

Impact of Knowledge Management on Organizational Performance and Competitiveness

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Purpose: The positive impact of KM in organizations has been well studied and documented. Public organizations in developing countries should take full advantage of this concept to increase efficiency and effectiveness of their services.

Study design/methodology/approach: With the research, we will provide guidelines for an acceptable KM policy that mobilizes organizational knowledge made up of knowledge resources in the public service in Nigeria. We will investigate the role of e-government, because of huge government investments in ICT, and what will contribute to progress towards the implementation of KM practices and procedures within the public organization.

Findings: As a case study, we take the TetFund, who connect 177 government run tertiary institutions. With survey, followed by statistical methods we get the results about the interactions of various KM metrics.

Originality/value: On the basis of findings, we will provide the adequate recommendations about KM framework adoptable to the public service in Nigeria that would improve performance of the TetFund.

Keywords: Knowledge resources, Knowledge workers, KM Policy, KM Framework, e-government, Organizational knowledge, KM strategy

Introduction

Justification of the study

Government actions can critically influence on establishing a global strategy and action plan for the Country's knowledge, innovation and technology systems, with the development and formulating concepts and by leading, articulating and promoting them. It can assume a main role by establishing priorities and fundamental goals by coordinating the development of an ample conceptual framework. The government can initiate a participative process with the diverse stakeholders to foster a strategy of knowledge, innovation and technology integrated with the population and centered on people (UNPAN, 2002).

This study seeks to examine the extent to which knowledge management (KM) impacts on organizational performance and competitiveness. The study will show that KM is a vital source of information to managers of organizations. Another significance of this study is to educate the educators and administrators of tertiary institutions about the benefits of sufficient KM on organizational performance and market competitiveness. Just government funding of education in future will not be enough and only self-funding institutions will provide the quality of graduands that the modern economy needs. Therefore is necessary to study the contribution of KM to achieve that.

In order to place KM as a major driver of innovation in tertiary institutions, we have to capture the tacit knowledge, which is often difficult to define, due to its inexpressible characteristics. However, its importance we found in a literature review highlighting the impact of tacit



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knowledge on certain KM topics and these include organizational learning, intellectual capital, KM strategy, but there is still some research gaps (Ventitachalam & Busch 2012).

In addition, in stating the importance of capturing tacit knowledge in tertiary schools, Mitri (2003) stated that: “performance assessment is an important task in all levels of education, both as input for identifying remedial needs of individual students and for improving general quality of education. Although explicit assessment measures can be obtained through objective standardized testing, it is much more difficult to capture fuzzier or tacit performance assessment measures. The problem of tacit knowledge capture is a central theme in the field of KM and assessment management can be thought of as a form of KM. Therefore, tacit assessment management can be facilitated through technologies commonly used in KM systems such as databases, Internet architectures, artificial intelligence, and decision support techniques.”

There is a need to apply KM techniques to manage tacit assessment knowledge as a way of improving the quality of graduates. McEvoy et al (2018) in their paper showed the benefit of KM on scholars who wish to study the public sector. There has been comparatively little research into specific public sector attributes. This study describes these attributes and illustrates how they are reflected in the literature, thereby underpinning each with academic relevance. It is this education that Bogoro (2015) stipulated is positioned to bridge the gap between a productive society and knowledge growth. While achieving this task, he advocated for a strong collaborative partnership between higher education institutions, government and the industry in what he tagged the ‘Triple Helix’, the confluence of which the economy of a nation is driven. This view by Bogoro (2015) underscores the place of tertiary education in the improvement of the economy.

The study focuses on the impact of KM on organizational performance and competitiveness. It is restricted to the case study of TETFund in Nigeria and by extension the Federal & State Governments 177 no tertiary schools that benefit from funding by the TetFund. Additionally, we will consider the pillars that support the creation of a knowledge society for all, who evaluate existing forms of knowledge in order to improve the sharing it, develop a more participative approach towards knowledge access and foster an effective integration of knowledge-related policies (UNESCO, 2005).

Purpose and objectives of the study

Public organisations, therefore, usually require KM strategies, which address their specific context and equally consider their unique cultural and legal implications (McEvoy et al 2018).

With the results of our research, we intend to enrich the field of KM with knowledge of the challenges in the application of KM in Public institutions in developing countries. The finding will contribute to the framework model that we would like to apply in transforming all the tertiary institutes towards the application of KM principles and processes.

The reasons for undertaking this study are following:

- To find out if the organizations practicing effective KM in Nigeria.
- To examine the relationship between KM and the performance of organizations.
- To uncover how we can adequately use KM for ensuring efficiency in organizations.
- To find out, what is the general level of adoption of KM as a tool to manage knowledge.
- To examine how the organisational social environment and ICT influence the implementation of KM.
- To show how KM can help in ensuring strategic alignment and profitability in organizations.

- Presentation of recommendations to the Management Budgeting to elaborate and implement a KM policy for the public sector.
- Preparation of solutions how to improving KM in Nigeria and overcoming the challenges faced in implementing KM in organizations.

Research questions, research hypotheses and limitations of the study

For our research, we set the following research questions:

- What kind of relationship exist between KM and the performance of organizations?
- How can be KM adequately used for ensure efficiency in organizations?
- Are organizations in Nigeria practicing effective KM?
- Does KM have any significant impact on organizational competitiveness?
- Are there challenges to adequate KM and its implementation in organizations?
- Can KM ensure strategic alignment and profitability in organizations?
- What is the possibility that one organization influencing other organizations in adopting KM?
- How can government apply KM in decision making in public institutions in Nigeria?

We also set the following research hypothesis:

- H1: There is a positive relationship between KM and organizational competitiveness.
- H2: KM significantly influences organizational competitiveness.

