

Application and Challenges of Knowledge Management System: A Case Study of St. Mary's University

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Abstract

The study assesses the practice and challenges of knowledge management system and its application to St. Mary's University. The study also addresses the knowledge management practice of the University, how the employees understand it, and the challenges for the effective implementation of the system. Participants for the study were selected using purposive sampling. The findings indicate that there are confusions in conceptualizing knowledge management system in the Institution. The Institution has applied knowledge management system mostly in document management and data base management. Getting employees buy in and updating knowledge immediately are the most common challenges in knowledge management system. The study, therefore, suggests to use these effective workable recommendations to advance the application of knowledge management system in the Institution.

Key words: Application, Challenges, Knowledge, Management, System

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Introduction

Knowledge has become one of the most highly valued commodities in modern economy. Furthermore, it is considered as the principal tool of competitiveness, innovation and national economic development. The fast-growing knowledge-based economy has increased the level of competition among organizations to sustain competitive positions (Muthuveloo *et al.*, 2017). That is why organizations are increasingly concentrating on employees' knowledge, experience and expertise (Torabi *et al.*, 2017). Due to its competitive and economic significance, study and research about knowledge is intensified.

The concept of knowledge-based economy has drawn the attention towards managing knowledge besides being labor and capital intensive. Being knowledgeable provides an edge to work independently and promotes staying creative (Tajali *et al.*, 2014). Knowledge management plays a strategic business role in organizations and affects teamwork, human capital and overall effectiveness (Feng *et al.*, 2005; Marques and Simon, 2006). The knowledge base view states that human capital plays an important role in acquiring knowledge, developing competencies, building up up-to-date technological skills, development of positive attitude and motivation to work for attaining organizational goals (Kianto *et al.*, 2016).

Knowledge Management (KM) is used to capture, document, retrieve and reuse knowledge, as well as to create, transfer and exchange it (Dyan and Evans, 2006). There is no limit to where KM can be applied, ranging from individual learning, small enterprises to large multi-national corporations: KM has become increasingly more important for individuals to understand what information is essential, how to administer this essential information and

how to transform essential information into permanent knowledge (Tseng *et al.*, 2012). KM plays a fundamental role in the success of an organization's activities and strategies (Castrogiovanni *et al.*, 2016). Therefore, managing and using knowledge effectively is vital for both individuals and organizations to take full advantage of the value of knowledge.

According to Dyan and Evans (2006), an organization that gives value to knowledge as a source of gaining competitive edge than competitors, should build up system that ensures constant learning and an effective way of doing tasks. In order to systematically manage any company's potential knowledge, we need to develop a system to apply a knowledge management system (KMS). Knowledge management systems are used to gather, manage, share, and utilize knowledge that has been stored in different databases throughout the organization. The new paradigm is that within the organization, knowledge should be shared in order to grow. Sharing knowledge among staff makes a company stronger and more competitive. Knowledge management may help in obtaining competitive advantage and improved employees' performances through innovation (Muthuveloo *et al.*, 2017; Carneiro, 2000).

According to Trevor Arden and Stephanie Edwards (2009), customer service is a sum total of what an organization does to meet customer expectations and produce customers' satisfaction.

The home page of customer service KMS consists of the following parts: new services to show a new service, update services that provide the services recently updated, recommended services that provide the service recommended to employees, hot knowledge to view the top new service, and statistics information to show statistics information.

The primary focus of KMS is to utilize information technology and tools, business processes, best practices, and culture to develop and share knowledge within an organization in order to have significant impact on organizational performance. So, it is obvious that there is an increasing importance of knowledge-based intangible assets (Marr, 2003) and knowledge management system process (KMS). To this end, many organizations have realized that the creation, transfer, and management of knowledge are critical for success.

However, the dimension of KMS process has not received adequate attention. Several organizations are attempting to use KMS to improve their employees' performance by using a KMS process initiative as investment decision. Benbya, *et al.*, (2004) have also mentioned that to give effective and sustainable services, service providers are required to possess a high level of understanding of KMS services both internally and externally.

