Vol. 7 No. 2

December 2022

Gaps in the implementation of knowledge management frameworks: proposal for their improvement in an ICT organisation's retail operations

Hilda Kundai Chikwanda
Department of Engineering and Technology Management
University of Pretoria, South Africa
hilda.chikwanda@up.ac.za

Lutho Qata
Department of Engineering and Technology Management
University of Pretoria, South Africa
u20796740@tuks.co.za

Abstract

Rationale of Study – This study investigated how knowledge management frameworks (KMFs) are implemented in an information communication technology (ICT) organisation's retail operation. The specific objectives were to explore and establish the KMFs used, identify gaps and challenges of their application and recommend how to improve the implementation and use of KMFs.

Methodology – The research adopted a mixed methods approach using quantitative and qualitative techniques. Data was collected from 72 participants with senior roles in an ICT organisation's retail operations.

Findings – The retail operations were aware of knowledge management (KM) as a concept. They had systems in place to store knowledge. The systems were accessible but had limited utilization. There was, however, no consensus on the frameworks in use. Gaps in implementing KMFs were found in knowledge acquisition, sharing, and transfer.

Implications – The study recommends the adoption of enhanced existing KMFs to guide employees and the management of knowledge in retail operations. There is also a need for adequate, appropriate, and updated technologies appropriate for the operations' KM processes. Retail operations can use the findings and recommendations of this study to leverage improvement on their competitive advantage.

Originality – The paper has employed critical analysis and interpretation of empirical data from the extant literature. It provides new perspectives on the topic. Hence it is original in terms of context, scope, and application.

Keywords

Knowledge management, ICT retail operations, application of KMFs

Citation: Chikwanda, H.K. & Qata, L. (2022). Gaps in the implementation of knowledge management frameworks: proposal for their improvement in an ICT organisation's retail operations. *Regional Journal of Information and Knowledge Management*, 7 (2),86-103.

Published by the

Regional Institute of Information and Knowledge Management

P.O. Box 24358 – 00100 – Nairobi, Kenya

1 Introduction

In any industry, businesses use available resources to be competitive. Intangible assets, such as knowledge, are increasingly becoming the resources required for competitive advantage (Jelenic, 2011: 34). Additionally, Jelenic (2011: 35) states that through commercially converted knowledge, competitiveness can be improved by 70-80% in global business environments. Knowledge benefits all types of businesses, whether the objective is to make a profit or not. Omotayo (2015: 2) posits that the success of non-profit organisations, such as government entities and charity organisations, is also influenced by how the knowledge is managed and optimised as an available resource.

Knowledge management (KM) has become increasingly significant to businesses worldwide. Igbinovia and Ikenwe (2018: 26) emphasise the importance of KM as a resource by calling it a 'weapon' (*a means of competing against another).* The 'weapon' has been used for competitive advantage since the 20th century and has since gained a grip in the business world. Businesses with KM processes and frameworks are, therefore, a step ahead of those who still need them. Oberer and Erkollar (2015: 947) state that more than being aware of the KM systems in an organisation is needed, effective implementation contributes to organisational success. KM is a critical aspect within an organisation, and there may be application gaps, those known and unknown to the organisation. If the gaps are consciously identified, it may be easier to devise solutions in which these gaps can be addressed and closed to improve business processes. An organisation may have knowledge and KMFs in place, but if not managed efficiently, just as any resource, its value may be overlooked or lost.

Organisations competing within the telecommunications industry are by no means exempted from exploiting KM and its frameworks to gain a competitive edge. Telecommunications is a branch of information communication technology (ICT) concerned with transmitting a communication over a distance. According to Tamilselvan, Sivakumar, and Sevukan (2012: 16). ICT is the technology that enables access to information through telecommunications. These technologies include wireless connectivity, fiber, cell phones, the Internet, and the most recent developments, such as the Internet of Things (IoT). In South Africa, the ICT industry has grown over the years and contributes significantly to the country's GDP (Stats SA, 2015). The Stats SA, Report No. 04-07-01 further indicates that telecommunications contributed the most to

ICT spending in South African households. This paper focuses on telecommunications retail operations within an ICT organisation in South Africa.

The retail operations within an ICT organisation selected for this study have yet to adopt KM explicitly and thus have not benefited from utilising knowledge as an asset. This lack of optimisation of knowledge has been giving the departments challenges and not allowing the business to perform at its optimum level. The retail operations KM systems, frameworks, and models are in place. However, it needed to be clarified whether these frameworks are adhered to and whether they are the most suitable for retail operations. It was also unclear whether there is adequate awareness of these frameworks and if they are implemented effectively.

With this background, this study investigated the KMFs and their implementation within the organisation. The main objective was to study KM and the implementation of KMFs within an ICT organisation to identify KMFs implementation gaps and challenges leading to developing new or improved frameworks to close the gaps. The findings and recommendations can be used to help put ICT organisation on an organisational learning (OL) path.

