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**TITLE OF THE COURSE: KNOWLEDGE MANAGEMENT**

**QUESTION:**

a) Discuss the efforts that Zimbabwe has made towards becoming a Knowledge Based Economy (KBE). [20 marks].

b) State the benefits that knowledge mapping will bring to your organisation. [15 marks].

c) State the barriers encountered in the process of knowledge mapping in organisations or specifically in your organisation. [15 marks].

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a) Pettinger (2017, p. 1) highlighted that the knowledge economy is associated with high-tech manufacturing (computer, electronics, aerospace), service sector industries, such as education healthcare and software design and business services such as insurance, information and communications. Pettinger (2017, p. 2) identified some of the characteristics associated with knowledge economy such as knowledge and information key driver of productivity, growth in high technology investment and industries, growth in knowledge intensive service sectors such as education, communications and information, growth in demand for higher skilled labour / University degrees, increased importance of tacit knowledge – the skills and ability to implement codified knowledge, innovation driven by both producers and users (for example, open source platforms/ customer feedback) rather than top-down linear systems, knowledge spill overs from one industry to another. Therefore all efforts Zimbabwe is making will be measured using the above criteria.

According to FAO (2022, p.1) “agriculture is the backbone of Zimbabwe’s economy as Zimbabweans remain largely a rural people who derive their livelihood from agriculture and other related rural economic activities and agricultural activities provide employment and income for 60-70 percent of the population, supplies 60 percent of the raw materials required by the industrial sector and contributes 40 percent of total export earnings and agriculture contributes approximately 17 percent to Zimbabwe’s GDP”. Zimbabwe have made some efforts in becoming a knowledge based economy even though it’s still in its infant stages to become a knowledge based economy. These efforts include some media and political reforms, setting of innovation hubs at all state universities, Zim Asset, STEM, promotion of ICT development, cabinet digitisation and vision 2030 which strive to make Zimbabwe middle income economy by 2030. The world is becoming a global village through the rise of knowledge based economies hence Zimbabwe is making some efforts to align itself with the rest of the global village.

Chitate (2016, p. 1) pointed out that one of the fundamental pre-requisites for industrialisation is its stupendous availability, in a country of skilled-manpower. Zimbabwe has experienced massive exodus of its skilled manpower due to the shrinking f their economy and this has resulted in professionals like doctors, engineers, teachers, lecturers, nurses just but to mention a few leaving Zimbabwe to seek greener pastures in Southern Africa region and beyond. The above without a shadow of doubt has heavily impacted on all efforts Zimbabwe must be doing in trying to be a knowledge based economy. This is so a knowledge based economy depends on the skills and abilities of Knowledge workers. Serrat (2008, p.1) defined a knowledge worker as someone who is employed because of his or her knowledge of a subject matter, rather than ability to perform manual labour and they perform best when empowered to make the most of their deepest skills. Currently the economic situation in Zimbabwe is not favourable to retain knowledge workers hence Zimbabwe dreams of becoming a knowledge based economy hits brick walls due to massive exodus of skilled manpower in need of green pastures.

Kefela (2010, p. 2) identified infrastructural development as one of the key pillars of knowledge society. Zimbabwe rate of infrastructural development is poor but actually it is experiencing rating deterioration in areas of infrastructural development due to weak economic growth. Pushak (2018, p.18) noted that Zimbabwe has faced greater power outages than what low- or middle-income countries in Africa typically encounter and obtaining power connections in Zimbabwe is a lengthy and costly process. It is without a shadow of doubt that power supply challenges in Zimbabwe has devastating effects on industrial production, internet and on almost every sector of the economy like rural electrification. With regards to the above one can argue that Zimbabwe still requires to work a long journey in order to achieve basic requirements needed for a country to become a knowledge based economy.

Marufu and Manenji (2016, p. 84) pointed out that the Government of Zimbabwe launched e-governance program in 2010 and now have a standalone ICT Ministry. The Ministry of Information Communication Technology’s (MICT) strategic Plan 2010–2014, which defines ICT as embracing the use of computers, telecommunications, office systems and technologies for the collection, processing, storing, packaging and dissemination of information. In this case, the study looks at the ICT subsectors of telecommunication, internet and broadband, and the respective opportunities for enhancing economic growth and development arising from their increased usage. Marufu and Manenji (2016, p. 84) pointed out that Zimbabwe lacks an unanimous e-government strategy across its ministries hence the existence of disparities in e-government adoption within the country – some ministries are more advanced while others only exhibit the first initial stages of e-government. The end result is that knowledge economy can’t be attained in such environment that lacks consistent in policy implementation.

