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Determining The State Of Knowledge Management In Higher Education Institutions In Zambia: An Exploratory Study Of Public Universities.

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Abstract—*the knowledge economy has forced organisations to rethink the nature of their resources and capability that can create advantage. Higher Education Institutions are no exception. They have not been spared by the external pressure exerted by the knowledge economy. Thus, to survive, they are considering knowledge as their only source of real sustainable advantage. However, few organizations are able to leverage their organizational knowledge. Hence, the field of Knowledge Management (KM) has emerged to help leverage their knowledge thereby cope with the advent of the knowledge economy.*

The purpose of this study was to determine the state of knowledge management in higher education institutions in Zambia using an exploratory survey. The study was premised on the systems thinking perspective.

It followed a quantitative research design that used a questionnaire and a knowledge management capability assessment tool. A homogeneous sample size of 45 managerial level staff of two universities was selected. One university is yet to be assessed.

The findings indicate that the two universities are in an unconcerned knowledge management state because they both had scores below 2.5 which was the median in our four-point Likert scale of all dimensions assessed. Therefore, the value of knowledge was not recognized in these institutions, only in isolated cases. Nonetheless, the study provides required background for promoting knowledge management awareness to both academic and administrative leaders. It also highlights positive as well as negative knowledge management indicators that can potentially be improved upon.

Keywords—*Knowledge Management; Knowledge Economy; Higher Education.*

I. Introduction

Rapid changes in the economy and business environment at the end of the 20th century forced organisations of all types to rethink the nature of their resources and capabilities that can create advantage OECD, (2003). Laal, (2010) claims that in such an environment the pace of evolution is swift, and those who cannot learn, adapt, and change from moment to moment simply will not survive. This is because of the complexity, volatility, and highly competitive nature of this environment which has been necessitated by the knowledge economy.

Higher Education Institutions (HEIs) have also not been spared by the pressure exerted by the advent of this economy (Cranfield, 2008). They have been forced to think about the way in which they teach, conduct research and manage their institutions and the various stakeholders. Thus, Drucker, (1993), claims that the only real source of sustainable competitive advantage in such an environment is knowledge.

Interest in Knowledge Management (KM) has been rising. The surge started in the mid 1990s (OECD, (2003). However, Wiig, (2004), expresses disappointment about the lack of understanding of how to pursue KM, both as a long-term commitment, and in ways that are both practical and can be fitted into schedules, efforts and priorities that are of crucial short-term importance.

In light of the above, the main purpose for conducting this study was to provide insights

into the present situation with regards to KM in HEIs in Zambia. This study was an exploratory survey of three public universities in Zambia. However, only two universities have been explored so far. Nonetheless, this paper is distinctive because there is no any such study done within the Zambian HEIs context.

The fundamental problem which was under investigation was the inability by HEIs to assess their KM practices. Rowley, (2000) claims that, it is because managers of these institutions are insensitive to the importance of Knowledge as a tool for enhancing organizational performance and survival.

HEIs should, therefore, learn to evaluate the state of their KM practices in order to cultivate positive knowledge attitudes among stakeholders. Measuring knowledge should be the first step towards determining an organizations knowledge asset and positioning it on the right KM development path (Wiig, 2004). Specific KM focus was on the institution's knowledge culture and mentality of key people. This is in line with a claim by Buckman, (1998), that, 90% of KM is based on cultural change

A knowledge assessment approach is the solution to this lack of capability to measure knowledge by HEIs. In order to address this problem, the study used the Statistics Canada, (2009) KM practices instrument and Wiig's, (2004) Knowledge Management Capability Assessment Tool as shown in Table 2.0 to determine the state of KM in HEIs in Zambia. The results obtained from this survey highlighted major knowledge-related problems and capabilities within the two Zambian HEIs context.

The advent of the knowledge economy has done little to ease the challenges of HEIs in Zambia and other developing countries. Some of the problems that HEIs face include; inadequate financial resources, unprecedented demand for access to higher education and economic and social crises in many developing countries (Teferra and Altbach, 2004). In addition, HEIs suffer from poor, inefficient and highly bureaucratic systems, while out of date infrastructure and poorly remunerated staff are the norm throughout many universities (Teferra and Altbach, 2004). These challenges have made HEIs to rethink their management style whereby business management techniques are being promoted as the best vehicle for change (Ewell, 1999) cited in (Metcalfe, 2006).