The remainder of this paper sheds light on the different streams of literature on KM and outlines the research approach taken, followed by the findings and their discussion. The final section concludes with a summary of the main results, limitations of the study, and some directions and implications for future research.

2 Research Objectives and Questions

The main objective was to investigate KM in an ICT organization's retail operations and identify gaps and challenges of application to bridge them. The research sought to answer the following questions:

i) What is the general awareness of the importance of KM in a retail operation in an ICT organisation? (H1)

ii) How is knowledge acquired, transferred, stored, and retained in a retail operation of an ICT organisation? (H2)

iii) What are the gaps in implementing KMFs in a retail operation in an ICT organisation? (H1 &H2)

3 Literature Review

Although organisational management of its knowledge is as old as organisations existed, the discipline of KM emerged to formalize its organisational practices (Karkoulian et al., 2013). Many definitions and viewpoints of KM exist. It has been identified as the organisational practice of capturing, creating, acquiring, sharing, and applying knowledge (Swan et al.,1999). It can be defined as the collection of processes that support knowledge creation, storage, sharing, and evaluation (Gumus, 2007). According to Kwanya et al. (2015), KM is a multi-faceted mix of strategies, techniques, and tools that organisations, groups, or individuals use to generate optimum value from their intellectual assets. KM is a strategy which organisations utilise knowledge as a resource deliberately and effectively (Jyoti, Gupta, and Kotwal, 2011: 315). These KM processes have to be integrated with work processes to adjust dysfunctional organisational behavior relative to evolving environmental conditions (Labedz et al., 2011).

Organisations know whether it be tacit or explicit, but knowledge management as an asset determines the value of the knowledge to the organisation. KM does not need to be a separate department that provides the sole purpose of managing the business knowledge in an organisation, but should be a function that is driven in every department within the organisation (Bixler, 2002: 2). According to ALRowaily and Alsadhan (2012: 43), KM is the formation of methods within an organisation by deliberately varying the current forms of processing knowledge to improve KM and the outcomes. KM has to be intentional and clear-cut within an organisation (Mostert & Snyman 2007: 2). The value of KM is not in the processes in place but in the effective implementation of the processes and systems. The KM process has four main abilities (Jelenic, 2011): to gain, convert, utilize, and integrate knowledge. The abilities refer to how skills are acquired, adapted, and transformed and how knowledge is used and exploited. Initiatives on KM are founded on people, processes, and technology (Meher & Mahajan, 2013).

3.1 Knowledge Management Frameworks and Models

In KM, frameworks and corresponding approaches (architectures, models, reference models) are typically used to describe components, design aspects, or technical architectures and their interdependencies (Hahn & Subramani, 2000, CEN, 2004, Heisig, 2009). In many cases, KMFs are created to achieve a common understanding in the area (Bhagat et al., 2002, CEN, 2004, Maier, 2007), to structure approaches and practices (Grover & Davenport, 2001), and to identify research gaps (Alavi & Leidner, 2001; Grover & Davenport, 2001). They describe concepts, aspects, processes, or systems and

their associations with a certain domain or problem to understand better or support explicit purposes. Frameworks provide a platform for aspects that must be considered during the design and implementation process. They are a suitable solution to map the different relative aspects, influence factors, and results. However, there needs to be a clear definition of frameworks; hence the focus of frameworks and reference models often overlaps and needs to be explicit. Regularly, the concepts of reference models or architectures are used similarly.

An analysis of around 160 frameworks by Heisig (2009) identified critical success factors and most important components as human-oriented factors (culture, people, leadership); organisation (processes and structures); technology (infrastructure and applications), and management (strategy, goals, and measurement). Earlier, Bixler (2002: 1) summarized the critical factors for implementing KM in organisations as leadership, technology, organisation, and learning. Pawlowski and Bick (2015) developed a global framework as a conceptual model for a holistic theory of global KM identifying influence factors and interdependencies. So far, there is no generally accepted framework for KM. The advantages of such a framework for research and practice can be twofold: i) it can guide researchers in their behaviour and influence their research activities (Serenko, 2013), and ii) businesses can rely on consistent methods and approaches to successfully implement KM in their firms. The purpose of KMFs, therefore, is to ensure that KM elements are in place and structured and that the components of KM are positioned correctly and interconnected. These components have been identified by Karemente, Aduwo, Mugejjera, and Lubega (2009) as accountabilities, processes, technologies, and governance of the KM. An organisation or group may attempt to pursue a KM initiative. However, without a framework, there is no visibility of the essential factors (tools, processes, people, and assets) necessary to influence the success of the KM initiative. According to Jennex (2009: 1), organisations should avoid using outdated KMFs or models as they misrepresent reality and may pose a serious challenge to the organisations.

