

UNDERSTANDING THE IMPACTS OF KNOWLEDGE MAPPING IN AN ORGANIZATION: A REVIEW

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ABSTRACT

This article reviewed the impacts of knowledge mapping as one of the key aspects of knowledge management in an organisation. Knowledge mapping has become one of the strategies in knowledge management system. Business organizations and institutions are advocating for knowledge mapping implementation due the enormous roles and benefits attached to it. This article reviewed the advantages of knowledge mapping in an organisation. The paper also discussed some of the knowledge mapping techniques that organisations applied in order to achieve the circle of knowledge management practices. These include yellow page, information flow analysis, social network analysis and process knowledge mapping among others. The paper explained the processes of knowledge mapping in an organisation and the Role of knowledge manager in Knowledge Mapping. The article concludes that to achieve success in implementing knowledge mapping, there is the need to have effective knowledge manager with good sound qualities. These qualities will play an important role in successful knowledge mapping in any business or institutional organisation. Recommendations were provided such: organisations should invest and fund the human capital project as the key asset of an organisation rather than material resources. Investing in human capital will improve the competence of employees and knowledge managers as while as improve productivity and services and human resources should encourage and sponsor formal and informal training such as seminars, workshops and conferences participation as well as obtaining higher educational qualification through further studies among others.

Keywords: Knowledge Management, Knowledge Mapping, Organisation

INTRODUCTION

Knowledge plays a strategically important role to the success and continuous growth of an organization. Knowledge is a familiarity, awareness, or understanding of someone or something, such as facts, information, descriptions, or skills, which is acquired through experience. Knowledge represents a crucial drive for organizations' competitive advantage. It generates value by supporting an organization's capability to produce innovation (Patriotta, Castellano, & Wright, 2013).

Knowledge management (KM) is a newly emerging approach aimed at addressing today's business challenges to increase efficiency and efficacy by applying various strategies, techniques and tools in their existing business processes. It has been described as a process or a set of processes a method of management, a new dimension of strategic information management (White, 2004). Knowledge management (KM) is the process of organizing, creating, using, and sharing collective knowledge within an organization. Knowledge management (KM) is the collection of methods relating to creating, sharing, using and managing the knowledge and information of an organization (Islam & Ikeda, 2014). Despite the popularity and importance of Knowledge Management, KM, to an organization, there is no universally accepted definition of KM or generic model for carrying out KM initiative (Aharony, 2011). As a result, various models for implementing a knowledge management initiative have been proposed by both researchers and practitioners. In order to design a proper roadmap for implementing KM program and determine the strategy for implementing such program in a particular organization, an understanding of the organization including its culture, relationships as well as communication networks is critical (Jain, 2013). In order to gain such understanding, knowledge mapping be necessary.

The mapping of knowledge is one of the most technical aspects in the field of knowledge management. A map of information represents the intellectual capital of the company visually. It helps stakeholders assess where essential information resides, how it moves, and any challenges or gaps. Knowledge mapping is defined as the process, methods and tools for analyzing knowledge areas in order to discover features or meaning and to visualize them in a comprehensive, transparent form such that the business-relevant features are clearly highlighted (Speel, Shadbolt, Vries, Van Dam, & O'Hara 1999). It can be defined as a process of surveying, assessing and linking the information, knowledge, competencies and proficiencies held by individuals and groups within an organization (Liang, 2007).

Nevertheless, there is no research which has been done on how to help knowledge managers for taking a proper kind of knowledge mapping technique. Knowledge mapping is a technique or process for organizing and visualizing relationships between concepts, information, and people. It provides a framework for navigating resources quickly and efficiently by identifying their connections. Through the knowledge mapping process, you can create a collaborative and interactive representation of knowledge that enables users to access different resources easily.

Knowledge mapping benefits an organization by taking important information and data, organizing it, and keeping it centralized to improve operations and decision-making (Liang, 2007). For an enterprise, knowledge mapping can help in many ways, such as

- optimizing resource utilization.
- Increasing understanding of processes.
- Identifying gaps in processes or backlogs in products.
- Increasing overall profitability.
- Improving cross-team collaboration.

In addition, knowledge mapping increases collaboration among departments within an organization as staff members can access essential data on existing or future projects in one centralized location. Knowledge mapping is best suited to businesses who want to improve their knowledge management capabilities and accelerate knowledge sharing and transfer across the organization (Obasikene, 2008). Knowledge maps don't actually store the knowledge of a business – it just shows you where to find it.