According to Naser, (2016: 55) the areas of high performance in HEIs generally include; reducing costs, increasing revenues, improving quality of teaching, scientific research and community service. KM is seen as the major influencing factor of these key performance areas because of the importance of knowledge itself as a competitive added value for humans, organisations and even nations Amudallal, (2016).

Naser, (2016) contends that the role of KM in HEIs is to produce and manage knowledge through activities and technical practices in order to link individuals from various academic and administrative levels and sections of these institutions. This is done through collaboration and sharing of knowledge by established communities of practice and virtual teams. In his view, KM is useful for building knowledge for problem solving and decision making.

There are two broad views that have dominated the KM dialogue, these are; the scientific and the social view of knowledge (Baskerville and Dupolic 2006). However, limitations of both views have raised attention to the Systems thinking perspective. Thus, this perspective was selected to guide this research because of the realization that knowledge is a dynamic phenomenon that cannot be investigated using one school of thought at the expense of another. A holistic approach is needed to adequately address problems in any situation.

Systems thinking or systems theory provides a framework by which groups of elements and their properties may be studied jointly in order to understand outcomes (Ackoff, 1971). Systems archetypes, which are common patterns of events, are a facility of systems thinking that can be used in identifying potential knowledge pitfalls and addressing them in the planning stages of KM (Taborga, 2011).

II. METHODOLOGY

This research was an exploratory survey of three public Universities in Zambia. However, only two universities, namely; The University of Zambia and the Copper-belt University have been studied so far. It followed a quantitative research design that used a questionnaire.

The participants in this survey research were university staff members at managerial and executive level as shown in Table 1.0.

The sampling procedure used in this research was non-probability and specifically purposive or judgmental sampling procedure called homogeneous sampling. The rationale for using this technique was to select key informants with the same set of characteristics such as experience, knowledge, skills and potential exposure to; the operations of their respective universities and possibly to the KM phenomenon. Thus, responses were solicited from both the academic and administrative leadership.

The target population was 103 while the sample size was82 managerial level staff. However, only 45 participants have been surveyed so far of which 30 came from the University of Zambia and 15 from The Copperbelt University while Mulungushi University is yet to be explored.

The research instrument that was used in this research was a survey questionnaire adapted from Statistics Canada, (2009). The instrument determined the state of KM practices in terms of perceived existence or lack thereof across the departments. This instrument was used along with Wiig's (2004) example of Knowledge Vigilance States. This is a KM states capability assessment tool which was extended to include goals for each KM state as advised by Kulkani and Freeze, (2006). Table 2.0 below illustrates the capability assessment instrument adapted from Wiig (2004).

The instrument used a Four-Point Likert Scale rather than a commonly used Five-Point Likert Scale to assess people's perceptions and attitude towards the existence of KM practices within their institutions. This is in line with the advice given by Statistics Canada, (2009) that using an even number of responses, with no middle neutral or undecided choice, was considered essential in forcing the respondent to settle on whether he or she leaned more toward the ''agree'' or "disagree'' end of the scale for each item Rhoads and Ribiere, (2010).

The survey questionnaire was previously validated in studies by Statistics Canada in Denmark, France, Germany, Italy, the Netherlands and recently the US federal agencies Rhoads and Ribiere, (2010). The Cronbach's alpha test in our study showed a value of 0.68 which is an acceptable level of internal consistency and reliability of the scales or dimensions which were measured.

The data was analysized using software called Statistical Package for Social Scientists (SPSS) version 22.0. Means for all the items were summated and composite score for each scale were generated.

III. RESULTS

The following were the dimensions that formed the basis of our knowledge management practices assessment: 1. Policies and Strategies; 2. Leadership; 3. Incentives; 4. Knowledge Capture; 5. Training and Mentoring; and 6. Communication. The findings from the two universities studied indicate that the first dimension scored an average of 2.4 out of 4. The second dimension, leadership, had an average score of 2.3. Thirdly, incentives at the two institutions had an average score of 1.7. Dimensions 4, 5 and 6 had mean scores of 1.7, 2.5 and 2.2 respectively.

It is worth noting that the scales used average scores 1to4 to indicate respondents level of agreeing or disagreeing to the statements with a median score of 2.5. All scores below 2.5 represent lower scores while scores at 2.5 and above indicate high scores. Figure 1.0 summarizes the average scores for all the dimensions using a radar chart.