KMFs have been categorized into three types: rigid frameworks, descriptive frameworks, and hybrid frameworks (those that possess characteristics of the two) (Heisig, 2009). Prescriptive frameworks state the activities that should be carried out in the KM processes but do not specify how these activities should be conducted. On the other hand, descriptive frameworks detail KM activities (Heisig, 2009, p. 5). literature states that different industries have different KMFs, and the research conducted by Heisig (2009) yielded several knowledge management frameworks and models.

Table 1: Some of the identified broad KMFs (Heisig, 2009)

Broad Framework	**Key elements**
Framework of KM Pillars	Understanding of knowledge creation (KC), manifestation, use, and transfer
Framework of Core Capabilities and Knowledge Building	Four core capabilities and four knowledge-building activities
Model of Organisational Knowledge Management	Seven KM processes (create, identify, collect, adapt, organize, apply, and share); And four organisational enablers (leadership, measurement, culture, and technology).
Framework of the Knowing Organisation	Uses information strategically for sensemaking, KC, and decision-making.
Framework of Knowledge Management Stages	A cycle of four KM stages (conceptualize, reflect, act, and retrospect) Internal factors (culture, employee motivation, organisation, management, and information technology)

Table 2: Some of the identified specific KMFs (Holsapple & Joshi, 1999)

Specific Framework	**Key elements**
Framework of Intangible Assets	KM is an asset with three components (external structures, internal structures, and employee competence)
Model of Intellectual Capital	KM is an asset, an organisational resource called intellectual capital: (human capital, organisational capital, and customer capital)
Framework of Knowledge Conversions	Four kinds of "knowledge conversion" that drive KC (socialization, externalization, internalization, and combination)
Model of Knowledge Transfer	Four stages in knowledge transfer (initiation, implementation, ramp-up, and integration) AND Four factors impacting knowledge transfer (features of knowledge transfer, features of the source of knowledge, characteristics of the recipient of knowledge, and characteristics of the

	context)
Model of KM Process	KM is the creation, leveraging, and sharing of know-how and intellectual assets by all individuals across the firm in order to better serve clients. -Six phases: acquisition, indexing, filtering, linking, distribution, and application.
Lotus KMF	Four basic business goals (innovation, competency, productivity, and responsiveness)

3.2 Reflections on different Knowledge Management Frameworks

Earlier research has yielded many KMFs. Peter Heisig (2009) reports numerous KMFs studied in European Guide to Good Practice in KM. He identifies frameworks that organisations utilise to manage their knowledge. Later, in 2013, Meher and Mahajan studied 16 different KM frameworks. Table 3 presents only three that were used for this study. Their selection was based on their use in the organisation.

Table 3: KMFs used in this study

KMF	**Main Components**
Global KMF (Pawlowski & Bick, 2012)	-Processes (knowledge, business, and external processes) -Stakeholders and contexts (knowledge) -Instruments and Results (strategy and management)
CEN Framework: - European KMF (CEN, 2004)	Business focus (processes and products) Core knowledge activities (identify, create, store and use) Enablers - personal (ambition, skills, behaviour, experience, tools, time management) and organisational (knowledge assets, knowledge capabilities)
Asian Productivity Organisation (APO) KMF (APO, 2020)	Accelerators (vision, mission, leadership, people, process, technology) Knowledge processes (identify, create, apply, share, store, learn, and innovation)

	Outcomes (individual, team, & organisational capabilities) Social capacity (quality, value for citizens, productivity, profit, growth, and sustainability)

The Global KMF identifies the key aspects when designing KM processes and systems and can be used as a guideline for researchers and practitioners to design, compare, and validate KM systems. European KMF is based on empirical research and practical experience in KM. This framework is divided into three layers; business focus, core knowledge activities, and enablers. The APO KMF (Figure 1) starts with understanding the organisation's vision, mission, business goals, and strategic direction. This helps the organisation to identify and evaluate its core competencies and capabilities and which areas it needs to develop. The four accelerators can help to understand the extent to which these drivers and enablers are prevalent in the organisation so that a successful KM implementation can be launched. The five core knowledge processes provide an initial assessment of existing practices related to KM, which can be leveraged during implementation.