(Feyori, 2010) on his research titled "Factors Affecting Employees' Performance" indicated the variables that affect the performance of employees of St. Mary's University College of Open and Distance Learning : training, motivation, supervision, working environment, organizational culture, and individual characteristics.

Bekan, (2019) also studied the impact of working environment on employees' performance. According to his study, good organizational work environment contributes a lot to employees' performance. Likewise, positive work place relationship would motivate employees to work hard and improve their performance.

Knowledge Management provides benefits to individual employees, communities, and to the organization itself (Dalkir, 2005). The findings of

different researches depicted that effective use KM practices have contributed a lot to the organization's success. When an organization does not have a proper knowledge management system (KMS) the organization may get memory loss and brain drain. Memory loss means the absence of KM that leads to the repetition of the same mistakes because nothing has been learned from previous experiences. Brain- drain leads to the loss of valuable knowledge resources when employees leave the organization.

To date, none of the studies in the literature have assessed the application and challenges of KMS in one of the Ethiopian Private Higher Education Institutions. Rahel Bekele and Worku Jimma (2013) have conducted research on an assessment of the level of knowledge management practices at *Jimma* University. The scholars have assessed the perception of staff on the current KM practices of the University from four knowledge management pillars, namely, technology, leadership, organization and learning. The research revealed that the level of perception on KM practices among academic and non-academic staff of the University is different. Technology was the least problematic and leadership was the most problematic among the four pillars with respect to the current knowledge management practices in the University.

Objectives of the Study

General objective

The general objective of the study is to investigate the applications and challenges of knowledge management system to St. Mary's University.

Specific objectives

The specific objectives of the study are to:

- ✓ Investigate the level of understanding of individuals at SMU about the concept of knowledge management system;
- ✓ Describe the application of knowledge management system in St. Mary's University; and
- ✓ Identify the challenges of knowledge management system in St. Mary's University.

Material and Methods

Informing this decision should be the world view assumptions the researcher brings to the study; procedures of enquiry; and specific methods of data collection, analysis and interpretation. By having all these in mind, the researcher used descriptive research design with mixed approach. The study also used a survey research strategy because of the need to have factual quantitative and qualitative information from a representative sample of a study population. The study utilized mainly primary data sources.

The target population of the study are all employees who have direct relationship with the focus of knowledge management system of the University. The researcher collected data from the coordination offices of CODL, 5 registrar officers from both undergraduate and graduate programs, one Center of Education Improvement Research and Quality Assurance Officer, 10 secretarial pool members and selected administrative staff from different levels of managements selected by using purposive sampling techniques. In this regard, what the researcher magistrate is their direct role on knowledge management practices, their current position in the institution

and their aspiration to apply knowledge management system in their day-to-day operation.

Among the different techniques of data collection, the researcher used questionnaires, interviews and document analyses. Since the research design is descriptive, the researcher included both open and close - ended questionnaires. The researcher also developed structured interview questions for the selected staff who have the skills and experiences on knowledge management system in the University. Kvale (2009) pointed out the importance of interview guides that contain the purpose of the study and a description of the corresponding questions. The research questions are aimed at gaining a detailed perspective on how knowledge management is contributing to bring effective organizational change and learning. The interview starts with more general questions that focus on the broad context in which knowledge management systems, organizational change and learning are perceived by organization members. As proposed by Kvale and Brinkmann (2009), the interview questions are as brief and simple as possible.

After the data were collected, they were tabulated, systematically analyzed, organized and interpreted. Descriptive statistics method (mean, median and mode) was used to analyze the data because it is suitable and simple to analyze. The study applied descriptive analysis because it is all about trying to describe or summarize the data. Although it does not make predictions about the future, it can still be extremely valuable in business environments.

Theoretical Framework

Recent work in the area of strategic management and economic theory has begun to focus on the organization's resources and capabilities. This perspective is referred to as the resource-based view and has gained acceptance in the strategic management literature (Prahalad and Hamel, 1990; Barney, 1991; Connor, 2002). The resource-based view suggests that organizations should position themselves strategically based on their unique, valuable, and inimitable resources and capabilities (Prahalad and Hamel, 1990; Zack, 1999; Connor, 2002). In this context, knowledge is considered as the most important strategic resource of the organization (Nonaka, 1994; Kogut and Zander, 1996; Zack, 1999; Wijetunge, 2002).