IV. DISCUSSION

The average scores of the study, except for the knowledge capture dimension, are all below the median of 2.5. This indicates that almost all the dimensions fell below the agree end of the scale. Therefore, the knowledge management practices attitudes of leaders in these institutions towards the assessed dimensions are generally negative. The weakest dimension was incentives and particularly monetary incentives towards knowledge. This was expected given that HEIs have financial challenges as noted earlier.

Knowledge capture is the only dimension with a high score. Individual items within this dimension show positive attitudes particularly with regards to capturing explicit knowledge of best practices in repositories at an average score of 2.6 and encouraging workers to participate in cross department teams or communities of practice at 2.5. Thus, this dimension was the only one viewed positively. This could be partly because of the increased use of Information and Communication Technology (ICT) in these universities.

The culture of knowledge sharing at 2.7 and collaboration with other institutions to acquire external knowledge at 2.9 are also among items that were viewed positively. However, due to lack of explicit knowledge management policies, strategies and programs to support knowledge retention, the policies and strategies dimension was viewed negatively.

Training and mentoring also had an undesired average score. This was unexpected because universities pride themselves in training, not only students but their staff as well. Furthermore, despite most respondents indicating positive attitudes towards continuous education for staff at 2.7; encouraging experienced workers to transfer their knowledge at 2.8, and providing informal mentoring practices within the universities at 2.6. Lack of funding and training in knowledge management was the factor that accounted for the overall undesired perception of this dimension.

Furthermore, most of the respondents also viewed the Leadership dimension with negative attitudes particularly with regards to assessing knowledge sharing in the employee performance review. However, most respondents agreed at 2.7 that knowledge management was a responsibility of managers and executives.

The final dimension which is communication also had undesirable responses. This is despite positive attitudes towards accessing shared documents on a portal with the aid of a content management capability at 2.6 and regularly submitting best practices to knowledge repositories or portals at 2.5. Thus, lack of knowledge sharing through communities of practice at 2.3 and storytelling to convey organizational meaning at 1.5 accounted for most of the negative attitudes towards the communication dimension. Table 3.0 provides a comprehensive breakdown of average scores for the individual items.

V. CONCLUSION

Results of this survey so far, indicate that higher education institutions in Zambia are in an unconcerned knowledge management state. See table 3.0 for a comprehensive analysis of knowledge states. This implies that the mindset of leaders in these institutions is not supportive of knowledge management. The value of knowledge is not explicitly recognized as seen from the sporadic management of knowledge owing to a culture which is not cognizant of the value of knowledge. This means that KM maturity in the two institutions is in its infancy.

However, there are positive indicators with individual items within the six dimensions on which the universities can build upon. In addition, the study has potentially provided required background for promoting knowledge management awareness in higher education in Zambia. The results also suggest to both academic and administrative leaders in these institutions, that there is need to promote knowledge management. This could help position HEIs in the right KM path and thereby enhance their performance.

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REFERENCES

[1] R.L. Ackoff "Towards a System of Systems Concepts," Management Science, 17(11), 661-671, 1971.

[2] A.W. Almudallal, S. N. Muktar & N. Bakri, Knowledge management in the Palestinian higher education: A research agenda. *International Review of Management and Marketing*, *6*(4), 91-100, 2016.

[3] R. Baskerville, and A. Dupolic, The theoretical foundations of knowledge management. "Knowledge Management Research & Practice" 4, 83–105, 2006. Available at: www.palgrave-journals.com/kmrp Operational Research Society Ltd.

[4] R. Buckman, (Knowledge sharing in Buckman laboratories. Journal of Business strategy. January/February, 19, 11-15. 1998).

[5] D. J. Cranfield and J. Taylor "Knowledge Management and Higher Education: a UK Case Study." *The Electronic Journal of Knowledge Management* Volume 6 Issue 2, pp. 85 - 100, 2008. available online at www.ejkm.com

[6] F. Peter Drucker, Post-Capitalist Society. Oxford: Butterworth Heinemann, *1993.*
P. T. Ewell, Imitation as art: Borrowed management techniques in higher education. *Change*, *31*(6), 10-15, 1999.