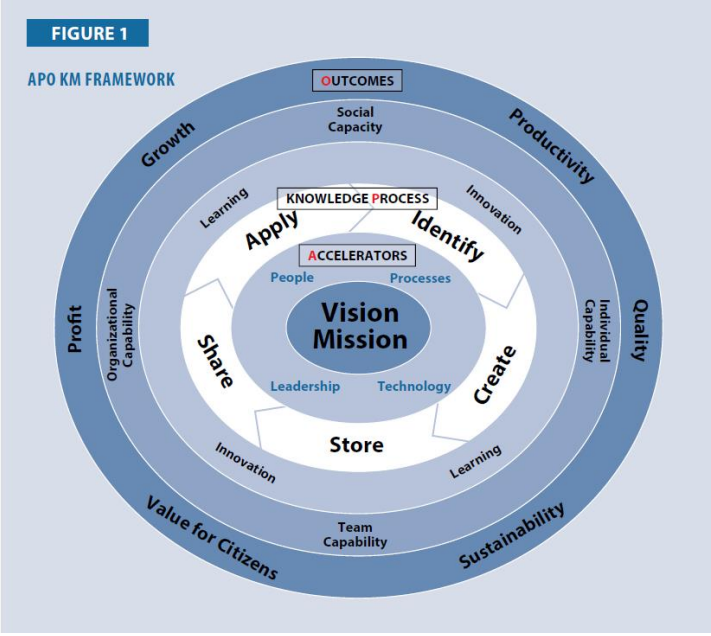

Figure1: Asian Productivity Organisation (APO) KMF

Source: Young (2020)

The outcomes of KM efforts measure the effectiveness of the knowledge processes supported by the critical success factors (Accelerators, Vision, and Mission). The

outcomes must demonstrate an improvement of learning and innovation that build an individual, team, organisational, and societal capabilities, ultimately leading to improved quality of products and services, productivity, profitability, and growth.

KMFs do not guarantee an organisation's success; however, the effective implementation of clear-cut processes contributes to the desired success. This study, therefore, focused on identifying gaps in the implementation of KMFS and suggested improvements.

3.3 Gaps and challenges in KMFs

As defined by Lin, Yeh, and Tseng (2005: 37), the knowledge gap is the difference between what the organisation is required to know and what the organisation knows. If an organisation operates in an extremely competitive environment, it may possess this gap, as it needs to compete with its contenders optimally. Such a gap can be closed by assessing the current state, comparing it to the state it should be in, and doing what should close it (Odom & Starns, 2003, p. 2). Oberer (2015: 948) states that an inconsistent flow of information can create gaps for the organisation as some employees may feel excluded and will not be able to provide constructive feedback for improvement purposes. Organisations can, thus, hinder the closing of knowledge gaps and opportunities for process improvements.

KM/KMFs gaps may occur in organisations for various reasons, including:

i) Persisting with something (product, service, process) that needs to be discontinued;

ii) Not possessing something that a firm should or something that has become redundant and does not correspond with the evolved environment.

iii) Departments operate in silos (Pfeffer & Sutton, 2000, p. 5), preventing steady information sharing that may result in inefficiencies.

iv) Focusing mainly on formal KS structures.

Lin *et al.* (2005: 37) identified six KM gaps divided into four aspects; strategic, perception, plan, and implementation. The strategic aspect relates to the knowledge required to enhance an organisation's competitiveness. For organisations to be competitive, they need to assess their performance against the external environment in which they compete and understand what knowledge they require to enhance their performance. The perception aspect speaks to how top management notices the knowledge required for an organisation to improve its competitiveness. Different levels

of management and management experience have different perceptions of what knowledge is required to implement the knowledge management plan. The plan aspects refer to the plan to implement knowledge management. The gap entails the inability to implement planned knowledge management activities. Finally, the implementation aspect refers to implementing the knowledge management plan. The gaps that would result under this aspect are employees needing to understand the KM plan, thus implementing it ineffectively or not. Organisations may find themselves faced with various KM challenges. The inconsistent supply and distribution of knowledge within an organisation may delay the translation, consolidation, and internalization of new knowledge due to varying formats. Organisation structures may limit knowledge sharing when an organisation places emphasis on hierarchical structures. Hierarchies hinder the free flow of information, and lower levels feel they need more support to share knowledge which may be a loss to the business (Ben-Arieh & Pollatscheck, 2002).

4 Conceptual Framework

KM elements require order and interconnection for effective application. As Karemente et al. (2009) identified, the KM elements are responsibilities, processes, technologies, and governance. KMFs play a vital role in creating this interrelation of KM elements. Heisig (2009: 5) states that KM initiatives are influenced by the factors (processes, people, assets, and tools) identified as essential for the framework. Organisations that implement KMFs that rely heavily on the people factor should ensure that they create a culture of KS and retain knowledgeable employees. The organisation should also be able to extract the knowledge and utilise it for the betterment of the business.

