Towards Organizational Knowledge Sustainability concept: The Nexus Between Knowledge Management and Organizational Learning

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Abstract

Knowledge management (KM) and organizational learning (OL) have received much attention in recent times owing to the increased recognition of knowledge as a source of organizational success and sustainability. However, while it seems clear that both KM and OL have the same goals, that is to nurture and harness knowledge resources, the concepts have tended, in the past, to be regarded independently of each other, with parallel strategies having been implemented for each. The current study examines the nature of the relationship between KM and OL, with the aim of providing a unified framework for understanding how the above-mentioned knowledge-based concepts relate to each other. A quantitative approach was used to achieve the set objective. Data were collected using questionnaires from 56 respondents, employed at 4 urban local governments in Uganda. Canonical correlation analysis was applied to the data. Empirical evidence confirmed that KM and OL have an interdependent relationship, which is manifested in two main dimensions namely, the institutional strategic focus and people (human resources) focus. Based on such dimensions, the study proposes a re-conceptualization of the linkage between KM and OL aimed at evolving the two concepts into a single organizational knowledge sustainability notion.

Keywords: Knowledge management, Organizational learning, Organizational knowledge sustainability.

Introduction

The importance of knowledge as a strategic source of competitive advantage (Petruzzelli, 2008; Karma 2006; Appelbaum & Gallagher 2000) has grown tremendously in the past two decades. This has been complemented by the increased recognition of the fact that organizations that will not learn faster will quickly lose competitive ground and disappear (Shenbagavalli, 2013). Consequently, both researchers and practitioners have concluded that Knowledge Management (KM) and Organizational Learning (OL) greatly influence organizational competitiveness and survival in this dynamic environment (Abdi et al., 2018; Vieira, 2013). Whereas there seems to be a general consensus that KM and OL are critical for organizational performance, no such consensus exists on how they interact with each other to deliver that performance. In fact, Cavaleri (2004) argues that these two disciplines have been considered by their respective advocates to be two separate and distinct fields of praxis. The intention of this article is to explore the interdependency of KM and OL with the view of advancing an Organizational Knowledge Sustainability (OKS) framework.

Central to this study is the fact that the convergence of KM and OL literature has been taken for granted, and the exact manner in which they are interdependent has not been clearly documented. In addition, previous research on KM and OL has mainly focussed on business

enterprises (Abdi et al., 2018), higher education institutions (Turyasingura, 2011) and little attention has been paid to the Local Governments (LGs) where the bulk of service delivery takes place in most countries. There is therefore a need for an empirical investigation on how KM and OL are interdependent in the LG setting. This article articulates a position that knowledge management and organizational learning can be brought together both theoretically and practically through an understanding of their interdependence.

Review of related literature

If KM refers to any practice of creating, acquiring, capturing, sharing and applying knowledge (Lin, 2014) and OL is the process of improving action through better knowledge and understanding (Fiol and Lyles, 1985), then the two concepts can be brought together in a unified framework. Pasteur et al. (2006) argues that the ultimate objective of knowledge management and organizational learning might be quite similar, but the paths and methods to achieve those objectives vary considerably in thinking and practice. As a result, different strategies have been applied for each of these interventions. In fact, some authors (e.g. Wiig et al., 1997) consider organizational learning as a KM strategy, while others like McElroy (2000) assert that knowledge management is an implementation strategy for organizational learning. The confusion surrounding this linkage is exacerbated by other authors like Vera and Crossan (2003) who argue that practitioners are the main promoters of knowledge management, while organizational learning is concerned with the process of knowing and therefore theoretically oriented. The OL concept appeared earlier in organizational literature compared to KM. The first reference to OL was in 1960s and was popularized in the 1980s after the works of Argyris and Schön (1978); but KM which only emerged in the 1990s (Pasteur et al., 2006) has attracted significant attention from both scholars and practitioners, thus underlying its centrality in this competitive era.