Knowledge is meaningful and authenticated information, whereas information is processed and organized data (Davenport and Prusak, 1998; Alavi and Leidner, 2001; Yahya and Goh, 2002). Knowledge is more helpful than information to facilitate the strategic decisions on time. It is categorized as explicit and tacit knowledge (Nonaka and Takeuchi, 1995; Polanyi, 1966). Explicit knowledge is easy to articulate, capture, and distribute in different formats. Tacit knowledge is generally unspoken and hidden (McInerney, 2002). It is difficult to capture, codify, adopt and distribute tacit knowledge because individuals cannot easily articulate this type of knowledge (Bhatt, 2000). It can be thought of as the know-how that is acquired mainly through personal experience (Nonaka, 1994; Ipe, 2003; Perez and Pablos, 2003).

Hence, knowledge management process should be regarded as the continuum comprising the knowledge-related definition, acquisition, creation, buying, development, sharing, diffusing, integration, usage, and evaluation activities; as well as reengineering the whole process (Demarest, 1997; Beijerse, 1999;

Liebowitz, 2000; Beech *et al.*, 2002; Perez and Pablos, 2003). Basically, four phases: knowledge acquisition, internalization, sharing and, and summarize the different activities in the overall process of knowledge management which has also a function supporting the strategic management process of the organization.

In every organization, the flow of knowledge management has to follow the following conceptual model:

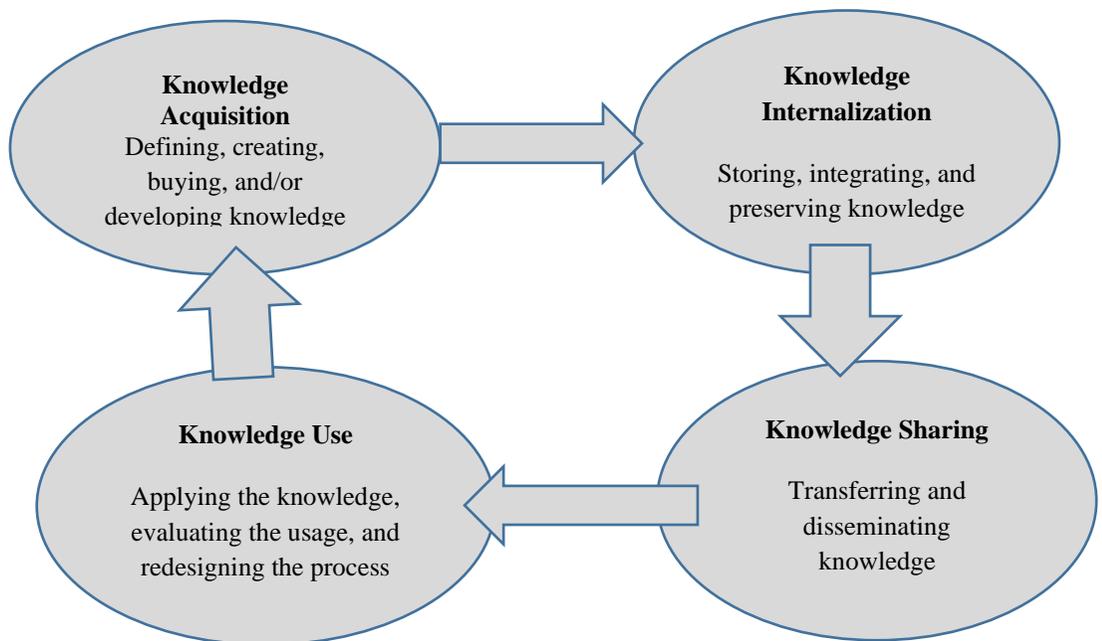


Figure 1. Conceptual model of Knowledge Management System of an Organization

Source: adopted from Literatures (2022)

The phase of knowledge acquisition comprises the operational definition of the knowledge organization needs, determining the knowledge gap, new organizational knowledge creation, and buying and/or development of the needed knowledge. Organizational knowledge is stored, integrated into repositories and preserved at the knowledge internalization phase.