The research may be confronted by some constraints such as time, logistics and geographical factor. Insufficient funding may hamper the efficiency of the researcher in sourcing for the relevant materials, literature or information and the process of data collection (internet, questionnaire and interview). In addition, due to limited time, we may not be able to take advantage of the large number of possible respondents. Research will be context dependent and influenced by current situations at the time of administering the surveys.

Justification of the study

This study will be multi-dimensional depending on the outcome. Considering we will be dealing with the funding agency TETFund and by extension with 70no Universities, 52no Polytechnique and 55no Colleges of Education.

For data collection, we will use a descriptive and explanatory approach, survey questionnaires and research material from the library and databases. Primary and secondary data sources we will use and the data will be analysed using different statistical coefficients, depending on the data collected at 5% significance. We will also use tables and graphs to present the results of the survey. We will select the respondents to the study from public higher education institutions, according to their relationship to TetFund.

Goethe et al (2012) conducted an empirical review to get to these findings reflect a mixture of intrinsic and extrinsic factors that determines academic staff retention in Public Universities in Kenya. Bezzina (2020) Using a web-based questionnaire and the responses from 201 organizations in the Maltese Pharmaceutical Sector, structural equation modelling revealed that various KM enablers produced direct effects on KM processes, and in turn, two KM processes produced direct effects on organizational effectiveness and mediated the relationship between some KM enablers and organizational effectiveness. Joshi (2019) used survey data from 313 Indian respondents to examine the influence of KM on firm performance. Shongwe (2016) used quantitative and qualitative content to analyse the 20 KM frameworks. An extensive research by Neto et al (2011) investigated and analysed the process of building a KM model at Brazil's

Embrapa (The Brazilian Agricultural Research Corporation). They used qualitative research strategy for the study of a single case with incorporated units of analysis and observed two criteria for the judgment of the quality of the research project: validity of the construct and reliability. With use of multiple sources of evidence and data, analysis consisted of three flows of activities: data reduction, data displays and conclusion drawing/verification.

Liebowitz (2000) discuss the use of surveys to explore a professional's thoughts about managing knowledge and solicit perspectives on the adequacy and efficiency of KM. Enakrire (2016) used both quantitative through survey and structured questionnaires and qualitative by content analysis, literature review and interview of key informants for research methodologies in the initial study.

Knowledge management

What is knowledge management

The definition of KM mostly consisting of the descriptive form that is why Arora (2011) describes KM as: "The process through which an enterprise uses its collective intelligence to accomplish its strategic objectives. KM is not just about technology. It is about processes, people, behaviour, workflow and other factors. KM is about understanding how people work, sharing concepts and ideas, identifying groups of people who work on similar things & seeing how they can learn from one another. KM is about organizations learning from their experiences & about leadership in organization".

Kidwell et al (2001) defines KM as the process of transforming information and intellectual assets into enduring value. Jashapara (2004) defines KM as the effective learning processes associated with exploration, exploitation, and sharing of human knowledge (tacit and explicit) that use appropriate technology and cultural environments to enhance an organisation's intellectual capital and performance".

Given the recognized multidisciplinary nature of KM (Dwivedi et al., 2011; Wallace et al., 2011; Akhavan et al., 2016; González-Valiente et al., 2019), Baskerville & Dulipovic (2006) identified that KM has emerged as an important field for practice and research in information systems. This field is building on theoretical foundations from information economics, strategic management, organizational culture, organizational behaviour, organizational structure, artificial intelligence, quality management, and organizational performance measurement.

Xiaoming & Kaushik (2003) defined KM as a set of systematic approaches to find, understand and use knowledge to achieve organisational objectives. In the same light, Kanmal et al (2019) defined knowledge as a corporate asset, but in practice it is grounded in different organisational functions and is stored in repositories and in individuals' memories. We can assume to mean that KM is everyone's problem (Edwards, Shaw, & Collier, 2003).

Applications of knowledge management

There has been a progressive development of the KM field, with better-focussed studies over the time (Bolisani & Scarso 2019). We have found that organisations who adopted KM because of its association with competitive advantage (Shongwe 2016). Various research shows both convergent and divergent associations of KM indices when deliberately applied within organizations management practices. Randeree (2006) reported that KM has moved to the forefront of both the research and corporate agendas. Today we increasingly recognize knowledge as an important, strategic resource by all types of organizations and institutions, whether private or public, service oriented or production oriented (Arora, 2011).

We are aware, that KM and its application in operations of firms has positive outcomes on a number of indices. KM became one of a pillar of good public management (Kiyangi, 2012). But we cannot find this encouraging result across the board between private and public organizations neither is its advantages enjoyed in the same way between developed and developing Countries.

There is interest in trying to identify links between various practical applications of KM matrices. Bolisani & Scarso (2019) reported the trends in research methods/approaches used in ECKM articles: generic keywords (KM, intellectual capital, innovation, knowledge, KM systems) remain in top positions, with only knowledge and KM systems have a declining trend. The topic communities of practice has somewhat lost some appeal. Knowledge creation has a positive trend, which shows that processes of existing knowledge exchange (sharing, transfer) are still a core topic for researchers, but its creation is also becoming important. Tacit knowledge also demonstrates a growing interest by researchers, which is surprising considering that this topic has long been at the centre of analysis and this may signal that the problem of managing tacit knowledge is largely unresolved and still attracts the attention of scholars. In addition, the new wave of KM practices (based on organizational and social processes) and the upsurge of social media may be leading to a new interest in tacit KM.

The results of other studies (Zaim et al., 2007; Zack et al., 2009; Kianto, 2011) shows, that there is a strong, positive and significant link between some KM constructs and organizational performance. Joshi (2019) found indirect influence of KM constructs on financial performance. Wang et al (2021) linked knowledge donation and knowledge collection as significantly related to service innovation. While Chaita (2021) in the study concluded that innovation is a global concept that requires knowledge acquisition through collaborative networks. Cabrilo (2019) furthermore, depict that leadership changes have a profound influence on knowledge-friendly organizational culture and knowledge sharing between mid-level management and employees.