At the heart of the matter is the fact that organizations can only be competitive if they "continuously learn and upgrade their knowledge assets in order to respond to the changing environment" (Appelbaum and Gallagher, 2000:40). This therefore means that in pursuit of competitive advantage, organizations ought to implement KM initiatives and pursue strategies that will make them learning organizations, thus underpinning the possible interconnection between the two. This study draws meaningful inferences from Huber's (1991) framework, where we infer that the organizational learning process constitutes knowledge acquisition, information interpretation, information distribution and organizational memory. Additional insights are drawn from Lyles' (1998) perspectives that organizations learn when there is a change in their states of knowledge occurring through knowledge acquisition, dissemination, knowledge creation, knowledge refinement and knowledge implementation. When these two perspectives are contrasted with Davenport (1995), five processes of knowledge management and Filius et al's (2000) KM processes, it raises OL and KM to almost the same level, at least theoretically. Davenport et al. (1996) talk of understanding knowledge requirements, creating new knowledge, integrating knowledge created externally, applying existing knowledge, and re-using knowledge, while Filius et al. (2000) focus on knowledge acquisition, knowledge documentation, knowledge transfer, knowledge creation and knowledge application. This apparent interconnection of organizational learning perspectives and processes of knowledge management raise the need for confirmation through an empirical investigation.

Table 1: OL and KM convergence according to selected authors

Organizational learning	Knowledge management
Huber (1991): OL includes: Knowledge acquisition, information* distribution, information interpretation, organizational memory	*Davenport 1995* KM entails: understanding knowledge requirements, creating new knowledge, integrating knowledge created externally, applying existing knowledge, re-using knowledge
Lyles (1998): OL includes: knowledge acquisition, knowledge dissemination, knowledge creation and refinement, knowledge implementation	*Filius et al (2000)* KM entails: knowledge acquisition, knowledge documentation, knowledge transfer, knowledge creation and knowledge application

What is more intriguing is that some writers on the two concepts (organizational learning and knowledge management) seem to discuss one without the other and, at best, the two are pursued parallel to each other especially in practice. In fact, some writers from the KM school suggest that OL is an entirely different discipline from KM.

Pasteur et al. (2006), in a theoretical paper for KM development, drew on Easterby-Smith and Lyle's (2003) framework and argued that, basing on the social construction of knowledge; knowledge is created and supported through the processes of learning by way of human interaction and situational embedding. In such a framework, knowledge and learning are co-dependent and cannot be separated. They go on to question whether it is still helpful to see them as separate disciplines given the linkages between learning and knowledge both in theory and in practice. They emphasised the need to draw from the richness of these two literatures and ensure greater alignment of organizational roles and strategies. This therefore creates the need to draw on both organizational learning and knowledge management under a unified framework. Pasteur et al. (2006), however, did not take the process further to develop this framework and this leaves a void in their prescription of unifying the two concepts. Thus the hypothesis for the research question for this study:

H1: There is an interdependent relationship between KM and OL underpinned by at least one dimension

Methods and context

This study applied a correlational design. The target population comprised technical staff of Urban Local Governments (ULG) in Uganda. Four ULGs were selected representing four major regions of Uganda (Western, Central, Northern and Eastern). ULGs in Uganda are structured in seven divisions and one unit. They include the Administration division, the finance and planning division, the works division, the production and marketing division, education division, public health division, community-based services division and the internal audit unit. Two personnel (the division head and one technical staff) were purposively selected totalling 16 in each ULG and 64 in four ULGs. The researcher-administered questionnaire was deployed and out of a sample of 64, only 56 questionnaires were returned fully filled and in a usable state, representing a response rate of 87.5%. Data were analyzed using the Canonical Correlation Analysis (CCA) technique. The CCA is a multivariate statistical technique that

facilitates the study of interrelationships among sets of multiple variables (Hair et al., 2010) and is used to investigate relations among two or more variable sets. In a CCA, the variables in each set are combined in such a way as to produce, for each set, a predicted value that has the highest correlation with the predicted value in the other set (Lew and Bruin, 2006). The canonical variate, which is the square of the canonical correlation, expresses the proportion of variance in each composite that is related to the pair of variables. CCA helps to understand the features of the overall relationship between a set of variables since the correlation will be analyzed not only at individual correlations but according to critical dimensions of the inter-relationship. The technique provides an overall picture of the dimensions (or variates) underlying the relationships between the two variable sets (Davies and Kinaka, 2006).

Results and discussion

This CCA procedure was executed using syntax in the SPSS programme version 20. It involved entering variable set 1 representing KM variables (knowledge documentation, knowledge transfer, knowledge application, knowledge creation, knowledge acquisition) and variable set 2 representing OL (individual-level learning, team level learning, and institutional-level learning). Interpretation of the results was based on the following classical rules namely, that canonical correlations with a loading value greater than .30 as the acceptable minimum loading value (Lambert and Durand, 1975) and canonical correlations with significant loadings.