The Zimbabwe Herald Newspaper (2019) reported that the Zimbabwe Government erected Innovation hubs centres in all Zimbabwe State Universities dedicated to convert academic knowledge into adoptable products through research and development. The Zimbabwe Herald Newspaper (2019) reported that Treasury in 2019 released $26 million which was used to finance the design and construction of the innovation hubs. Zimbabwe had a fairly eventful year in higher and tertiary education where the focus was on bridging the gap between the classroom and industry. These are centres dedicated to converting academic knowledge into adoptable products through research and development. The hubs have since been opened at the University of Zimbabwe (UZ), National University of Science and Technology (NUST), Midlands State University (MSU). Construction is at an advanced stage at other State universities including the Zimbabwe National Defence University, Great Zimbabwe University and Chinhoyi University of Technology, among others. Moreover Harare institute of technology developed a software that can track fuel consumption on public transport funded by government and at the same time they developed a software that can curb corruption in the redistribution of land. All the above efforts are a sign that Zimbabwe is geared for a knowledge based economy even though a lot of work still need to be done on the ground. The Zimbabwe Herald Newspaper (2015) reported that “Talking of innovation, in Zimbabwe we have had celebrated personalities in that regard and one example is respected farmer Zephaniah Phiri, who initiated a water harvesting project in Zvishavane (Zvishavane Water Project), which has become the pride of our country known in many parts of the world”.

b)Knowledge mapping is a process of surveying, assessing and linking the information, knowledge, competencies and proficiencies held by individuals and groups within an organization ((Dr Ann Hylton, KeKma-Training 2002). Knowledge mapping is a process by which organizations can identify and categorize knowledge assets within their organization – people, processes, content, and technology. It allows an organization to fully leverage the existing expertise resident in the company, as well as identify barriers and constraints to fulfilling strategic goals and objectives. It is constructing a roadmap to locate the information needed to make the best use of resources, independent of source or form (W. Vestal, APQC, 2002). A Knowledge Map describes what knowledge is used in a process, and how it flows around the process. It is the basis for determining knowledge commonality, or areas where similar knowledge is used across multiple processes. – Fundamentally, a process knowledge map contains information about the organization’s knowledge. It describes who has what knowledge (tacit), where the knowledge resides (infrastructure), and how the knowledge is transferred or disseminated (social) (IBM Global Services - Technique Paper, 2000). It allows an organization to fully leverage the existing expertise resident in the company, as well as identify barriers and constraints to fulfilling strategic goals and objectives. It is constructing a roadmap to locate the information needed to make the best use of resources, independent of source or form. (W. Vestal, APQC, 2002). **It** helps to discover the constraints, assumptions, location, ownership, value, and use of knowledge assets, artifacts, people and their expertise (Denham Grey). Contrast this with a knowledge audit, which tracks deviations from policy or established process, checks for compliance with standards and procedures, and seeks to measure and value knowledge assets. It helps to reduce the cycle times and defects in the process and enhances its productivity.

Knowledge maps comes with a number of benefits such as identification of knowledge gaps within an organisation. This gap will be identified through analysing the current skills and the required skills. In an organisation a person might be a job holder for quiet sometime but without the current skills required to hold that job. For example in the previous time minimum entry qualification was advanced level plus 3 years’ experience for one to be employed at Nedbank but this have since changed as one need to have a University degree to be employed at Nedbank. In the end knowledge mapping helps to identify such gaps and the need for further training and educational advancement so that one’s knowledge will be aligned with the market trend that is influenced by a number of factors. Process maps provide a detailed outlook of the current process and guides the effective management of change (Hassing 2020).

Identification of knowledge dependencies within cross functional work groups is one of the benefits that knowledge maps brings within an organisation. Organisations exist as a system in which one area depends on the other for the execution of duties hence one work stream may impact on all other interlinked work streams. For example ICT is a support functions for other organisations and if it fails or experience some challenges it will impact on other functions that depends on it. For example in a banking setup at Nedbank if ICT experience some challenges it means clients in the branches will not be able to withdraw their monies and all other digital platforms like mobile banking, Internet banking and core banking system will be heavily affected. For Audit or compliance to effectively perform their duties they need to have an understanding of what goes on in retail banking, finance and administration. This is usually done through studying their process flows and also from tacit knowledge derived from staff within those departments. For example when an auditor seeks some clarities on certain issues he/she will have to engage the rightful person so that the issue will be clarified. The improvements made in the process can easily be tracked using process maps since it becomes possible to audit and understand different areas in the process as well as the organization (Hessing 2020).