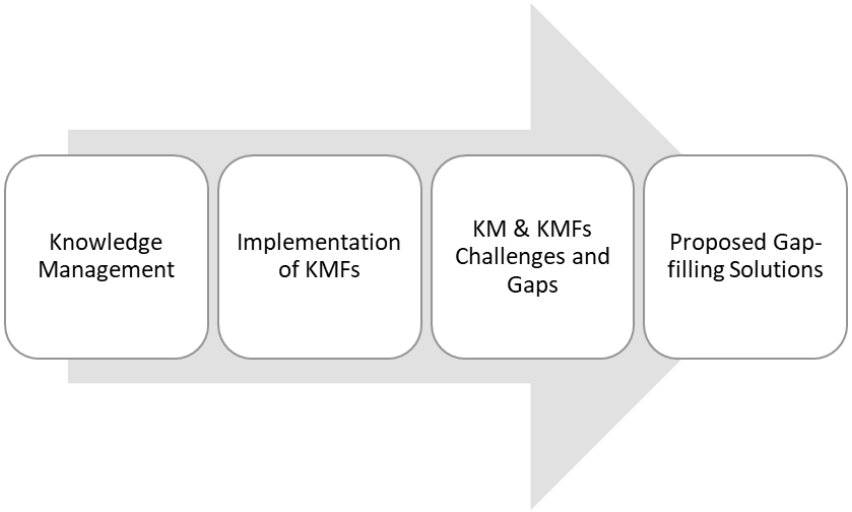

Figure 2: Conceptual Framework

The hypotheses were:

i) There are KM application gaps in the retail operations of an ICT organisation in South Africa.

ii) There needs to be more application of KMFs in retail operations in the ICT organisation.

5 Research Methodology

The authors adopted a mixed methods approach encompassing the quantitative method by distributing questionnaires to collect data from respondents and through a qualitative method via interviews. The targeted population comprised executive heads of departments, senior specialists, specialists, and coordinators. The quota sampling design was used to ensure that each operation was represented. The distribution for the research population is shown in table 4. An analysis of knowledge, KM, and KMFs, followed by the development of a hypothesis, was done. The current models were analyzed to find those that could be used as benchmarks for gap identification purposes. The initial focus was on explicit knowledge and analysis of the KMFs within the ICT organisation. In order to address the problem of KMF gaps, the research project analyses KM and KMFs thoroughly and measures the implemented strategies at an ICT company against existing frameworks. Holsapple and Joshi (1999: 7) state that knowledge activities should not only be described clearly but their correlations should be identified. They suggest a generic framework that encompasses the main content features of the frameworks be created.

Table 4: Population distribution and response rate

Position in organisation	**Total Number (in retail operations)**	**Selected Participants**	**Number of respondents**
Executive heads of departments	6	4 (66. 7%)	3 (75%)
Principal Specialists	8	8 (100%)	7 (87.5%)
Senior Specialists	12	12 (100%)	11 (91.7%)
Specialists	54	38 (70.4%)	31 (81,6%)
Senior coordinators	16	10 (62.5%)	10 (100%)
Total	**96**	**72 (75%)**	**62 (86.1%)**

Investigative questions aligned with the main research objectives and questions were derived. Pre-tests on the collection instruments were done to ensure the questions were clear to the respondents.

6 Research Findings, Analyses, and Discussion

With response rates of 86% and 70% for the quantitative and qualitative methods, respectively, the following results were obtained and discussed.

6.1 Understanding KM concept and awareness of existing KM within the retail operations

i) 66% (agree and strongly agree) are aware of KM as a concept

ii) 13% disagreed that KM existed in retail operations and

iii) 21% remained neutral.

6.2 Awareness of KM assets, knowing where information is stored and its accessibility in the ICT organisation

55% of the respondents knew where information was stored, but the number decreased to 44% when asked whether the information was accessible. This inconsistency creates a challenge as this disparity in the responses shows limits to who can access the information. Accessibility to information can be prohibited for varying reasons, such as hierarchical structure, where only upper levels of management are privy to certain information or knowledge sharing is inconsistent. The qualitative data supported the quantitative data as interviewees addressed the challenge of certain knowledge acquisition being on a "need-to-know" basis.

6.3 KM practices and KMFs used in retail operations and satisfaction with KM processes

About half of the respondents were satisfied with the KM processes. This percentage is concerning as over half of the respondents believe that the processes have the potential to be better. The theory states that improved processes can potentially improve performance and, in turn, competitiveness. Slightly over 71% of the respondents dissatisfied with the KM processes did not hold leadership positions, implying that the employees who required seamless processes for optimal performance were working with processes they were not happy with. Sefollahi (2018: 433) states that organisations that need help to easily ascertain the correct form of knowledge in its right place within the organisation limit their competitiveness in the industry.

6.4 Effective transfer of knowledge in the retail operations

Over half (51.6%) of the respondents agreed that knowledge transfer in retail operations was effective. Within the organisation, the number decreased slightly; thus, knowledge transfer within the greater organisation could have been better. This may be due to reluctance to KS outside of the retail operations. However, the retail operations employees may have needed more interaction with the rest of the organisation to deduce an unbiased conclusion.