Knowledge sharing implies the transfer and dissemination of knowledge throughout the organization. At the phase of knowledge use, knowledge is exploited and applied to organizational goals and objectives. Then, the efficiency of this usage is evaluated. If needed, the process is redesigned. Various social and technical tools are used at each phase of knowledge management. In order to effectively execute the process, appropriate tools should be selected and used efficiently at each phase. Note that the phases cannot be seen as simply sequential. Rather, recursive relationships characterize the process (McAdam and McCreedy, 1999).

There is no universally accepted model of knowledge management which is applicable to all organizations. Contextual origins of most models relate to large private enterprise studies. However, the field has become established and interest from other sectors has grown since 1990's. Thus, knowledge management has passed the fad level (Ramsay, 1996; McAdam and Reid, 2000). Very different models have been put forward from then up to now. These are designed for various contexts, to be valid for several types of organizations. However, the model explicated above is a general one that could be useful for demonstrating the general knowledge management processes of most types of organizations. A knowledge management conceptualization for a specific type of organization must depend on the key attributes of that type of organization and consider the actual and potential challenges faced by those organizations. For this reason, to conceptualize university knowledge management, they discuss with a particular focus on their characteristics and the challenges they face.

Traditionally, creating new knowledge and disseminating it throughout the society is perceived as the main function and responsibility of universities (Reid, 2001; Loh *et al.*, 2003). Regarding this function, universities have two

main activities: research and education. Universities contribute to the social capital of the society with their graduates and create/produce new knowledge with the research they conduct. They have been in a somewhat isolated situation in the society, partly because of the specialties of their main activities and partly because of their established characteristics resulting from academic autonomy. Consequently, sometimes they have been described as ivory towers and the knowledge they create has been evaluated as an output far from being applicable to real world problems (de la Mothe *et al.*, 2000; Loh *et al.*, 2003).

Admittedly, universities have had significant importance for knowledge creation. This expresses the strategic positioning of the university in the modern world. The socio-economic transformations co-existing with the increasing significance of knowledge and knowledge processes in economic and social life have had profound effects on the university system as well. Globally, knowledge creation has gained a heterogeneous structure (Krücken, 2003; Zaharia and Gibert, 2005).

The new era is not an era that the university loses importance. What differentiates the new era is the crucial need of the University for Cooperation and various interactions so as to realize its functions. The need for interaction is valid for institutions at all levels of higher education, from community colleges to major research universities (Maurrasse, 2001; Fuller, 2002). Besides, the challenges of the new era require complex internal rearrangements in the university. The university needs to improve its adaptive capacity (Wissema, 2009). This is necessary for new knowledge production. Knowledge management plays a critical role at this point. The university, whose main mission is to create and diffuse knowledge, has to make its own

knowledge processes effective. This will make it easier to cope up with the challenges that the new economy imposes to the university.

Results and Discussion

Level of understanding about Knowledge Management System

The results revealed that 30.6% of the respondents agreed that they have a clear understanding about the concept of knowledge management system as opposed to the 28.6% who do not have. 18.4% of them were neutral on the question. Respondents were also asked to indicate their feeling towards the definition of knowledge management system. Accordingly, 36.7% of the respondents replied that knowledge management is a platform for repository/database for electronic resource, and 30.6% of them argued that it is a management tool to help staff acquire and share knowledge. The study results confirmed the definition given by Oblinger and Rush (1997) as the process of identifying, organizing, storing and disseminating information within an organization. When knowledge is not easily accessible within an organization, it can be incredibly costly to a business as valuable time spent seeking out relevant information versus completing outcome-focused tasks. They also argued that effective knowledge management allows individuals and company employees to innovate, to solve problems and communicate vital information and to increase productivity within a business or organization. Regarding to the contribution of knowledge management system, 36.7% of the respondents reported that knowledge management system contributes significantly to their day-to-day operations. Studies, in this context, argued that knowledge management is important because it supports the constant sharing of data across all users within a business or organization and emphasizes the importance of learning. Sharing data or

information becomes a primary focus and enables innovation or company culture change when needed. The knowledge and expertise that management owned could easily be accessible to employees and create a positive and conducive work environment. Effective knowledge management supports the creation, dissemination and utilization of knowledge to help achieve an organization's objectives and goals.