[7] U. Kulkarni, & R. Freeze, "Measuring Knowledge Management Capabilities." Encyclopedia of Knowledge Management. Idea Group Reference, Hershey, PA 605-613, 2006.

[8] M. Laal, (2010). Knowledge management in higher education. Procedia Computer Science 3, pp. 544–549,2011. Available at: Elsevier.www.sciencedirect.com

[9] Metcalfe, A.S. Knowledge management and higher education: a critical analysis. Hershey: Information Science publishing, 2006.

[9] S A. Samy Naser, , M. J. Al Shobaki, Y. M. A. Amuna, measuring knowledge management maturity at HEI to enhance performance-an empirical study at Al-Azhar University in Palestine. International Journal of Commerce and Management Research Volume 2; Issue 5; April 2016, pp. 55-62, 2016. Available at www.managejournal.com

[10] OECD and Statistics Canada, Measuring Knowledge Management in the Business Sector: First Steps. Paris: OECD Publications Service, 2003.

[11] E. Rhoads and V.M. Ribiere, Evaluation of Knowledge Management Practices in U.S. Federal Agencies. In: Green, A., Stankosky, M. and Vandergriff, L. In search of knowledge Management: pursuing Primary principles. Bingley: Emerald Group Publishing Limited, 2010.

[12] J. Rowley, Is higher education ready for knowledge management? The International Journal of Educational Management. MCB University Press. 2000. Available at http://www.emerald-library.com

[13] Statistics Canada. *How to Cite Statistics Canada Products*. Statistics Canada Catalogue no. 12-591-X. Ottawa. Version updated May 2009. Ottawa. Available at: /pub/12-591-x/12-591-x2009001-eng.htm (your access date).

[14] D. Teferra, and P.G. Altbach, African higher education: Challenges for the 21st century. Higher Education: The International Journal of Higher Education Research January 2004, Volume 47, Issue 1, pp 21–50, 2004. Available online at http://link.springer.com/article/10.1023/B:HIGH.0000009822.49980.30

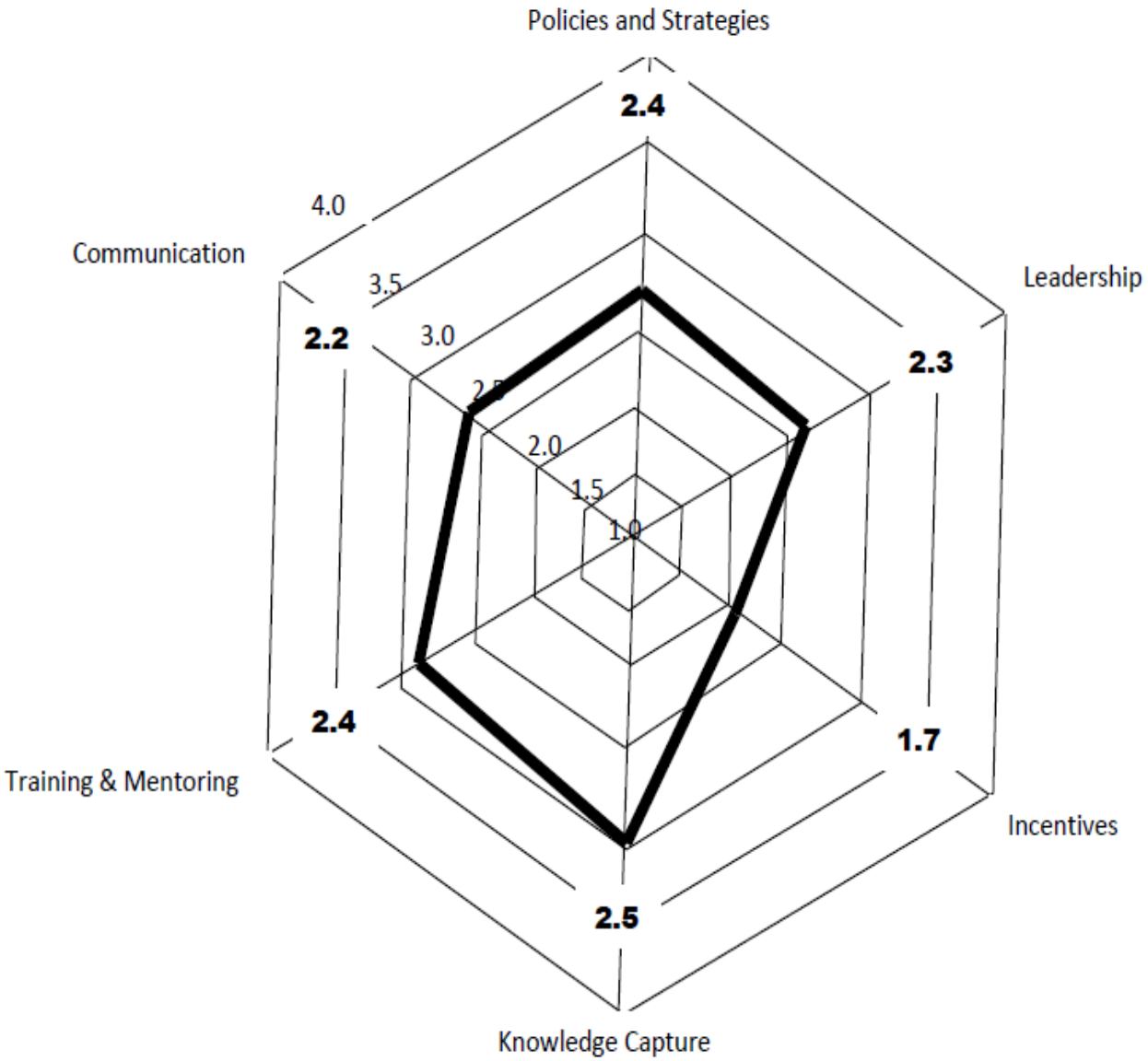
[15] M. Karl Wiig. People-Focused Knowledge Management: How Effective Decision-Making Leads to Corporate Success. Amsterdam: Knowledge research institute, 2004.