6.5 Culture of sharing information among different divisions within the retail operations

A total of 45.2% (agreeing to the culture of KS) is a manageable figure to deduce that there is a culture of KS. The remainder was evenly distributed between neutral and those disagreeing.

6.6 The knowledge-sharing culture within the retail operations

A strong sense of the need for a KS culture within the retail operations was expressed. It was expressed that a KS culture would entail the organisation being intentional about KM and its implementation. The retail operations have information-sharing sessions relating to the rest of the business functions, but this was not coming through for KM initiatives. Collaboration was seen as difficult to achieve, which would not be the case in an environment where KS was the norm. The KS culture experienced by participants in the organisation and precisely in the retail operations had limitations because the information was only shared on a trust basis. This suggests that people must build relationships first; otherwise, individuals share information or knowledge if they believe they can gain something from it. This type of KS attitude is not suitable for an ideal KS culture.

6.7 Clarity on the benefits of having effective KM processes in the retail operations

An insignificant number (3.2%) of the respondents disagreed with the statement, '*I am clear on the benefit of effective KM processes in the retail operations'*. There was, therefore, clarity on such benefits.

6.8 Effective use of knowledgeable employees

One-half (50%) of the respondents believed that the retail operations retained knowledgeable employees. However, due to 35% of the responses remaining neutral, a concise conclusion cannot be drawn from the data. Generally, knowledgeable employees are retained. What does this mean, then?

6.9 Provision of learning opportunities for employees within the retail operations

The retail operations encouraged training, performance development courses, and cross-functional collaboration. Such training proved beneficial to the course attendees as knowledge gained from such courses could be shared with others through a *'pass it forward'* culture implemented post-attending training programs. There was a consensus on the use of outdated technology for KM processes. Participants had expectations of faster and more efficient technologies that have appropriate capabilities for their jobs. Only under 10% of the respondents disagreed with opportunities being provided; in contrast, 75.9% agreed to learn opportunities.

6.10 Understanding the benefits of KS within the retail operations

A slight majority (51.6%) of the survey respondents agreed that they feel employees understand the benefit of KS. This non-overwhelming percentage suggests that because employees need to understand the value of sharing knowledge, they are not inclined to share it.

6.11 Clarity on benefits of effective application of EMFs

Participants were clear on this but expressed that KM was not deliberate in retail operations. The findings show the potential for approaching KM and applying KMFs deliberately and effectively communicating to the employees as with other strategies. KMFs adopted in the two sub-divisions were found to be different. One used a framework resembling the KMF that utilises business intelligence, while the other adopted a framework resembling the Lotus KMF. Views on high collaboration within and between the teams, using brainstorming and discussions, were among the responses. In one division, one of the core functions of a sub-division was to deliver innovative solutions to its customers. An expression of a need for extensive KS was captured.

Using the four pillars as outlined by Bixler (2002: 1), the critical factors necessary for the successfulimplementation of KM in retail operations were revealed:

i) **Leadership**: Leadership is generally responsible for setting the tone for the culture in organisations. Most respondents were neutral or did not agree with a culture of rewarding KS in retail operations. The retail operations' leadership can encourage KS by rewarding it. KS results in knowledge transference, creating cooperation and commitment, and building employee trust. It also can be effective in enhancing employees' performance.

ii) **Technology**: Respondents in retail operations were generally dissatisfied with the existing technology infrastructure. Technology is an integral part of a KM system, and changes or improvements affect the KM processes. Outdated, irrelevant, or ineffective technologies do not bring value to KM processes as inadequacies retard the processes. There was a general agreement that relevant and updated technology should be introduced in retail operations. Literature (Tamilselvan, Sivakumar & Sevukan, 2012, p. 16) states that technology enables access to information; hence inadequate or ineffective technology can hinder access to information. Lack of access to relevant information may create inefficiencies in employees' performances and consequently contribute to the non-performance of retail operations.

iii) **Organisation**: Technology is not the only vital part of the KM system; people within the division are considered valued assets. There is a need for a seamless combination of people and technology. A disparity in the KM culture of the organisation and the KM culture of retail operations was found. This study could not conclude this as the culture of the whole organisation is based on the opinions of the sample population of the retail operations. The KM strategies should align with the retail operations' strategies. We recommend that a similar study based on the entire organisation be conducted.

iv) **Learning**: Learning is essential if retail operations intend to acquire tools to enhance the existing KM processes. Not only should it be formal learning like training, but collaborative team discussions can also be effective. Improving technology should align with training.

7 Conclusions and Recommendations

This study examined the existing KM practices in a retail operation of an ICT organisation. The purpose was to identify gaps in implementing KMFs and seek ways to bridge them.