Impact of knowledge management in organizations

Andrea, Maurizio & John (2007) described knowledge as “the most important factor of organisational production, ahead of assets such as land, labour and production”. Organisations today essentially measure their self-worth in knowledge assets (Huang et al., 2011), the management of which has our interest.

The application of KM in the new knowledge economy has not surprisingly been the focus of studies. Beyond the research, we can see the impact of KM empirically within organizations that have applied its principals and processes. KM is seen as a strategy of driving efficiencies across all public services, improving accountability, and enhancing partnerships with stakeholders, capturing the knowledge of the ageing workforce and improving the overall performance of public sector entities (Arora, 2011). We can link knowledge to organisational advancement and herald it as a key dynamic for organisational success (Anantatmula & Kanungo, 2010). Extant literatures have provided the basic understanding on how an organization’s knowledge resources and its practices to manage knowledge are associated with its performance (Inkinen et al 2016). In addition, to tie them all, Griffiths & Remenyi (2008) established a relationship between the business strategy that a knowledge intensive service firm wants to pursue and the approach to KM that it needs adopt to support the strategy.

Innovation, the current economic driver in this digital age has been linked to KM. Seidler-de Alwis and Hartmann (2008) demonstrated that organizations promoting processes of knowledge sharing are more successful in innovation. In their study, Kör and Maden (2013) demonstrated that KM processes significantly influence innovation types. The results also indicate that KM processes relate positively to innovativeness, which in turn increases

innovation in organizations. KM processes, such as knowledge acquisition, knowledge creation, knowledge storage, knowledge sharing and knowledge application, play a major role in bringing innovation (Boroujerdi et al 2019). Gloet and Terziovski (2004) also showed that there is a significant positive correlation between KM practices and the performance of innovation.

However, not all writers agree to these positive correlations, Kalling (2003) states that the facts are correct and that current research into KM fails to recognize and offer a detailed understanding about the role of knowledge in improving firm performance. But Inkinen et al (2016) identified managerial learning point in his study and that different configurations of IC and KMP could yield equally good firm performance outcomes. There concluded that in knowledge economy one size does not fit all.

There is therefore room for more KM research in as many isolated areas to try to standardize the applications, metrics and indices of KM. Providing more KM framework models will go a long way in establishing the study of KM as a development growth partner.

Knowledge management in Public sector and public services

Public Sector

The term public sector refers to the functioning agencies & units at the federal, state, country, municipal & local levels of government. The sector includes all agencies, government cooperation, the military & departments, agencies & miscellaneous units that perform some form of public service (Arora, 2011).

Public sector managers and administrations face many challenges and new responsibilities in the twenty-first century. Common challenges and concerns that affect public sectors worldwide are identified as driving efficiencies across all public services; improving accountability; making informed decisions; enhancing partnerships with stakeholders; capturing the knowledge of an ageing workforce, and improving overall performance (Arora, 2011).

Almost all public institutions in Nigeria have a budget for the provision of computers. The age of ICT has arrived. As a result, ICTs are a key concept in obtaining and facilitating the creation of explicit knowledge by means of the collection, storage, aggregation and transmission of quantitative data (Phang & Foong, 2010). It is generally believed that technological infrastructure has the potential to enable or facilitate knowledge processes by providing a platform for knowledge capture or sharing (Handzic, 2004). Many aspects of IS and information technology have been variously mislabelled as KM (Wilson, 2002).

As this is the era of e-government, the ICT component and KM applications must perform supportive roles. Zhou & Gao (2007) have identified three benefits of KM in e-government as being conducive to enhance governments' competence, to raise governments' service quality and to promote healthy development of e-government. KM for e-government is no longer a choice but an imperative if economies have to survive in the unfolding era of privatization, liberalization and globalization (Misra, 2007).

Since e-government is largely knowledge intensive, it requires KM applications, techniques to represent government fully, and appropriately. The success of e-government depends on KM, which provides the overall strategy and techniques to manage e-government content eloquently in order to make knowledge more usable and accessible and to keep it updated (Arora, 2011).

There are a number of stumbling blocks to the progress and performance of KM. Some have been well documented. Based on research and comparative analyses with public organizations from member countries of the Organisation for Economic Co-operation and Development

(OECD) brought forth, as one of its main conclusions, that: Along the stages of data and information collection and result analyses, it became even clearer that the establishment of a policy of KM is fundamental for its effective institutionalization (...) in Direct Administration organizations. The isolated initiatives; the dispersed efforts, many times within the same ministry, the absence of communication about KM practices and information sharing, both internally and among organizations; and the unfamiliarity of the subject among members of high administration, middle management and government employees in general, this all demonstrates that a KM policy is indispensable for the dissemination of Direct Administration KM to occur (Batista et al., 2005).

KM is vital to the running of an organization, but the conditions that support or sustain it within an organization are not well understood or utilized. Its concept has not been fully and successfully implemented in many organizations domiciled in Nigeria due to some associated problems ranging from limited awareness, to inadequate management support, inadequate skill of knowledge managers and workers; lack of performance indicators and measurable benefits; improper organizational structure; lack of coordination and evaluation.

Many organisations recognise knowledge as a core competency; however, given its multifaceted potential, implementing KM initiatives can be onerous (Chong & Chong, 2009). It is evident that public sector KM is in its early stages, and research has been discovering clearer ways to marry the applications of private sector KM to the public field (Bate & Robert, 2003a). This is notwithstanding the fact that in the public sector, culture is seen as complex and often not supportive of initiatives, which can lead to knowledge sharing and dissemination (Amayah, 2013).

Some of the above problems have resulted in a lack of widespread contribution of KM in Nigerian organizations. In fact, there is little or no satisfactory KM in many companies and organizations in Nigeria due to its neglect or because it has not been placed at the front burner of most organizations. It has also caused lack of consistent progress in terms of organizational performance, competitive advantage and profitability and has regrettably spilled over to the economy.