Knowledge mapping assist the organisation to identify where knowledge resides within an organisation. The knowledge map provides an assessment of existing or required knowledge and information on what knowledge, who has the knowledge, where the knowledge does resides (The United State Agency for International Development 2003). It provides the necessary information and helps to determine the Who, What, Where, Why, When and How aspects of the process and problem, and even guides towards possible solutions (Hassing 2020). In this the organisation will be well informed in resolving issues that requires technical skills or specialists. For example if an organisation wants to embark on a project it first need to identify subject matter expects of that project before it kick starts. For example if the project is to do with records and archives software development they need the input of expects such as ICT programmers, Records Manager, Risk, Audit, Compliance, Finance, Internal control, Project Manager and Retail. This is crucial as all those people who have the required knowledge will be involved hence the project will deliver according to business expectations. Knowledge with each of these resources will also be made available to know issues which it will address. For example the sustainability on project costs have to be ascertained by Finance whereas Compliance will look on regulator’s perspective, whereas the records manager will be looking on addressing system user needs.

Knowledge mapping is key and essential to an organisation as it provide the roadmap on how a product or service can be delivered to both internal and external clients. It identifies individual process steps within each process. One can identify the major areas of strengths and weaknesses in the existing process, such that the contribution of individual steps in the process are recognized (Hessing 2020). For example when one is to examine steps followed by projects department when planning to accomplish a certain task, he/she will identify issues such as objectives of project, deliverables, costs, critical success factors, timelines, quality assurance testing, user acceptance testing. In this way it helps the organisation to be well equipped and informed before embarking on a project as the roadmap will be detailing every process involved in from planning, execution and implementation stage of s project. So mapping assist the business (bank) to identify the knowledge required to fulfil the purpose of each process step. If the knowledge is knowledge then a decision can then be taken on whether that knowledge is residing internally or it need to be outsourced. Decision making becomes fast as it deals with the ‘show me’ aspect and not the ‘tell me’ aspect of the process and the problem areas (Hessing 2020).

Knowledge mapping provides an opportunity and a platform for knowledge to be shared within an organisation. Knowledge can be shared through various platforms such as intranet. Intranet can be defined as a network that uses Internet concepts and technologies within an organisation in order to be accessed by employees to share knowledge and such knowledge is stored electronically and access is usually controlled by password (Natarajan 2008 :6). For example at Nedbank there is a shared folder on the saver link in which all information of the bank will be residing. Such above information residing at this shared link includes process flows for all departments, procedure manuals for all departments, compliance issues and job profiles/grading for every position within the bank. Thus the above helps to equip individuals who might be wanting to link or work with the next department. It will also assist staff to know what is expected of on a particular job and what is expected of in a particular department. Without knowledge mapping it will be very difficult for staff to know activities done in other departments. Thus knowledge mapping create a knowledge tool that helps users find what they need. Process maps serves as a measurement tool for a process that is very much necessary to manage and finally improve it (Hassing 2020).

Knowledge mapping is a key assessment to for analysing knowledge quality, knowledge sharing, and ease of access amongst other issues (The United State Agency for International Development 2003). In an organisation knowledge mapping assist in assessing the quality of knowledge an organisation have on particular issues or subjects. For example through knowledge mapping at Nedbank they can be in a position to assess how far the business have gone in penetrating the market on digital banking including tools and devices needed to deliver services expected under digital banking. The quality of knowledge in a organisation is key and a driver that have direct bearing on organisational performances. Some organisation performances is poor simply due to poor quality knowledge that they have. For example in Zimbabwe the reason people usually seeks treatment abroad is because they know and understand that there is poor knowledge quality on health related issues. In a banking sector through knowledge mapping the organisation can identify their area of weaknesses which affect their market share in the banking industry. Process maps facilitate improvements in the process, since it becomes easy to pin point the specific areas that need changes, like bottlenecks, delays, capacity constraints etc. in the light of efficiency and effectiveness of the process (Hassinng 2020).

Knowledge mapping allows organisation to easily share knowledge within the organisation because the success of an organisation rests on knowledge sharing and distribution. Knowledge sharing allows existence succession plans within organisations and business continuity. One of the greatest challenges in organisation is that one person might be knowing a certain job and at the end of the day when that person is not around the organisation will be held at ransom.

c) Knowledge is a strategic resource for an organisation hence it must be at the fingertips of all staff members. When employees have adequate knowledge they will be able to deliver their goals and meet business objectives. There are various barriers to knowledge mapping in any organisation and Nedbank is not immune to those factors. Such factors are but not limited to integration of knowledge management concept, management support for knowledge sharing, technological barriers, existing corporate culture and staff retention not a priority.