Table 2: CCA resultsTable 2

Number	**Canonical correlation**	**Wilk's λ test**	**Chi-SQ**	**DF**	**Sig.**
1	0.749	0.341	264.009	13.000	.000
2	0.390	0.682	30.011	6.000	.000
3	0.082	0.233	1.314	2.000	.541

From the above table, it is clear that only two canonical variates were found to be significant at 99% degree of confidence. The first canonical variate produced a correlation of 0.749, a Wilk's λ of 0.341, chi-SQ of 264.009, $p<0.000$. The second canonical variate produced a canonical correlation of 0.390, a Wilk's λ of 0.682, chi-SQ of 30.011, $p<0.000$. Results further show that the first canonical correlation Rc1 = 0.7492 contributed 56.1% of the variance (Rc12) while the second canonical correlation contributed 15.2 % of the shared variance (Rc22) = 0.3902. The third canonical variate, which produced a correlation of 0.082, a Wilk's λ of 0.433, and chi-SQ of 1.314 is not significant. Based on Hair et al. (2010), the most common practice is to analyze the canonical variates whose canonical correlation coefficients are statistically significant beyond a certain level, usually 0.05 or above. From the above findings, only two functions have significant canonical correlation coefficient, 1 and 2, at 0.000. The third canonical function is therefore dropped from further analysis.

Table 3: Canonical loadings of KM and OL on respective canonical variates

	Canonical variates	
	V1	U2
Canonical correlations	0.749	0.390
Squared canonical correlations	56.1 %	15.2%
Knowledge management practices		
Knowledge documentation	.420	.269
Knowledge transfer	-.598	-.762
Knowledge application	.301	.823
Knowledge creation	-.411	.162
Knowledge acquisition	.441	.108
Organizational learning dimensions		
Individual learning	-.432	.594
Team learning	.541	-.647
Institutional learning	-.582	.239

Exploring the first dimension of the interdependence between KM and OL: *Future focus orientation*

It is evident from the above results that the variables that are mostly associated with the first pair of canonical variates represented by V1 and U1 (see Table 2) are knowledge documentation, knowledge creation, and knowledge acquisition from the KM set. From the OL set, it is institutional learning that is mostly associated with the first canonical variate. These variables seem to show an inclination towards institutional memory and knowledge preservation. Knowledge creation, knowledge documentation and knowledge acquisition are all practices that are implemented with focus on the future. It can be taken to reflect the strategic intent of the institution, which in turn determines the extent to which that organization engages in KM practices identified under this dimension. This seems to support the view presented by Malhortra (1996) which states that the increasing complexity and rapidity of change of the environment dictates that organizations continuously learn new ways of doing things and adapt to the changes. Learning new ways implies getting new knowledge and innovation. Sustainability is a term that is used in reference to the future situation. Similarly, a practice of documenting knowledge is implemented with the underlying reasoning that in future that knowledge will be useful to the organization. This is consistent with the call made by March (1991) on all organizations that they must continuously exploit their existing knowledge while at the same time exploring new knowledge in order to survive in this ever-increasing competitive era. Exploring new knowledge is accomplished through knowledge acquisition.

The variable on the criterion set that is mostly associated with the first canonical variate is institutional learning. The possible explanation of this outcome is that through knowledge creation, knowledge documentation and acquisition, the focus is on building institutional capacity for knowledge retention. In the same vein, Grant (1996) argues that competitive advantage is based on the firm's or institution's ability to integrate individual's specialised knowledge into organizational memory.

Exploring the second dimension of the interdependence between KM and OL: *People orientation*