THE ADVANTAGES OF KNOWLEDGE MAPPING

Implementing knowledge mapping has a lot of benefits among which are:

- Encourage knowledge retention. A knowledge map is instrumental for transforming employees into “knowledge partners” that take on an active knowledge-creating role and document their experiences. This process helps individual retain knowledge in an organisation , even when key employees leave.
- Improve collaboration. Effective knowledge mapping helps to reduce knowledge silos and improve cooperation by making it easier to enhance knowledge sharing and knowledge transfer between colleagues and teams.
- Identify knowledge gaps. Mapping out the knowledge helps identify weak spots and areas where you need to transform tacit knowledge into explicit knowledge.
- Improve the decision-making process. When you facilitate knowledge flow, employees can easier locate knowledge, identify problems, and find solutions.
- Level up knowledge-centered support. A knowledge map helps your support team answer both internal and external support requests on time, as they can locate and extract the correct information faster.

KNOWLEDGE MAPPING TECHNIQUES

There are different techniques to map existing organizational knowledge. Each of these techniques uses a set of tools, approaches, objectives, and specific characteristics. In this section, these techniques are introduced concisely.

YELLOW PAGING

The yellow pages facility is a structural collection of data and documents about people in an organization. It is an effective way to know who knows what is in an organization. The purpose of yellow pages is to facilitate communication and knowledge sharing between individuals and groups

of people in organizations. Many organizations have their own yellow paging applications, which enable employees to find and communication with each other and with particular expertise and skills (Mikolajuk, 2005). This method has some weaknesses, 1) problems in quality reviewing or existing knowledge of people; 2) maintenance, like up-to-dating information in system. The underlying reasons are as follows (Iske, 2005):

- The systems are not integrated in the business processes;
- There is no connection between the context of entering information and the context of using information;
- The information providers need to be pro-active in keeping the system up-to-date.

INFORMATION FLOW ANALYSIS

Information flow analysis determines who is accessing what information resources and how often by researching in organization's functional process and informal networks. This process can be put into practice by use of complex computer programs (Lutters, Ackerman, Boster, & McDonald 2002). Some techniques can provide the same information. Examples of them may be using sign-out sheets to capture real world usage information and taking advantage of questionnaires and interviews which include these questions about a specific topic (Maccall, 2006) such as:

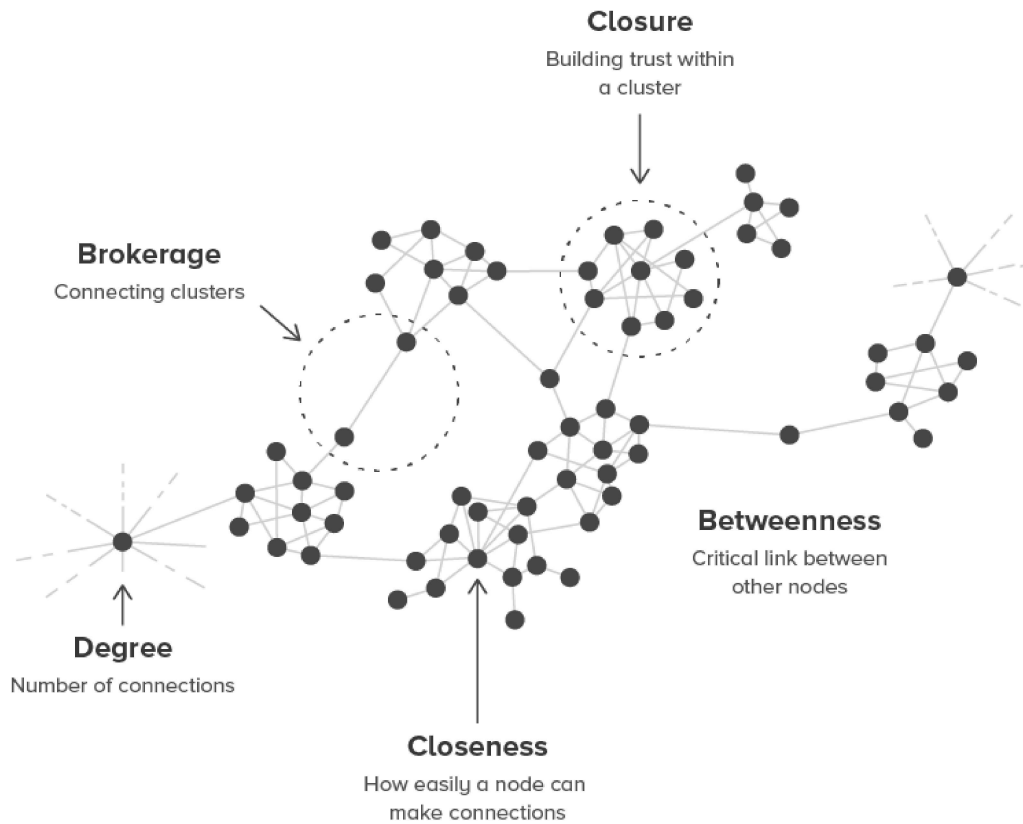
- Where do you refer when you need information on it?
- What resources do you use on it most of the time?
- Who or where do you submit information on it to?