The peoples’ mental attitude is one of the barriers of knowledge mapping at the Nedbank. Most organizational knowledge is controlled at the level of the individual – thus for organizations to achieve success they need their employees to be willing to share their knowledge ( Martocchio 2008:3) If a person has a positive mental attitude for knowledge sharing, s/he will be willing to share knowledge. There are some who have wrong mental attitude on knowledge sharing. This is attributed to insecure job security hence they will not share their knowledge in order to remain relevant during their career at the bank. The issue of job security have also been triggered by the Covid -19 pandemic hence despite people being encouraged to work from home they always come to work to secure their jobs rather than simply sharing their knowledge remotely. In the end they will not be willing to share their knowledge as they fear they will be overtaken by events. For instance, experts may hide information in order to reinforce their status within the organization Martocchio 2008, p. 11). There is aspect of knowledge hording as well within departments for example ICT have various functions at the bank that is programming, security and operations and infrastructure development. Most of the time when someone send a query they will be told so and so is not around and he/she is the one who can solve that nature of problem. Whilst we appreciate issue of subject matter expects in organisations, we must also look on succession plans powered by knowledge sharing/mapping. It is crucial to note that some employees consider knowledge as the sole property of the person who holds it as such, it is difficult for an organization to compel an employee to share all of his or her knowledge (Martocchio 2008, p. 9).

Lack of incentives is one of the drawbacks or barriers to knowledge sharing. Lack of organizational incentive is as a barrier for knowledge sharing at the bank. Although incentives do not create new knowledge sharing practice, they strengthen existing knowledge sharing patterns by creating a positive attitude for knowledge sharing practice (Garfield 2013). Knowledge sharing involves some kind of effort and the knowledge providers expect some kind of reciprocal benefit for its effort. Unrewarded efforts will not exist sustainable in the long run. If they found the person as resource person, they negotiate and provide more attractive incentives. Employees don’t get any organizational incentive by sharing their knowledge. The business only pay outsiders who come to render their services in the form of conducting training. From time to time various departments that interlink usually hold training and refreshers. For example employees from departments such as Compliance, retail and Document Management Centre will be sharing their knowledge on their processes and their refining in line with business models. The training can go for five days but there is no incentives given to those trainers but if it was an outsider they will be rewarded. Lack of incentive also affects employees’ creativity and quality of work. This also indicates that lack of intrinsic motivational factors can also affect knowledge sharing among employees.

Time constraint is one of the barriers of knowledge mapping within an organisation. The availability of time affects individual attitude to share or withhold knowledge. In the short term, employees who hide knowledge will have more time available to work on their own tasks, and their performance would be expected to be higher than that of employees who take the time to share their knowledge with their co-workers (Martocchio, 2008, p. 25). Employees who provide services at front line desk are very busy and don’t have time to share knowledge as compared to employees who are in the support functions or back office. For example at Nedbank there are various training that are done but most of the time client facing staff like Bank Tellers, Inquiries clerk, sales consultancy don’t usually attend those sessions as they will be busy serving clients. At the end of the day tapping knowledge from the tellers will be difficult as they will be constrained by time. Even though explicit knowledge will be there in the form of procedures and process flows but one need combination of tacit and explicit knowledge to understand certain concept well. They cannot sit for knowledge sharing session due to the nature of their jobs which prohibits them to be mobile but want them to be stationed at one place.

Information confidentiality is one of the barriers of knowledge sharing within the banking sector. Information confidentiality is a serious problem in the Bank (Garfield 2013). It is very difficult to get bank documents if you are not a member of a specific department. Some documents are confidential even to colleagues who are working in the same department that is the concept of information access levels comes into play. Information confidentiality has basic value for the Bank in particular and financial sectors at large. You cannot share information without the permission of the Bank. For example the Human Resources have serious limitations as far as knowledge sharing is concerned unlike other departments and even ICT they limit the number of people entering their department citing confidentiality. For example very few people have access to know Bank Financial closing balance on a daily or monthly bases. At the end of the day this affect knowledge sharing and dissemination as they will be some missing links on knowledge mapping due to the issue of confidentiality. Confidentiality has a lot of meaning. But under that shelter, people hoard their knowledge. Thus all information entering the bank domain are subject to scrutiny, the same goes to information flows within the bank and those going outside the bank. Not all people at Nedbank have the privilege of sending emails to all at the bank and there are some staff like drivers whose emails are restricted to internal communication only and in this way it affect knowledge sharing.