Tables and Figures

Role	Number
Registrar	2
Librarian	3
Director/Manager	13
Dean	25
Academic Head of Department (HOD)	29
TOTAL	82

Table 1.0:
Participants and their Roles

Figure 1.0: The Radar Chart shows the average scores for each dimension adapted from Rhoads and Ribiere, (2010)



KM State of HEIs	KM characteristics	KM Goals
Vigilant Attitude Is: Realistic, Automatic, and Tacit Knowledge Is Fully Internalized	-Everyone in the enterprise understands how to create, capture, build and apply the best knowledge -Systems, culture and incentives are fully supportive of KM and are "Knowledge-Focused	Senior management periodically reviews the effectiveness of KM investments to the whole organization.
		Recent improvements in document access have been implemented.
		Expert and expertise identification has expanded and been refined.
		New tools for data manipulation are tested and implemented.
		The impact of lessons learned on operations is communicated.
Proactive Attitude Is: Proactive and Pragmatic Based on Deep Insights	-Most employees and all top managers have accurate understanding of how to create, use, and manage knowledge assets in support of enterprise goals and for personal gains -Culture and incentives are gradually being changed	Senior management sets policy, guidelines, and goals with respect to KM.
		Tools to locate experts are easy to use.
		Capturing, storing, and using lessons learned are part of normal work process.
		Knowledge-document retrieval is fast and easy.
		Historical data utilized for decision making is easy to access and manipulate.
Literate Attitude Is: Systematic but Dependent	-Many employees understand how knowledge is created and transferred. -They know KM is needed but cannot act without outside assistance. -Culture and incentives are not yet supportive of KM.	Organizational leadership understands how KM is applied to business.
		Lessons learned are captured.
		Taxonomies and centralized repositories for knowledge documents exist.
		Experts are able to register their expertise.
		Historical data is available for decision making.
Aware Attitude Is: Idealistic and Innocent	-Some employees are generally aware of the importance of knowledge -They don't know how to implement KM corporate-wide and can't make it a practical priority -Culture and incentives are not considered	Supervisors encourage regular meetings to share knowledge/solutions.
		Experts and their expertise are identifiable.
		The importance of prior lessons learned is recognized.
Unconcerned Attitude Is: Not Caring	-The value of knowledge is not explicitly recognized only in isolated cases -Management and employees manage knowledge sporadically, intuitively, and individually -Culture is not cognizant of knowledge values	Previous lessons learned can be found with perseverance.
		Some experts are willing to share expertise when consulted.

Table 2.0: A Knowledge Management Assessment and Capability Tool adapted from Wiig, 2004

Table 3.0: Average scores of individual items