There is no consensus towards what makes an ideal KM position in organizations. Griffiths & Remenyi (2008) presents a hybrid approach to understanding the KM requirements for a knowledge intensive service organization. It proposes a strategy KM alignment framework grounded in literature. There are gaps to be filled by further research to increase the pool of relevant literature. According to McEvoy et al (2018) because of the diverse nature of the public sector, a “one size fits all” solution is not applicable. This is in clear support the need for the outcome of this proposed research.

Consequently, it is proposed that there is a need of strategy designed especially for the public sector to be developed to fill the gaps and for cross learning (Cong & Pandya, 2003) They also concluded that “KM as a discipline is still in its infancy, especially in the public sector, evidenced by little discussion in the current literature. Hence, there are still many issues, which we do not know. However, governments are realising its importance for running the public sector and starting to practice it. Issues, challenges, and opportunities exist in the process. Public sectors have to face these by taking a proactive attitude and make it happen in order to reap the benefits. To succeed in the attempt, special considerations to lack of awareness, public and private sector difference, and the need for a generic KM framework to be developed must be taken into account”.

Knowledge management in Public service

Most research on the applications and adoption of KM is found directed at the Private sector. There is extensive coverage in literature of KM implementation based on private sector entities. Although recent trends have been characterised by a shift towards understanding KM in the public sector organisations, there is very little focus on the public sector entities in Africa (Mbhalati, 2014). The Public sector seems to have had a late start. However, McEvoy et al (2018) reported from qualitative data obtained from a detailed literature review on public sector KM research has indicated that KM in the public sector is relatively under researched compared with its private sector counterpart. A detailed empirical research done by Freedoms' & Goncalves (2008) and states that: "The research points out that around 40% of the Ministries consider KM to be a key strategic issue and among these 40%, 28% have enrolled KM into their strategic priority points. Much in the same way, the majority (92%) of Ministerial initiatives are, in one way or another, already being analyse, planned or executed within KM precepts. Nevertheless, the degree of formal embodiment of KM is less ubiquitous, only 28% of the subjects indicating little if any structural implementations such as dedicated personnel and specific work areas or tasks. Only 4% of the Ministries have formal KM objectives with clear identification and action-priority."

KM is seen as a strategy of driving efficiencies across all public services, improving accountability, and enhancing partnerships with stakeholders, capturing the knowledge of the ageing workforce and improving the overall performance of public sector entities (Arora, 2011). Pee & Kankanhalli (2016) reports that in public administration, KM is increasingly advocated for improving novelty and agility in policy development and service delivery.

Within the public sector, KM also has the ability to enhance development (Amayah, 2013), and capture knowledge that may be lost due to staff turnover, transfer, or retirement (McAdam & Reid, 2000). A major component of successful KM practice is raising its awareness not only to managers at all levels, but also to frontline personnel. The concept of KM need to be better understood and benefits much talked about by everyone in the organisation in order for the organisation to be conducive to the KM practices. The concept of KM is nothing-new (Hansen et al 1999). Organisations have always used KM practices (in various disguises) to make decisions, and to produce goods and services, though not in a deliberate and systematic manner. Essentially, what is new about KM is the act of being conscious about the existence of a KM process (Sarvary 1999).

Consequently, it is proposed that there is a need of strategy designed especially for the public sector to be developed to fill the gaps and for cross-referencing (Cong & Pandya, 2003). Regardless of the importance ostensibly attached to it, public sector organizations have often been less inclined to fully explore the benefits of KM than the private sector (Arora, E. 2011).

McEvoy et al (2018) reported that most of KM research in the Public sector is concentrated around health, education, and government intervention. Highlighting the effectiveness of KM in the public sector will help utilise knowledge for efficiency and service delivery improvement they concluded.

Within the people, process and technology components of KM, Mbhalati (2014) states the importance of recognizing Public Servants as Knowledge workers and the application of KM to the public sector for the benefit of society. However, the dissemination of KM in Direct Administration will only take place if a KM policy is implemented (BATISTA et al. 2005). In general, the public sector is lagging behind the private sector in applying modern customer centric service methods (Arora, 2011).

As an authoritative expert of KM, Spender (2015) argued that a great deal of KM was (and is, actually) mostly concerned with how to help organization mobilize their knowledge resources rather than, for example, how to create new ones. Moreover, this is mostly prevalent in the public sector. Wiig (2002) believed that KM could lead to the development of capable knowledge workers, these competent public servants will do the 'right thing first time' resulting in lower costs and improved performance.

Because of the fact that government entities are recognised as knowledge intensive organisations whose officials are fully- fledged knowledge workers, the prospects of KM in the public sector are remarkable (Butler & Murphy, 2007). Wiig (2002) argued that KM could introduce new options, capabilities and practices to help public administration advance. This is indeed a good motivation for public sector organisations in Africa to invest efforts in KM. Yum (2007) and Nava (2007) discussed on electronic KM, IT and government implementation with the benefits. Similarly, Yum (2007) and Ikoja-Odongo (2006) looked at KM in developing Countries and Africa respectively.

It is established in KM literature that the public sector organisations fall far behind their private sector counterparts in a number of areas in terms of KM implementation (Arora, 2011). Xiaoming and Kaushik (2003) recognised that awareness of KM in the public sector is low and that there is confusion regarding the definitions of the terms data, information and knowledge in public sector entities.

Overall KM has to be considered an important building block in the improvement of public services and successful realization of e-government initiatives in the government institutions and municipalities (Arora, 2011) and Sandhu et al. (2011) concluded that in order for the public sector to capitalise on the benefits of KM, it is essential for it to overcome the cultural barriers that permeate its hierarchies by increasing teamwork, reducing bureaucratic decision making and increasing value management.

