factors in the organisational context. Moreover, a simultaneous review of the academic and empirical literature was proposed to inform the recommendations made. Mearns and du Toit (2008) stated that KA is successful only if the subsequent recommendations are actionable. Thus, working in collaboration with the Knowledge Manager, specific actionable solutions and interventions would be developed that can be directly and efficiently implemented in the organisation.

6.7 Phase: Re-audit and Impact Assessment

Drawing from the existing literature on KA, most methodologies have emphasised continuously auditing the KM environment to ensure success. The final phase of the methodology was thus proposed to continue the audit as an on-going activity within the organisation. The Ongoing Audit would be promoted as an integral aspect of the Knowledge Manager's role to enable continuous assessment of the KM environment to ensure that the KM initiatives are relevant to the context of the organisation.

7. Knowledge management audit: Implementation

Within the case study organisation, considerable progress has been made with the audit process. Phase: Context was implemented with the SMT and the senior managers in the organisation, along with document analysis of the organisation's annual reports. Initial analysis suggested that the organisational structure is highly complex. Being a knowledge intensive organisation, certain KM processes have already been adapted and implemented by different departments in the organisation. Further analysis revealed certain risks and challenges in the context, specifically tight time constraints and limited funding. Due to these challenges, the existing resources and staff are already performing at their optimal. As a result, although the organisation collectively has a positive attitude towards KM and the benefits of knowledge sharing, the staff are likely to show limited engagement in brand new and complicated processes. Thus, the initial phases of the audit revealed possible enablers and barriers in the context whilst highlighting the scope for the next phase of the audit.

Phase: Current KM Strategy was subsequently conducted with the Knowledge Manager to analyse and evaluate the past and existing KM initiatives in the organisation. It became apparent that the barriers to KM that emerged in Phase: Context had affected the success of past KM initiatives in the organisation. For example, in the past technological solutions have been implemented to improve communication and collaboration within the organisation. However, they garnered limited engagement because they were perceived as complicated to learn and standalone processes rather than integrated in the working practices of the staff. This finding highlighted the need to study the interaction between the culture, technology, people and processes in an organisation to design sustainable KM solutions (Bhatt, 2001). Further, Lettieri, Borga and

Savoldelli (2004) stressed the need to manage all available resources efficiently in not-for-profit organisations to maximise excellence. Thus, considering the existing contextual barriers of time and funding, the Knowledge Manager and the researcher collectively agreed that the organisation's KM strategy should emphasise processes that can become embedded in the organisational context and culture. The next phase, Phase: Audit Design was thus conducted in collaboration with the Knowledge Manager to design a data collection method to identify the existing KM processes, resources and roles and responsibilities.

Based on the audit design, the subsequent phase, Phase: Data Collection, consisted of interviews, focus groups and ethnographic observations with the organisation's staff. The purpose of data collection was to map out a network of people, resources and processes in the organisation to facilitate an efficient flow of knowledge. The data collected from multiple sources throughout the audit process will be analysed to develop an action plan for the organisation, in collaboration with the Knowledge Manager. The overarching aim is to place the responsibility of KM on the organisation's staff and the role of the Knowledge Manager will then be to support and facilitate the KM processes.

8. Conclusion

For knowledge management to provide sustainable competitive advantage, it is important that KM practices themselves are sustainable and robust in dynamic organisational contexts. This will be possible if the KM practices are embedded in the organisation, aligned to the organisational objectives, optimise the existing resources and consider the challenges and enablers in the context. The paper presented a knowledge management audit methodology to conduct a systemic inquiry into an organisational context to inform their KM strategy. Building on the existing KA literature, the methodology stressed the embeddedness of the auditor in the organisation to study multiple factors and how they interact to influence the knowledge environment of the organisation. The study aims to assess the impact of this approach on developing a KM strategy that is aligned to the organisational context and objectives and provides sustainable competitive advantage. In this instance, the methodology is being implemented in a knowledge-intensive, not-for-profit, high-performance sport organisation. Thus, in addition to contributing to the KA literature, the study will attempt to provide insight into the application of KM principles in the field of high-performance sport.

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