In respect of the second pair of canonical variates represented by V2 and U2, it can be seen that the variables that are mostly associated with it from the KM set are knowledge transfer and knowledge application (see Table 3). On the other hand, from the OL set, variables that were mostly associated with it are team learning and individual learning in that order of strength of relationship. These variables show an inclination to people focus. They portray a people perspective in their outlook. This is possibly because knowledge transfer, or sharing as it is commonly understood, takes place when people are willing to do so. People cannot be forced to share knowledge with others; they cannot be coerced into transferring knowledge to other people. This phenomenon is corroborated by Connelly and Kelloway (2003:294) in their assertion that employees can receive suggestions on what and how much knowledge to share with their colleagues, but the final decision is always up to them. This probably partly explains why the first generation of KM that heavily relied on information technology failed to yield the desired benefits to organizations. The results also confirm what Sabherwal and Becerra-Fernandez (2003) posited in their assertion that traditional emphasis of KM (first generation) focuses mainly on organizing and making available important knowledge wherever and whenever it is needed. They go on to argue that, increasingly, KM has incorporated managing important tacit knowledge. Tacit knowledge is unique in the sense that it is embedded in people's minds, and because of that, it is difficult to share or transfer. Transferring such knowledge therefore requires existing social relationships among people (individuals and teams) which are determined by continuous interactions that are in turn influenced by trust among people.

The second, mostly associated KM variable on the second pair of canonical variates, is knowledge application which is synonymous to what Skyrme (1999) called knowledge use. It can also be known as knowledge utilization or knowledge exploitation. This process is vital in order to create value for organisations. It must be noted however that knowledge is applied through people who are the value creators for organizations. Armstrong (2008) argues that the most important resource any organization has is its *people*, who work either individually or collectively to help the organization achieve its goals and objectives. Essentially, people hold the key to the success of any organization through the application of the knowledge they possess.

Re-conceptualizing the interdependence of Knowledge Management and Organizational Learning: the Organizational Knowledge Sustainability (OKS) perspective

Findings of this study suggest that the way we look at knowledge management and organizational learning requires a re-conceptualization. This is precipitated by the fact that both of these knowledge initiatives have been treated separately by some practitioners and scholars; and strategies for their implementation have been implemented parallel to each other. This reason is usually advanced to explain their dismal success rates. The understanding from this study appears to indicate that when these knowledge interventions are implemented together with OL initiatives, their chances of success are improved. Joint implementation of both knowledge management and organizational learning

strategies is largely based on the integration of the two dimensions that link them together. As explored above, these dimensions are the human resource orientation and the strategic focus. Literature is awash with assertions that people constitute a critical driver for knowledge management and organizational learning success. While it is true, it should be discussed in the light of the institution's strategic intent, which is the future focus. An organization that clings on the status quo has little incentive to pursue organizational learning strategies which are essentially change-focused. But organizations which prioritize flexibility in the face of the changing environment are highly motivated to unlearn old ways and learn new ways of doing things in pursuit of their competitiveness and sustainability. Since it is no longer a subject of debate that knowledge constitutes a key source of competitive advantage and sustainability, its continued exploration and exploitation should be a major pre-occupation of any modern and responsive organization. Effective application of existing knowledge, while at the same time creating and acquiring new knowledge through promotion of learning activities at various levels of the organization calls for a new understanding of this knowledge phenomenon. This notion may be conceptualised as Organizational Knowledge Sustainability (OKS) which emphasises proper utilization of existing knowledge to serve today's needs of the organization, while mindful of the future knowledge requirements of the organization. The pivot upon which organizational knowledge sustainability can be built is found in the human resource of the organization and the activities implemented by the organization in line with its future knowledge requirements. In line with this thinking, Su et al. (2003) asserted that establishing strategies for developing organizational members' learning ability requires two main issues namely, paying high regard to human resources and establishing an open learning environment. The former addresses the human resource orientation while the latter addresses the institutional activities geared towards creating an open learning environment.

Conclusions

The study set out to examine the interdependent relationship between KM and OL with a view of proposing a unifying framework for the two knowledge concepts. Findings revealed that organizations would benefit more if both KM and OL interventions were implemented in tandem. The two dimensions that seem to constitute the linkage between KM and OL are the human resource orientation and the organization's futuristic focus. There is need for organizations to prioritize human resources in a bid to promote KM but, at the same time, constantly take stock of existing knowledge and put in place strategies to acquire more knowledge to meet future knowledge requirements. This is deemed to constitute the organizational knowledge sustainability phenomenon.

It is therefore imperative that leaders and policy maker of dynamic organizations prioritize human resource interventions that support knowledge sharing at individual, team and organisational levels. These may include embedding knowledge sharing in performance appraisal processes, establishment of knowledge sharing platforms and designation of knowledge management officers and knowledge champions. Of equal importance, is continuous documentation of existing stocks of knowledge, comparing such stocks with knowledge requirements in the operating environment and strategizing for continuous employee retooling and knowledge acquisition.

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