Lack of appreciation for knowledge as strategic resource in the organization is the main organizational factor that affects knowledge sharing. Knowledge is now being seen as the most important strategic resource in organizations, and the management of this knowledge is considered critical to organizational success and If organizations have to capitalize on the knowledge they possess, they have to understand how knowledge is created, shared, and used within the organization (Minu 2003).  Unless people appreciate the value of knowledge, they will not be interested to retain, share and apply it. This is the main problem in organizations where there is no matured knowledge management system. For example at Nedbank there is no position of Chief Knowledge Officer as expected if knowledge is to be fully recognised as strategic resource. Thus there is low appreciation of knowledge as a strategic resource. The one almost close to be knowledge officer is the Learning, Training and Development Manager but it falls under Human resources department and not as a standalone department. There is actually need for an executive position in charge of knowledge management but the opposite is true at Nedbank. Changes occur only when it comes from top management or Nedbank group as an instruction. There is no system in the Bank that captures employees’ personal experience and institutionalizes it as Bank’s knowledge and share to other employees. It can be learned that the Bank has low appreciation for knowledge as a resource. There is no unit or department that is responsible to manage the Bank’s knowledge. There is no recognition for individual knowledge and use it as organizational knowledge. Knowledge is a process that is accumulated through time and found scattered in peoples mind, documents and products. The main source of knowledge for organization is its employees. But the Bank did not recognize its employees’ knowledge as vital resource to innovate new products and services and improve its efficiency to achieve its strategic objective.

Lack of full support from top management is the main barrier for knowledge sharing. For example there is no stand-alone department at Nedbank for Research or for Business Intelligent to make sure knowledge is acquired, stored and shared. When new ideas are suggested from the bottom, top managements are reluctant to accept it especially if the head of specific department is not willing to buy the idea. This discourages employees from forwarding new ideas next time. Any knowledge that contradicts to the value of the Bank will not get acceptance and is not promoted to be shared among employees. The Bank is a subsidiary of Nedbank group and it puts priority on Nedbank South Africa policies despite the novelty of the employees’ idea. Getting acceptance for new ideas takes a long process as it need to be rubber stamped at group level. The Bank also gives values and promotes sharing of knowledge that helps to ensure the bank complies with regulator, Nedbank group and shareholders.

Technological factors is one of the barriers to knowledge sharing at Nedbank. For example some have maximum email limit of 3gb, some 5gb, some 10gb and senior management above that. The email and ICT policies are not friendly on knowledge sharing. So sharing knowledge through an email in that case becomes next to impossible. This is because most of the knowledge resides in documents but sharing is heavily affected by email size limits. The bank have restrictive policy in terms of accessing certain sites for example one can’t open gmail or yahoo email using Nedbank infrastructure and also the ICT security policy is heavily driven at group level that is Nedbank South Africa Head Office. As a result it becomes difficult for people to search and gather knowledge using bank ICT infrastructure which is restrictive and if one uses more than 20gb per month on social media sites such as Facebook, YouTube that person will be summoned and warned. Although technology facilitates knowledge sharing among employees, it has a lot of challenges to fully utilize its opportunities. The Bank has different technological infrastructure like intranet but these infrastructures are not properly configured to support knowledge sharing among employees due to various factors. Technology can create value to the organization if the necessary skills, infrastructure, systems and procedures are built to support the knowledge sharing practice of the Bank. Thus there is technological barriers and lack of technical support on knowledge sharing.

Lack of effective communication skills by which knowledge is disseminated from knowledge holder into the life streams of Nedbank. In sum, knowledge is personal, resides within the individual, and its transfer often requires direct communication between individuals (Martocchio 2008, p. 5). One dimension is communication skill by which knowledge is shared from its source to its recipient. Communication skills include both verbal and codification skills. Of course knowledge is embedded in products. But it is difficult to extract knowledge from organizational products especially for inexperienced employees. This also indicates that the Bank does not have explicit procedure to codify its employee’s experiential knowledge and make it accessible to other colleagues. The Bank encounters serious problem when its senior employees leave the Bank as the Bank does not have any explicit procedure to capture those leaving employees. When employees leaves the organisation they will hold the exit interview with regards to the experience of that employee at the bank. Given the economic situation in the country staff retention no longer a priority in organisations hence this affect knowledge sharing especially to that that have been with the organisation for many years.

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