On the other hand, 24.5% of the respondents replied that knowledge management system has no significant contribution to their job and does not add value and 28.6% of the respondents are neutral towards the question on measuring the exact contribution of knowledge management system for their day-to-day operation. However, 42.9% of the respondents reported that knowledge management system helps them gain, share, retain and use knowledge in their day-to-day operation. This result supported the study by (Zaharia and Gibert, 2005) that demonstrated the need to integrate information and communication technologies and the business environment, particularly regarding issues related to internal organization and external factors. The collaboration between workers is one of the most appropriate ways to capture tacit knowledge, but the increasing pressure of cost and time reduction, and delivering better projects and fighting ever increasing environmental challenges have made the effective use of managing explicit knowledge that is the core focus of the construction industry in past few years. However, capturing tacit knowledge within the education sector remains a challenging area of research and development.

Application of Knowledge Management System

Based on the analyzed data, 47.0% of the respondents agreed that the University is applying knowledge management system for the sake of

managing database system. Database management systems store and distribute information that relate to specific products or business operations. Using this system helps employees have access to important data, and it may help management share important information more quickly. For example, if a company receives a new client, management may input the client's information into a database management system so that employees can have access to it. On the other hand, 42.9% of the respondents strongly agreed that St. Mary's University is currently using document management system, and employees with the same percentage are neutral on the application of knowledge management system in the Institution. Companies can use document management systems to create, maintain and organize documents. Companies have the option to place all of their documents into one system, or they can create various manuals for each department. This is useful for companies that handle extensive paperwork, like finance and insurance companies. It is also helpful when companies offer various products or services so that they can keep track of inventory documents and balance sheets. Document management systems allow for various members of a company to access documents easily since they can access them all in one system. 36.7% of the respondents agreed that St. Mary's University is applying knowledge management system on expert knowledge system and content management system. Expert knowledge systems are private knowledge management systems that serve a specific team or business department. Typically, the information found within expert knowledge systems pertains only to the operations within a specific department. Expert knowledge systems contain a high-level of specialized knowledge on topics. Specialists working within a specific industry contribute information to expert knowledge systems. For example, a sales department may have expert knowledge systems that contain specialized information on product details,

sales strategies and common sales challenges and solutions. Even if the level is not sequential and not well recognized by the employees, the University is using knowledge management system in its different operations.

Barriers to the Application of Knowledge Management System

Based on the analyzed result, 47.0% of the respondents agreed that among the different challenges hindering knowledge management system in the Institution, lack of keeping knowledge up- to- date takes the lead and getting employees buy in ranks second with response rate 42.9%. Getting senior managers buy in and making sure that people are getting the knowledge that they need take the 3rd and the 4th rank with a 36.7% of similar employee respondents.

It is obvious that employees are reluctant to change. According to one often-cited fact (Zaharia and Gibert, 2005), 70% of change programs fail to succeed due, in large part, to employee resistance. As technology advances and companies implement new systems, employees can become overwhelmed and prefer to do things in “the old way.” Plus, habits, in general, are difficult to change. Once employees have a particular way of completing their work, they often do not want to veer from that process. In the interview session, employees forwarded the following elements to solve the problem related to getting employees buy in. Employees often resist change because they lack awareness of the reason for the change. Prior to and during the implementation of a knowledge management system, it is essential for institutional managers at different level to build a culture of engagement and knowledge sharing. Employees must understand the benefits of a knowledge management system to fully embrace it.