Tertiary Education Trust Fund (TETFund) and the Challenges of Knowledge Management as a case study

The Tertiary Education Trust Fund (TETFund) was originally established as Education Trust Fund (ETF) by the Act No 7 of 1993 as amended by Act No 40 of 1998 (now repealed and replaced with Tertiary Education Trust Fund Act 2011). It is an intervention agency set up to provide supplementary support to all level of public tertiary institutions with the main objective of using funding alongside project management for the rehabilitation, restoration and consolidation of Tertiary Education in Nigeria.

The main source of income available to the Fund is the two percent education tax paid from the assessable profit of companies registered in Nigeria. The Federal Inland Revenue Services (FIRS) assesses collects the tax on behalf of the Fund.

The funds are disbursed for the general improvement of education in federal and state tertiary educations specifically for the provision or maintenance of:

- Essential physical infrastructure for teaching and learning
- Institutional material and equipment for research and publications
- Academic staff training and development and
- Any other need which, in the opinion of the Board of Trustees, is critical and essential for the improvement and maintenance of standards in the higher educational institutions.

Goals:

- To continuously improve Education Tax Revenue by ensuring that the tax is collected and made available for TETFund intervention programmes.
- To deliver appropriate and adequate intervention programmes with due regard to the sensitivities of beneficiaries and stakeholders.
- To promote cutting-edge technologies, ideas and organizational skills in education, and ensure that projects are forward-looking as well as responding to present needs.
- To ensure successful completion of intervention projects.
- To form a viable and enduring partnership between the TETFund and its stakeholders.
- To manage Education Tax in a way that is most beneficial to the Nigerian people.
- To recruit, retain, train and retrain a highly motivated workforce.
- To plan, undertake research and create reliable databank for improvement of education in Nigeria.
- To ensure accountability and transparency in all its undertakings.

Objectives:

- Provide funding for educational facilities and infrastructural development
- Promote creative and innovative approach to educational learning and service
- Stimulate, support and enhance improvement activities in the educational foundation areas, like Teacher Education, Teaching Practice, Library Development and Special Education Programmes
- Champion new literacy enhancing programmes as scientific, information and technological literacy

The TETFund has been created to undertake a most important assignment. The required funds made available scarce and judicious application of such funds is important. As stated by Boroujerdi et al (2019) higher education institutions considered as the most important resources contains information, the knowledge required for the advancement and development of society, the centre of activities related to creation and production, distribution, transmission and dissemination of knowledge. In today's global economy, school is the main supplier of competent workforce and it has to face challenges related to education of knowledgeable and skilful students. Educational institutions are knowledge intensive organizations. Thus, they have to obtain, store, share, utilize, and generate knowledge to train and educate the students effectively (Ozmen, 2010).

Effective KM is seen vital in higher education as it is in the corporate sector. It can lead to better decision-making capabilities, reduced "product" development cycle time (for example, curriculum development and research), improved academic and administrative services, and reduced cost (Ozmen, 2010). One of the major reasons to process knowledge is for individuals, groups and the organization itself to learn, to remember what it has learned and to leverage the collective expertise in order to perform more efficiently and more effectively (Evans, M.M. 2014).

In general, the vast array of literature outlines that the educational organizations are yet to be able to embrace KM and are not yet conscious about the crucial importance of tacit knowledge (Banacu et al, 2013). The import of this statement is best appreciated by the work of Arora (2011) who wrote that higher education organizations are the main knowledge intensive organizations, but now many organizations in the public sectors have started to realize the importance of KM in streamlining their operations.

Many researchers have stated their interest in introducing KM methods in the field of higher education. Rowley (2000), in a study, asked the question, "Is higher education ready for KM?"

Her paper investigated the perceptions of KM within higher education as a management tool and presented the nature of academics and universities and related challenges of KM implementation within this context. Kidwell et al. (2000) stated that higher educational institutions have significant opportunities to apply practices of KM to support every part of their mission. In another study, Demchig (2014) found that higher educational institutions tended to neglect knowledge at the organizational level.

In trying to identify gaps in KM and its role in educational institutions, Atanasova (2019) identified as one of the goals of their article is the presentation of an expert system concerning learning resources as a part of the university KM system that can be used as a decision support tool for the achievement of competitiveness and sustainable development in some processes related to distance e-learning at the university.

Implementation

In planning an implementation roadmap, we look to the statement by Heisig (2009) that the effective handling of knowledge comprises the core practices of KM and one of the means for driving the success of KM is to have a clear and well-planned strategy (Liebowitz, 1999).

Freedoms' & Goncalves (2008) conducted a survey focusing 25 Ministries and six important Brazilian state companies demonstrated that the latter have advanced in a more solid way to transform the KM-conveyed administrative approach into coordinated institution-based action, yielding clear objective-marking and concrete results and indicators. Implementation will stress the importance of identifying the core KM processes (Edwards, 2011).

On research methods or approaches, theoretical and conceptual modelling still prevails, with no change when compared with the recent past. This may mean that the KM field still needs the elaboration of concepts, theories, reference models, and classifications, or they are newly developed or derived (and adapted) from other fields. Indeed, there is a key issue here: a standard definition of knowledge, which is still difficult to find and to operationalize (Bolisani & Scarso 2019).

Phases

The phases can be summarized according to Goncalves (2006) and the research plan will comprise four different research stages as follows:

- The first stage of the research will include a thorough review of literature, primary and secondary sources in relevant databases. Selection of relevant literature will be made in relation to the theoretical basis of the research. We will review research dealing with similar circumstances as our areas of research and case study. Areas of differences and/or similarities will be presented and comparisons made within our conclusions.
- In the second stage – we will conduct a qualitative analysis by the administration a survey questionnaire. These will be future analysis and the resultant analysis will be subjected to verification of the work hypotheses. The study will employ the descriptive and explanatory design; questionnaires in addition to library research materials in order to collect data. Primary and secondary data sources will be used, and data will be analysed using the chi square statistical tool at 5% level of significance. Other statistical tools that shall be used frequency tables and percentage. The respondents under the study will selected public higher educational institutes and their relationship to Tet Fund.
- In the third stage, will be the conclusions. As part of this will be the verification of the hypotheses in line with our research results in relation to researches already carried out by other authors. Also, to be presented will be our recommendations based on the results

of our research. At this stage, a scientific article for publication in a relevant magazine or journal will be proposed.