SOCIAL NETWORK ANALYSIS

Social Network Analysis (SNA) can be defined as a map and a measuring of relationships and flows between people, groups, organizations, computers, or other information or knowledge processing entities (Pollock, 2012). The nodes in the network are the people and groups and the links show relationships or flows between the nodes. SNA provides both a visual and a mathematical analysis of complex human systems. It is one of the methods used to understand networks and their participants are to evaluate the location of actors in the network.

SNA try to understand how tacit knowledge was broadcasted and how it can be improved. SNA also enable managers to understand and exhibit thousand relations which facilitate or prevent creation or transfer knowledge. doing SNA we can answer to these questions: How does information flow in an organization? To whom do people turn for advice? Have subgroups emerged that are sharing what they know as effectively as they should?

Figure 1. Social Network Analysis (SNA)



Sources:

PROCESS KNOWLEDGE MAPPING

Process knowledge mapping is a method of analysis to define the knowledge needed and the knowledge available to support a business process. It also analyzes a business process to identify decision milestones (where knowledge is needed), knowledge requirements (what knowledge is needed), routes for access and retrieval of knowledge through people and technology and gaps between required skills and current skills (USAID, 2003). In this technique, we can identify individual organizational processes and their steps, the position of the person performing the step, main skills and training which the person should have it in specific position, experiences and expertise for position, needed resources and procedures or actions that should be carried out by applying it. In the other word, we use job analysis in this technique to mapping knowledge.

FUNCTIONAL KNOWLEDGE MAPPING

Functional knowledge mapping is a step-by-step process which supports details. It is very similar to process knowledge mapping but functional knowledge mapping stresses on the person in the position. By using of this technique, we can list individual's knowledge and social contacts which are related to the specific position. It also aids us to determine individuals having skills, experiences,

academic educations and other resources which can be applicable in other areas or who may be useful or possessing knowledge about that position. Therefore, functional knowledge mapping creates an organizational directory of skills, knowledge, individual's relationships and resources. When using this technique, we should prepare interviews or survey to gather the needed data.

One of the advantages of mapping knowledge using two last techniques is that one can find gaps between what she needs and what is in reality for individuals holding specific positions. These gaps can be seen in education, training, experience, and resources (Maccall, 2006).

KNOWLEDGE MAPPING PROCESSES

The knowledge mapping process is a great way to gain insight into the information your organization already has versus the data it doesn't yet have. Below are a few related information mapping techniques and tips that many business professionals use to facilitate sharing thoughts, ideas, and concepts.

You can create a simple but practical knowledge map for your team or objective in 4 easy steps:

- 1. Identify a topic for the knowledge map and set up the framework.** One easy way to accomplish this is with the pre-designed templates provided by knowledge map software. First, start with a topic essential to the project or goal based on who will be using the knowledge map.
- 2. Differentiate between related and relevant information resources.** For example, the nodes might include agendas, ideas, logistics, or preparation. Identify all necessary resources, and figure out who would need to consult with to collect the information for each node.
- 3. Continue branching out to more specific nodes if and as needed.** In brainstorming example, the preparation node might lead to sub-nodes like the problem being solved, the target consumer, or the minimum number of ideas required.
- 4. Include keywords:** explaining how the nodes relate to one another as you capture each data required.

While knowledge mapping can be a highly efficient platform for showcasing and sharing knowledge, the process is also susceptible to information bloat. As a rule of thumb, knowledge maps should:

- Avoid introducing excess or irrelevant data that may prevent users from quickly accessing the content they need.
- Stick to high-worth information that can be applied directly and immediately to a decision or the next course of action.
- Keep the information as clean, lean, and user-friendly as possible.