This work has revealed that the retail operations employees were aware of the general principles of KM and the importance of KMFs. They also had an appreciation of the existing frameworks. However, KM initiatives in the retail operations were not deliberate, and employees within the retail operations needed to be clearer on active KMFs. Different sub-divisions used different frameworks suggesting that a hybrid KMF may be worth considering. This paper further suggests that through appropriate investigations of

the business needs of the retail operations, KMFs that work for each division can be identified. Missing elements (gaps) can also be identified, appropriately selected, and implemented. Due to these varying KM needs of the sub-divisions within the retail operations, an umbrella framework may be optional. However, KM initiatives can be managed by ensuring that KM elements necessary for successful implementation are fulfilled and focused on.

This study picked little evidence of an existing culture of KS. However, it was discovered that the technology in use needed to be improved upon. As such, the challenges and gaps relating to KM in retail operations provide opportunities for improvement in implementing KMFs.

The study recommended that the retail operations effectively utilise all KM resources. More than the possession of KM assets is required, but the retail operations need to go further and ensure that the assets are implemented appropriately and effectively. The retail operations risk lacking a powerful tool by not enforcing a clear KM strategy and being deliberate about their knowledgemanagement. The retail operations can avoid the potential benefits by closing this particular gap of not being intentional on their KM.

References

Adebisi, S. & Adejare, B. O. (2016). Knowledge management as a strategic tool for performance of selected global mobile system for mobile telecommunication (GSM) firms in Nigeria. Nigerian Journal of Management Studies, 17(1), 80-11

Aggestam, L. (2006). Learning organisation or knowledge management – Which came first, the chicken or the egg. Information Technology and Control, 35(3A), pp. 295–302.

Alavi, M., & Leidner, D. E. (2001). Knowledge management and knowledge management systems: Conceptual foundations and research issues. MIS Quarterly, 107-136.

AlRowaily, K. & Alsadhan, A. O. (2012). Integration of knowledge management system in telecommunication: A case study of Saudi Telecom. International Journal of Computer Science and Network Security, 12(11), 42- 53.

Ben-Arieh, D., & Pollatscheck, M. A. (2002). Analysis of information flow in hierarchical organizations. International Journal of Production Research, 40(15), 3561-3573

Bhagat, R. S., Kedia, B. L., Harveston, P. D., & Triandis, H. C. (2002). Cultural variations in the cross-border transfer of organisational knowledge: An integrative framework. Academy of management review, 27(2), 204–221.

Bixler, C.H. (2002). Applying the four pillars of knowledge management. KMWorld, 11(1), 1–2.

CEN (2004) CEN CWA 14924 European Guide to Good Practice in Knowledge Management - Part 1 to 5, Brussels.

Dahou, K., Hacini, I., & Burgoyne, J. (2019). Knowledge management as a critical success factor in developing international companies' organisational learning capability. Journal of Workplace Learning, 31(1), 2–16.

Escrivão, G., & Silva, S. L. (2019). Knowledge management maturity models: identification of gaps and improvement proposal. Gestão & Produção, 26(3), e3890. https://doi.org/10.1590/0104-530X3890-19

Fteimi, Nora, (2015). Analyzing the Literature on Knowledge Management Frameworks: Towards a Normative Knowledge Management Classification Schema, ECIS 2015 Completed Research Papers. Paper 51. ISBN 978-3-00-050284-2 http://aisel.aisnet.org/ecis2015_cr/51

Grover, V., & Davenport, T. H. (2001). Consulta: 30 octubre 2018. General Perspectives on Knowledge Management: Fostering a Research Agenda. Journal of Management Information Systems, 18(1), 5.

Gumus, M. (2007). The effect of communication on knowledge sharing in organisations. Journal of Knowledge Management Practice, 8(2)

Guo, Z. & Sheffield, J. (2006). Habermasian inquiring system: Toward a general framework for knowledge management research. Proceedings of the 39th Annual Hawaii International Conference on System Sciences, Kauia, p. 7, 162c.

Hahn, Jungpil & Subramani, Mani, (2000). A Framework of Knowledge Management Systems: Issues and Challenges for Theory and Practice. ICIS 2000 Proceedings. 28. https://aisel.aisnet.org/icis2000/28

Heisig, P. (2009). Harmonisation of knowledge management- comparing 160 KM frameworks around the globe. Journal of Knowledge Management, 13(4), 4–31.

Hinkelman, K. (2006). Knowledge and Business Engineering - Knowledge Management and e-Learning in context. UNISA lecture in October 2006

Holsapple, C. W., & Joshi, K. D. (1999, January). Description and analysis of existing knowledge management frameworks. In Proceedings of the 32nd Annual Hawaii International Conference on Systems Sciences. 1999. HICSS-32. Abstracts and CD-ROM of Full Papers (pp. 15-pp). IEEE. https://doi.org/10.1007/s13132-020-00710-9

Igbinovia, M.O &Ikenwe, I.J. (2018). Knowledge Management: processes and systems. Information Impact: Journal of Information and Knowledge Management, 8(3), 26-38.