- In the fourth stage, submission of the completed doctoral dissertation. At this stage, the drafting of a scientific article should be completed.

Methodology

The six sections of the survey comprised:

- demographic information (organisational, individual)
- knowledge assets (location, importance)
- knowledge processes (implementation, improvement)
- social environment (leadership, culture, measurement)
- technological infrastructure (technology types, support roles); and
- comments and suggestions

Results

A description of KM as consisting of people, process and technology is well known (Edwards, 2011), hence this survey sought to gain a deeper insight into the issues/obstacles that respondents considered as important to their attempt to move KM forward in their organisation through their textual response.

According to a survey (KM magazine, 2001), an organisation's main implementation challenge stems from the absence of a "sharing" culture and employees' lack of understanding KM and the benefits it offers. Organisations can address these challenges by making; training, change management and process redesign primary components of KM initiative (Chong et al 2003). Using such guides, we will structure our questionnaires to offer survey results that can determine the stage of KM development in organizations.

Additionally, Songwe's (2016) said five prominent KM processes were discovered as knowledge transfer, storage, application, creation, and acquisition (K-TSACA). The conclusion of the study is that organisations and researchers seem to focus mostly on five KM processes, hence their popularity/dominance over others. Also, Bueno, Aragón, Salmador, and García (2010) established that KM is the process of creation, acquisition and transfer of knowledge that is reflected in the behaviour of the organization. Do these and other works reflect in our case study?

It is necessary to analyse whether the research questions established in the theoretical model are supported by the available evidence to assess whether they should be accepted, reformulated or rejected (Garcia- Alvarez 2014). There is also a need to develop frameworks that can help practitioners to understand the sorts of KM initiatives or investments that are possible and to identify those that make sense in their context (Handzic and Hasan, 2003). Our results will clarify these positions within our case study.

Research generally shows a positive effect of ICTs on KM, but it fails to clearly establish which technologies and KM processes are most beneficial (Nonaka & Teece, 2001). Akram, Siddiqui, Nawaz, Ghauri, and Cheema (2011) established an integrated model to analyse innovation, in which knowledge and ICTs are included. Their results show that ICTs allow organizations to manage knowledge in order to improve organizational knowledge assets and abilities. Essentially, it provides a basis for organisations to evaluate, compare, control and improve upon the performance of KM (Ahmed et al., 1999). ICT resources and how it is applied within our case study will determine our results in this regard.

Our results should show that the theoretical framework is a comprehensive and useful tool for exploring the firm level learning processes involved in knowledge generation. The proposed theoretical framework would be based on a constructivist approach to organisational knowledge and uses the concept of absorptive capacity.

References

- Akram, K., Siddiqui, S. H., Nawaz, M. A., Ghauri, T. A., & Cheema, A. K. H. (2011). Role of KM to bring innovation: An integrated approach. *International Bulletin of Business Administration*, 11, pp. 121-134.
- Ahmed, P. K., Lim, K. K. & Zairi, M. (1999). "Measurement practice for KM". *Journal of Workplace Learning: Employee Counselling Today*, Vol. 11 No. 8, pp. 304-11.
- Akhavan, P., Ebrahim, N. A., Fetrati, M. A., & Pezeshkan, A. (2016). Major trends in KM research: a bibliometric study. *Scientometrics*, 107(3), pp. 1249-1264.
- Amayah, A. T. (2013). Determinants of knowledge sharing in a public sector organization. *Journal of KM*, 17(3), pp. 454-471.
- Anantamula, V. S., & Kanungo, S. (2010). Modelling enablers for successful KM implementation. *Journal of KM*, 14(1), pp. 100-113.
- Andrea, G., Maurizio, M., John, D. (2007). Managing knowledge in times of organizational change and restructuring. *Knowledge and Process Management*, 17(3), pp. 118-127.
- Arora, E. (2011). KM in public sector. *Journal of Arts & Commerce* 2(1), Vol-II, Issue 1, pp. 165-171.
- Atanasova, I. (2019). A University KM Tool for the Evaluation of the Efficiency and Quality of Learning Resources in Distance e-Learning. *International Journal of KM (IJKM)*, 15(4), pp. 38-55.
- Bate, S., & Robert, G. (2003). KM and communities of practice in the private sector. *Lessons for Leading the "Quality Revolution" in Health Care*, 80, pp. 643-663.
- Bogoro, S. E. (2015). Enhancing the Relevance of Research and Industry Partnership in Nigeria: A Case for New Strategies. Convocation lecture delivery at the 2015 convocation ceremony of the Federal University of Technology, Owerri, Dec. 3
- Banacu, C., Buu, C., & Nedelcu, A. (2013). Tacit KM - Strategic Role in disclosing the Intellectual capital. *Proceedings of the 7th International Management Conference "New Management for the New Economy"*, November 7th-8th, 2013, Bucherest, Romania.
- Batista, F., Quandt, C., Pacheco, F., & Terra, C. (2005). *Gestão do Conhecimento an Administração Pública*. Texto para discussão n. 1095. Brasília: IPEA.
- Baskerville, R., & Dulipovici, A. (2006). The theoretical foundations of KM. *KM Research & Practice* 4, pp. 83-105.
- Bezzina, F., Baldacchino, D., & Cassar, V. (2020). Relating KM Enablers, KM Processes, and Organizational Effectiveness: The Case for the Maltese Pharmaceutical Sector. *International Journal of KM (IJKM)*, 16(4), pp. 109-124.
- Bueno, E., Aragón, J. A., Salmador, M. P., & García, V. J. (2010). Tangible slack versus intangible resources: The influence of technology slack and tacit knowledge on the capability of organizational learning to generate innovation and performance. *International Journal of Technology Management*, 49(4), pp. 314-337.
- Butler, T., & Murphy, C. (2007). Implementing KM systems in public sector organizations: a case study of critical success factors. *ECIS 2007 Proceedings*, paper 112, <http://aisel.aisnet.org/ecis2007/112>, University of St. Gallen, St. Gallen, Switzerland.
- Cabrilo, S., & Leung, R. (2019). Do Leaders Really Matter in KM Practices? Case of Serbian Companies. *International Journal of KM (IJKM)*, 15(4), pp. 94-113.
- Chaita, M. V., & Sibanda, W. (2021). The Role of Knowledge in Enhancing SME Innovation: The Case of Knowsley – Northwest Region of England. *International Journal of KM (IJKM)*, 17(1), pp. 93-112.
- Chong, C. W., & Chong, S. C. (2009). KM process effectiveness: Measurement of preliminary KM implementation. *KM Research & Practice*, 7(November 2008), pp. 142-151.
- Cong, X., & Pandya, K. V. (2003) Issues of KM in the Public Sector. *Electronic Journal of KM Volume 1 Issue 2*, pp. 25-33.
- Demchig, B. (2014). "KM capability level assessment of the higher education institutions: Case study from Mongolia", *Procedia - Social and Behavioural Sciences*, Vol. 174, No. 12, pp. 3633-3640.
- Edwards, J. (2011). "A Process View of KM: It Ain't What you do, it's the way That you do it". *The Electronic Journal of KM*, Volume 9, Issue 4, pp. 297-306.
- Edwards, J. S., Shaw, D., & Collier, P. M. (2003). KM in SMEs: It's different, but not so different. In S. Oliver (Ed.), *Making electronic commerce work for small and medium enterprises*. Bolton, UK: e4sme, pp. 89-109.
- Enakrire, R. T., & Ocholla, D. N. (2017). 'Information and communication technologies for KM in academic libraries in Nigeria and South Africa', *South African Journal of Information Management* 19(1), a750.