THE ROLE OF KNOWLEDGE MANAGER IN KNOWLEDGE MAPPING

To facilitate the implementation of knowledge mapping, a well-defined and operational knowledge management system should be in place. Latest information technology should be used in the libraries.

In this regard, the knowledge manager should consider himself as the chief knowledge officer of the entire organization and should work together with the chief information officer, heads of the planning department, the computer and information technology center, the human resource management department, the finance department etc., to design and develop a good knowledge mapping system. Such system should be built on the existing computer and information technology infrastructure including upgraded intranet, extranet, internet and available software programs to facilitate the capture, analysis, organization, storage and sharing of internal and external information resources for effective knowledge exchange among employees and other users.

Knowledge manager in the 21st century played a vital role in advocating for knowledge sharing among users, and their respective communities where people and ideas interact in both real and virtual environments to expand learning and facilitate the creation of new knowledge (Hussain & Nazin, 2013). Knowledge manager have a crucial role in the development of processes and policies that harness the knowledge base of an organisation. As information custodians and disseminators within institutions, knowledge manager makes substantial contributions to the successful implementation of knowledge management projects (Patil, 2013).

Quality of a Knowledge Manager

- i. Ability to educate:** An effective Knowledge Manager should have the ability to bring km theory to life in a language that the whole organisation understands.
- ii. Ability to influence:** For knowledge mapping to be a success in any organisation, you need both the leadership of your Senior Management and the support of the other professions in the Business. Senior Executive support and their buy-in to the knowledge management vision is vital; without their support and leadership any organisational change will not be effective. As well as leadership support from the top you also need bottom-up support from other professions in the Business; you'll need everyone on-board for km success. Effective Knowledge Managers can influence at all levels across the organisation.
- iii. Ability to strategize:** A good Knowledge Manager understands the wider Business Strategy and creates a km roadmap that aligns to it. Strategic km goals should integrate with the strategic Business goals and an effective Knowledge Manager demonstrates how km supports the Business's overall plan.
- iv. Good Communication Skills:** Good knowledge manager is mostly advocate about change. People's ability to adapt to change varies, however they are more likely to embrace change if they understand the reasons for the change and how they will benefit from them. Key to this is effective communication and good relationships with other professions, such as Quality, Human Resources, Risk Management, Communications and Innovation. You'll need everyone on-board to make change successful so developing a comprehensive communications strategy and plan that includes training is vital to km success.

- v. **Good Planning:** An effective knowledge manager requires a robust plan and framework as a solid starting point from which an organisation can develop the tools and skills to make knowledge mapping real.
- vi. **Be Patience:** Good knowledge manager is mostly about patient and ready to accommodate criticism. Learning from past culture change initiatives in the organisation; what worked and what didn't. Change is not only about a shifting of processes, tools and techniques but also about a fundamental shift in culture.
- vii. **Ba Resilience:** Good knowledge manager takes courage!

CONCLUSION

Organisations today have invested heavily in human capital and the essence is to have competitive advantage above other organisations. Implementing knowledge mapping is a key to improve productivity and efficiency in any organisation. To achieve success in implementing knowledge mapping, the need to have effective knowledge manager with good sound qualities. A good knowledge manager can help an organisation to select their suitable techniques with attention to technique's features and apply it in organization and be sure of mapping knowledge successfully. Organisations can also adopt knowledge mapping techniques to support and conceptualize knowledge sharing to help individuals find experts who are in need.

RECOMMENDATIONS

1. Organisations should invest and fund the human capital project as the key asset of an organisation rather than material resources. Investing in human capital will improve the competence of employees and knowledge managers as while as improve productivity and services.
2. Organisations should provide adequate formal and informal training programmes in the organisation. Human resources should encourage and sponsor formal and informal training such as seminars, workshops and conferences participation as well as obtaining higher qualification through further studies. Individual's will acquire more tacit knowledge, skills and techniques which will help the organisational development.
3. Organisations should provide adequate ICT resources, facilities and tools for the successful implementation and execution of knowledge mapping. This can be improved through the provision of computer systems, internet facilities, tools, equipment's and installation of good software for knowledge mapping system.
4. Management of organisations should put more interest in knowledge management activities and knowledge mapping in specific. These practices should include knowledge identification, acquisition, organization, sharing/transfer, auditing, repackaging, uses, application and knowledge preservation for successful operation in an organisation.

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