Information and Communication Technology satellite account for South Africa, 2012/ Statistics South Africa. Pretoria: Statistics South Africa, 2015, Report No. 04-07-01, http://www.statssa.gov.za

Jelenic, D. (2011). The Importance of Knowledge Management in Organisations- with Emphasis on the Balanced Scorecard Learning and Growth Perspective. International Conference on Management, Knowledge, and Learning, pp 33–43.

Jennex, M.E. (2009). Re-visiting the knowledge pyramid. Proceedings of the 42nd Hawaii International Conference on System Sciences, pp 1–8.

Jyoti, J., Gupta, P., & Kotwal, S. (2011). Impact of knowledge management practices on innovative capacity: A study of telecommunication sector. Vision, 15(4), 315–330.

Karemente, K., Aduwo, J., Mugejjera, E., & Lubega, J. (2009). Knowledge management frameworks: A review of conceptual foundations and a KMF for IT-based organisations. In Strengthening the Role of ICT (Development 4, pp. 3 - 24). UK: Fountain Publishers.

Karkoulian, S., Messarra, L. C., & McCarthy, R. (2013). The intriguing art of knowledge management and its relation to learning organisations. Journal of Knowledge Management, 17(4), 511–526.

Kwanya, T., Ogutu, J. Muthuri, E., Turandi, T., Maina, E. & Omach, C. (2015). Knowledge management jobs in Kenya: a functional analysis, Regional Journal of Information and Knowledge Management, 1(1), 21-39.

Labedz, C., Cavaleri, S., & Berry, G. (2011). Interactive knowledge management: Putting pragmatic policy planning in place. Journal of Knowledge Management, 15(4), 551–567.

Lin, C., Yeh, J. M., & Tseng, S. M. (2005). Case study on knowledge-management gaps. Journal of knowledge management.

Lin, C. & Tseng, S. (2005). The implementation gaps for the knowledge management system, Industrial Management & Data Systems, 105 (2). 208-222. https://doi.org/10.1108/02635570510583334

Maier, R. (2007). Knowledge Management Systems: Information and Communication Technologies for Knowledge Management, 3rd ed. Springer, Berlin

Meher, D.P. & Mahajan, N. (2013). Study of knowledge management frameworks. International Journal of Science and Research (IJSR), 5(7), 1258- 1265

Mostert, J.C. &Snyman, M.M.M. (2007). Knowledge management framework for the development of an effective knowledge management strategy: South African Journal of Information Management, 9(2), 1-20.

Nonaka, I., & Takeuchi, H. (1995). The knowledge-creating company: How Japanese companies create the dynamics of innovation. New York, NY.

Oberer, B., & Erkollar, A. (2015). Sustainable Knowledge Management Shown In The Example of a Company Operating On The Telecommunications Market. Procedia Economics and Finance, 26, 946-952.

Odom, C., & Starns, J. (2003). Analyzing KM gaps, KMWorld 12(6)

Omotayo, F. O. (2015). Knowledge Management as an important tool in Organisational Management: A Review of Literature. Library Philosophy and Practice, 1(2015), 1-23.

Pawlowski, J. M., & Bick, M. (2012). Open educational resources. Business & Information Systems Engineering, 4(4), 209-212.

Pawlowski, J. M., & Bick, M. (2015). The global knowledge management framework: Towards a theory for knowledge management in globally distributed settings. Leading Issues in Knowledge Management, Volume Two, 2, 134.

Pfeffer, J., & Sutton, R. I. (1999). Knowing "what" to do is not enough: Turning knowledge into action. California management review, 42(1), 83-108.

Pfeffer, J., & Sutton, R. I. (2000). The knowing-doing gap: How smart companies turn knowledge into action. Harvard business press.

Rami S. Al-Gharaibeh1 & Mostafa Z. Ali1 (2021). Knowledge Sharing Framework: a Game-Theoretic Approach. Journal of the Knowledge Economy. Springer Science and Business Media {LLC}

Sefollahi, N. (2018). The importance of ICT on knowledge management in organisations. Journal of fundamental and Applied Sciences, 10(2), 431- 448.

Serenko, A. (2013). Meta-analysis of Scientometric Research of Knowledge Management: Discovering the Identity of the Discipline. Journal of Knowledge Management 17(5), 773–812.

Swan, J., Newell, S., Scarbrough, H. &Hislop, D. (1999). Knowledge management and innovation: networks and networking, Journal of Knowledge Management, 3 (4), 262–275. https://doi.org/10.1108/13673279910304014.

Tamilselvan, N., Sivakumar, N. & Sevukan, R. (2012). Information and communications technologies (ICT). International Journal of Library and Information Science, 1(1), 15-28.

Young, R. (2020). Knowledge Management: tools and techniques manual, Asian productivity organisation (APO).