- Evans, M., Dalkir, K., & Bidian, C. (2014). A Holistic View of the Knowledge Life Cycle: The KM Cycle (KMC) Model. *Electronic Journal of KM* Volume 12 Issue 2.
- Fox, L., Senbet, W., & Simbanegavi, W. (2014). Youth Employment in Sub-Saharan Africa: Challenges, Constraints and Opportunities. *Journal of African Economies*, 2016, Vol. 25, AERC Supplement 1, pp. i3-i15.
- Freedoms' and Gonçalves, S. M (2008). Formulating a KM Policy Federal Public Administration. The Brazilian Experience. Documentation and Information Centre Publishing Coordination. Brasília – 2008.
- Gloet, M., & Terziovski, M. (2004). "Exploring the relationship between KM practices and innovation performance". *Journal of Manufacturing Technology Management*, 15 No. 5, pp. 402-409.
- Goncalves Sonia, M. G. (2006). Elementos básicos para a formulação de uma política de gestão do conhecimento para an administração pública federal brasileira. Dissertação (Mestrado). Universidade Católica de Brasília, Distrito Federal.
- González-Valiente, C. L., Santos, M. L., & Arencibia-Jorge, R. (2019). Evolution of the Socio-cognitive Structure of KM (1986–2015): An Author Co-citation Analysis. *Journal of Data and Information Science*, 4(2), pp. 36-55.
- Griffiths, P., & Remenyi, D. (2008). "Aligning KM with Competitive Strategy: A Framework." *The Electronic Journal of KM* Volume 6 Issue 2, pp. 125-134.
- Handzic, M. (2004). *KM Through the Technology Glass*. Singapore: World Scientific.
- Handzic, M., & Hasan, H. (2003). The search for an integrated KM framework. In *Australian Studies in KM*, Hasan, H and M Handzic (eds.), pp. 3-34. Australia: University of Wollongong Press.
- Huang, L.-S., Quaddus, M., Rowe, A., & Lai, C. (2011). An investigation into the factors affecting KM adoption and practice in the life insurance business. *KM Research & Practice*, 9(1), pp. 58-72.
- Ikoja-Odongo, J. R. (2006). Quest for knowledge and knowledge management in rural societies in Africa. XVII Standing Conference of Eastern, Central and Southern Africa Library and Information Associate, SCECSAL XVII, Dar es Salaam, Tanzania.
- Inkinen, H., Ritala, P., Vanhala, M., & Kianto, A. (2016). "Intellectual capital, KM practices and firm performance", *Journal of Intellectual Capital*.
- Jashapara, A. (2004). *KM: An integrated approach*. London: Pearson Education.
- Joshi, H., & Chawla, D. (2019). How KM Influences Performance? Evidence from Indian Manufacturing and Services Firms. *International Journal of KM (IJKM)*, 15(4), pp. 56-77.
- Kale, D., & Little, S. (2005). "Knowledge Generation in Developing Countries: A Theoretical Framework for Exploring Dynamic Learning in High-technology Firms". *The Electronic Journal of KM* Volume 3 Issue 2, pp. 87-96.
- Kalling, T. (2003). "KM and the occasional links with performance". *Journal of KM*, Vol. 7 No. 3, pp. 67-81.
- Kanwal, S., Baptista Nunes, M., Arif, M., Hui, C., Andrew, D., & Madden, A. D. (2019). Application of Boundary Objects in KM Research: A Review. *The Electronic Journal of KM*, 17(2), pp. 100-113.
- Kidwell, J. J., Vander Linde, K. M., & Johnson, S. L. (2000). "Applying corporate KM practices in higher education". *Educause Quarterly*, Vol. 4 No. 1, pp. 28-33.
- Kliyingi, G. W. (2012). An exploration of KM trends in the Ugandan public sector. Workshop on KM Capacity in Africa, Khartoum, Sudan, 4-7 January.
- Kör, B., & Maden, C. (2013). "The relationship between KM and innovation in Turkish service and high-tech firms", *International Journal of Business and Social Science*, Vol. 4 No. 4, pp. 293-304.
- Liebowitz, J. (1999). "Key ingredients to the success of an organization's KM strategy". *Knowledge and Process Management*, Vol. 6 No. 1, pp. 37-40.
- Malhotra, Y. (2000). KM for e-business performance, *Information Strategy*, the Executive Journal, 16(4), <http://www.brint.com/papers/kmebiz.html> [15 June 2006].
- Mbhalati, O. J. (2014). Reinventing the public sector in Africa through KM. *KM Research & Practice*, 12:1, pp. 114-121.
- McAdam, R., & Reid, R. (2000). A comparison of public and private sector perceptions and use of KM. *Journal of European Industrial Training*, 24(6), pp. 317-329.
- Misra, D. C. (2007). Ten Guiding Principles for KM in E-government in Developing Countries; Accessed 19 April 2009.
- Mitri, M. (2003). Applying tacit KM techniques for performance assessment. *Computers & Education* Vol 41, Issue: 2, pp. 173-189.
- Mwadiani, M., & Akpotu N. E. (2002). Academic Staff Turnover in Nigerian Universities: *Education Journal*, Vol. 123.
- Nava, A. S. (2007). KM as a strategy for recovering trust in government- the Mexican experience. In *Managing Knowledge to Build Trust in Government* (QIAN H, MIMICOPOULOS M and YUM HY, Eds), pp. 214-229, United Nations Department of Economic and Social Affairs, UN, New York.