A culture of knowledge engagement starts from the top down. However, senior leaders can also be slow to adopt new technology, as it does not always directly fit into their day-to-day responsibilities. Executives tend to focus on big-picture strategic items and may assume that knowledge management does not apply to their roles. And when employees notice that leaders and managers are not using the technology, they may follow suit, slowing the overall technology adoption. During the interview session, employees suggested that to convey the importance of knowledge management and reduce employee hesitancy, senior leaders should publicly demonstrate their usage of the knowledge management system. Often, it is most effective to work with a champion on the senior leadership team who is specifically tasked with speaking about the value of knowledge management and conveying the importance of adopting the new system. Interviewees also added that even if the institution has a well-designed framework for knowledge management system, the practice is still questionable. Documenting what we did is not well cultured and it needs serious intervention of all concerned bodies. Most of the interviewees also stated that in order to effectively practice and implement knowledge management system, we need to have innovative and well-organized human resource management. Because if we have an innovative human resource management, we can have the best performance and practice recording culture, and develop a well-organized exit report from those who leave the institution.

Conclusions and Recommendations

The findings of the study revealed that the significance of the knowledge management system for higher education institutions such as St. Mary's University is well recognized by both the management staff and employees at different levels and positions. For a highly competitive and very dynamic

working environment, it is imperative to have a well-framed knowledge management system to retain talented employees for a long period of time. To this effect, the most dominant knowledge management practice of St. Mary's University is associated with the document management system of the traditional filing system. It is theoretically and practically known that employees are hesitant to accept change and to practice new processes, new systems, new cultures, and new technology. The empirical evidence of the study suggested that it is advisable to document what we did on both individual and organizational level.

Recommendations

Based on the findings presented above and the conclusions made, the following recommendations are forwarded:

- ✓ The results of the study confirmed that St. Mary's University is applying both document management and data base management systems, which has to be appreciated. However, additional efforts should be made towards sharing knowledge from one employee to the other in his/her immediate circle;
- ✓ The human resource management of the Institution has to practice and apply the different innovative human resource management models and performances that can help fully apply knowledge management system in the Institution; and
- ✓ The institution shall be better if the management staff focus on identifying the knowledge need of their employees for the sake of fully practicing knowledge management system.

Implications for Future Research

This paper aimed at providing insights into knowledge management processes in higher education institutions with special focus on St. Mary's University. Different national and regional characteristics should be considered while designing and evaluating the knowledge management processes of specific universities. Thus, future research should consider much more distinctive features of universities to analyze. Comparative knowledge management studies, including extreme cases, can lead to a better understanding of the subject. Future research should also investigate how sub-processes of university knowledge management affect each other. Additionally, project-based collaborative activities of the universities and other organizations are very important in the new economy. Therefore, future research should also concentrate on project-based administration issues and project-based knowledge management efforts of the universities.

References

- Akehurst, G., Rueda-Armengot, C., Vivas Lopez, S. and Palacios Marquez D. (2011). “*Ontological Supports of knowledge: knowledge creation and analytical knowledge*”, *Management Decision*, Vol. 49 No. 2, pp. 183-194.
- Bekan. S. (2019). *Boosting Employees` Performance; Impact of Working Environments on Employees` Performance: case study on Ethio telecom at Ambo Branch: Addis Ababa University.*
- Bekkers, V., Edelenbos, J. and Steijn, B. (2011). “*An innovative public sector? Embarking on the innovation journey*”, in *Innovation in the Public Sector*, Palgrave Macmillan, UK, pp. 197-221.
- Bontis, N. (2002). *Voluntary turnover: knowledge management – friend or foe?* *Journal of Intellectual Capital*, 303-322.
- Boyne, G. A. (2004). *Public and Private Management.* *Journal of Management studies*, 97-122.
- Brassard, B. a. (2004). *Leadership and organizational outcomes: Meta-analysis of empirical studies.* Turkey: Springer.
- Carneiro, A. (2000). *How does knowledge management influence innovation and competitiveness?* *Journal of Knowledge Management*, 4(2), 87-98.
- Chang, S.C. and Lee, M.S. (2007). “*A study on relationship among leadership, organizational culture, the operation of learning organization and employees` job satisfaction*”, *The Learning Organization*, Vol. 14 No. 2, pp. 155-185.
- Cong, X. and Pandya, K.V. (2003). “*Issues of knowledge management in the public sector*”, *Electronic Journal of Knowledge Management*, Vol. 1 No. 2, pp. 25-33.
- Curristine, T., Lonti, Z. and Joumard, I. (2007). “*Improving public sector efficiency: challenges and opportunities*”, *OECD Journal on Budgeting*, Vol. 7No. 1.
- Desouza, K. C. (2011). *Managing Ideas Within Your Organization.* New York: Neal-Schuman.

- Dyan, R. and Evans, S. (2006). "*KM your way to CMMI*", Journal of Knowledge Management, Vol. 10 No. 1, pp. 69-80.
- Dunk, N. (2013). *Knowledge Management Enablers and Knowledge Creation in ERP System Success*. International Journal of Electronic Business Management, 11(1), 49-59.
- Feng, K., Chen, E. T., and Liou, W. (2005). *Implementation of knowledge management systems and firm performance: an empirical investigation*. Journal of Computer Information Systems, 45(2), 92-104.
- Feyori .B. (2010). *Factors Affecting Employees` performance*: Addis Ababa University
- Flynn, B.B., Schroeder, R.G. and Sakakibara, S. (1994). "*A framework for quality management research and an associated measurement instrument*", Journal of Operations Management, Vol. 11 No. 4, pp. 339-366.
- Garvin, D. A. (1993). *Building a Learning Organization*. Open Journal of Business and Management, Vol.3 No.2, 78-91.
- Ghuri, P. and Gronhaug, K. (2002). *Research Methods in Business Studies*, Pearson Education, Harlow.
- Goel, A.K., Rana Sharma, G. and Rastogi, R. (2010). "*Knowledge management implementation in NTPC: an Indian PSU*", Management Decision, Vol. 48No. 3, pp. 383-395.
- Gunasekaran, A., Patel, C. and McGaughey, R.E. (2004). "*A framework for supply chain performance measurement*", International Journal of Production Economics, Vol. 87No. 3, pp. 333-347.
- Kianto, A., Vanhala, M., and Heilmann, P. (2016). *The impact of knowledge management on job satisfaction*. Journal of Knowledge Management, 20(4), 621-636.
- Lopez (2004). *Managing Knowledge: The Link between Culture and Organizational Learning*. Journal of Knowledge Management, 93-104.

- Muthuveloo, R., Shanmugam, N., and Teoh, A. P. (2017). *The impact of tacit knowledge management on organizational performance: Evidence from Malaysia*. *Asia Pacific Management Review*, 22(4), 192-201.
- Ortenblad, A. (2002). *A Typology of the Idea of Learning Organization*, Volume: 33 issue: 2. SAGE Journals, 213-230.
- Rosenberg, J. (2004). *The Barriers To Organizational Change*. Denmark.
- Saunders, M.L., Thornhill, A. and Lewis, P. (2016). *Research Methods for Business Students*, 7th Edition. Pearson, Italy.
- Storey, J. a. (2000). "Knowledge management initiatives: learning from failure". *Journal of Knowledge Management*, 145-56.
- Syed-Ikhsan, S.O.S. and Rowland, F. (2004). "Knowledge management in a public organization: a study on the relationship between organizational elements and the performance of knowledge transfer", *Journal of Knowledge Management*, Vol. 8 No. 2, pp. 95-111.
- Tajali, M., Farahani, A., and Baharvand, M. (2014). *Relationship between Knowledge Management with employees' Performance and Innovation*. Kuwait Chapter of Arabian Journal of Business and Management Review, 33(2544), 1-5.
- Torabi, M. H. R., Kyani, A., and Falakinia, H. (2017). *An investigation of the impact of knowledge management on human resource performance in management of Keshavarzi bank branches in Tehran*. *Procedia-Social and Behavioral Sciences*, 230, 471-481.
- Tseng, K.H., Chang, C.C., Lou, S.J., Tan, Y. and Chiu, C.J. (2012). "How concept-mapping perception navigates student knowledge transfer performance[J]", *Educational Technology and Society*, Vol. 15 No. 1, pp. 102-115.
- Xue, Y., Bradley, J. and Liang, H. (2011). "Team climate, empowering leadership, and knowledge sharing", *Journal of Knowledge Management*, Vol. 15 No. 2, pp. 299-312