- Neto de Alvarenga, R. C. D., & Vieira, J. L. G. (2011). "Building a KM Model at Brazil's Embrapa (Brazilian Agricultural Research Corporation): Towards a Knowledge-Based View of Organizations" *The Electronic Journal of KM*, Volume 9, Issue 2, pp. 85-97.
- Ngulube, P. (2019). Mapping Methodological Issues in KM Research, 2009-2014. *International Journal of KM (IJKM)*, 15(1), pp. 85-100.
- Nonaka, I., & Teece, D. J. (2001). Research directions for KM. In: Nonaka & D. J. Teece (Eds.), *Managing industrial knowledge: Creation, transfer and utilization* (pp. 330-335). London: Sage Publications.
- OCDE. *Competencies for the Knowledge Economy*. Paris: 2001.
- Ozmen, F. (2010). The capabilities of the educational organizations in making use of tacit knowledge, *Procedia - Social and Behavioural Sciences*, 9, pp. 1860-1865.
- Phang, M., & Foong, S. (2010). Information communication technologies (ICTs) and knowledge sharing: The case of professional accountants in Malaysia. *World Journal of Science, Technology and Sustainable Development*, 7(1), pp. 21-34.
- Rabhi, M. (2011). "Key Performance Indicators Metrics Effect on the Advancement and Sustainability of KM". *The Electronic Journal of KM*, Volume 9, Issue 2, pp. 149-154.
- Randeree, E. (2006). "KM: securing the future". *Journal of KM*, Vol. 10 No. 4, pp. 145-156.
- Rowley, J. (2000), "Is higher education ready for KM?" *International Journal of Educational Management*, Vol. 14 No. 7, pp. 325-333.
- Sandhu, M. S., Jain, K. K., & Ahmad, I. U. K. B. (2011). Knowledge sharing among public sector employees: Evidence from Malaysia. *International Journal of Public Sector Management*, 24, pp. 206-226.
- Seidler-de Alwis, R., & Hartmann, E. (2008). "The use of tacit knowledge within innovative companies: KM in innovative enterprises". *Journal of KM*, Vol. 12 No. 1, pp. 133-147.
- Shongwe, M. (2016). "An Analysis of KM Lifecycle Frameworks: Towards a Unified Framework" *The Electronic Journal of KM*, Volume 14, Issue 3, pp. 140-153.
- Spender, J. C. (2015). "KM: Origins, history, and development", in Bolisani, E., Handzic M. (eds.). *Advances in KM. Celebrating Twenty Years of Research and Practice*, Springer, Cham., Switzerland, pp. 3-23.
- Tettey, J. W. (2006). *Staff Retention in African Universities: Elements of a Sustainable strategy*, Washington DC: World Bank.
- United Nations Department of Economic & Social Affairs, *World Economic Situation & Prospects 2021*
- UNPAN United Nations Online Network in Public Administration and Finance. *Understanding Knowledge Societies in twenty questions and answers with the Index of Knowledge Societies*. New York, 2002.
- Venkitachalam, K., & Busch, P. (2012). "Tacit knowledge: review and possible research directions". *Journal of KM*, Vol. 16, No. 2, pp. 357-372.
- Wang, Z., Ling, K. C., & Li, H. (2021). The Impact of Knowledge Sharing on the Relationship Between Market Orientation and Service Innovation. *International Journal of KM (IJKM)*, 17(2), pp. 130-154.
- Wiig, K. M. (2002). KM in public administration. *Journal of KM* 6(3), pp. 224-239.
- Wilson, T. D. (2002). The nonsense of 'KM'. *Information Research* 8(1). Paper no. 144
- Xiaoming, C., & Kaushik, P. (2003). Issues of KM in the public sector. *Electronic Journal of KM* 1(2), pp. 25-33.
- Yum, H. Y. (2007). Overview of KM in the public sector. In *Managing Knowledge to Build Trust in Government* (QIAN H, MIMICOPOULOS M and YUM HY, Eds), pp. 10-20. United Nations Department of Economic and Social Affairs, UN, New York.
- Zhou, Z., & Gao, F. (2007). E-government and KM. *IJCSNS International Journal of Computer Science and Network Security*, 7(6), pp. 285-289.