Practices and Facilities for Knowledge Management in Universities of Pakistan

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Abstract

Knowledge management ensures that all learners have access to a broad variety of knowledge and skills. The purpose of this research was to determine the present status of knowledge management in terms of practices and facilities in the higher education institutions in Pakistan. The population of the study included 4634 approved Higher Education Commission (HEC) supervisors, of which 364 were randomly selected from the chosen disciplines. A questionnaire was used for data collection. The data were analyzed, using descriptive and inferential statistics. It was found that there is a lack of awareness about knowledge management, lack of structure and a coordination point, as well as budgetary difficulties and leadership support for knowledge management techniques. It was also found that the intended integration of knowledge management methods into the agenda of the universities had not been fully implemented as planned. The study recommends that universities should develop strategies, appoint a key coordination point, develop policy guidelines, and utilize advanced technology for knowledge management.

Keywords: knowledge management; practices; approved supervisors; perceptions; higher education

Introduction

Knowledge Management (KM) journey may be divided into three generations; the first generation of KM covers the years 1990-1995, the second generation of KM encompasses the years, 1996-2000. The second generation of knowledge management started around 1996 when knowledge management was first used in a corporate setting. The third generation emerged about 2002, with an emphasis on outcomes, such as the connection between knowledge and action, among other things. According to Alavi and Leidner (1999), knowledge is well-founded personal confidence that improves a person's capacity to act productively. It is essential because tacit knowledge promotes competence, provides a competitive advantage, and is required for the performance of day-to-day

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activities and tasks. Explicit knowledge is defined as knowledge that can be expressed verbally, stored, retrieved, and conveyed (Nonaka & Kenney, 1994). For companies in recent years, knowledge has grown to be a major source of intellectual capital. Knowledge Management has been adopted in companies to cope with this intellectual resource. It is known as knowledge management which refers to the process of identifying, gathering, acquiring, sharing, and using the information inside an organization. Businesses may enhance their performance and manage their information assets more effectively by using a knowledge management approach for innovation (Darroch, 2005)

Researchers at the University of California, Los Angeles (Easa) studied the impact of various knowledge generation modalities on innovation and discovered that the internalization process when combined with the externalization and socialization processes had the most beneficial impact on creativity. A specific quality management strategy is associated with each type of knowledge creation that leads to better performance (Linderman, Schroeder, Zaheer, Liedtke & Choo, 2004)). Knowledge management is a critical component of the branding process in higher education institutions. Universities all around the globe are doing knowledge management research on problems such as collecting, generating, storing, sharing, and deploying knowledge, among other things.

When it comes to encouraging innovation, the capacity to create and share information is critical, and it is often cited as the most important issue facing the knowledge-based economy (Pawlowski & Bick 2015). Knowledge management (KM) has been recognized as one of the most critical enabling components that must be established and maintained in dispersed engineering organizations (McMahon, Lowe, and Culley 2018). Small businesses are better able to innovate when they have access to and utilize fresh information (Samir, 2020). It is essential to a company's long-term success, growth, and viability that it manages its knowledge (KM) (Cletus, 2019). The field of knowledge management has a long way to go. Institutions of higher education are becoming more aware of how they manage their knowledge base (Zinzou and Doctor, 2020).

Knowledge management activities are more strongly affected by cultural factors than other activities. Researchers in Pakistan's academic sector studied the cultural elements of knowledge management to better understand it (Abases, Hayat, Shahzad, & Riaz, 2011). Design thinking may be captured using some information technology tools (Aurisicchio & Bracewell 2013; Rohde, Otorga & Marjanovi 2015), and interpersonal

communication can be made easier via the use of technology. Using information and communication technology (ICT), cultivating a culture of knowledge sharing, and fostering mentorship in universities all face significant challenges due to a lack of staff training, KM competency, and a lack of sharing culture, as well as a lack of acquisition, understanding of the KM concept, and IT infrastructure (Ahmed, Sheikh, and Akram, 2018). In Pakistan, knowledge management is a relatively young and rapidly expanding field. The business administration curriculum for BBA honors and MBA degrees includes a course on knowledge management as an optional elective (HEC, 2005). The use of knowledge management techniques is not given much consideration in Pakistan, as well as in developing countries with low literacy rates (Shah &Mahmood 2015). The researchers investigated the practices and resources available for knowledge management in Pakistani higher education institutions.

Statement of the Problem

When it comes to functioning successfully and efficiently, society must manage its knowledge resources. Increased productivity is achieved via the streamlining of ideas and problems. Knowledge management helps to streamline ideas, issues, new initiatives, and increase productivity. Knowledge management is comparatively a new concept in many universities in Pakistan, although work has been done. So, it necessitates investigating the knowledge management practices and facilities in Pakistani Universities.

Objectives of the Study

The objectives were to:

1. Find out the existing practices of knowledge management in Pakistani universities.
2. examine the current facilities of knowledge management in Pakistani Universities.
3. determine HEC approved supervisors' perceptions on knowledge management requirements in Pakistani universities.

Literature Review

According to Davenport (1998), knowledge management is impossible to do without upper management's and leaders' involvement. Employee participation is a critical element for knowledge management implementation success (Moffett, McAdam & Parkinson, 2003)). A

knowledge management strategy, according to Whyte, Ewenstein, Hales, and Tidd (2008), may be realized through the capacity of university staff to communicate information. As human history has progressed through the ages, educational institutions have made significant contributions to the advancement of humanity by enabling access to space, the fastest communication networks, and extremely complex technology, all of which have improved the overall quality of human life. Higher educational institutions must play a pivotal role in the development and application of future knowledge if they are to remain competitive.

Knowledge management methods are becoming increasingly popular in Pakistani businesses and universities. Due to a lack of available strategies, universities have no central unit to take responsibility for knowledge management practices. Some of the most prevalent problems experienced by personnel in universities of Pakistan include a lack of infrastructure, a lack of software tools, and a lack of appropriate information technologies. Due to a lack of knowledge of the benefits of digital technology, there was insufficient leadership, senior management, and a political/competitive climate (Shah, Rizvi, & Jumani, 2018).

Knowledge management is becoming more important in Pakistan's geopolitical situation (Shah& Mahmood, 2015). Seminars, conferences, and workshops are essential for university students to understand the value of knowledge management and its correct use for development (Shah, Rizvi, & Jumani, 2018).

The number of studies on knowledge management efforts at the university level is very small. There have only been a few studies that have concentrated on information system implementation efforts, which have restricted knowledge management to information communication technologies alone, with a lack of consideration for the wider viewpoints. The report on the university's financial system was the primary emphasis of this system. In the course of implementing this system, a variety of problems emerge, including organizational opposition to change, rules of various public agencies, top-level pledges, and institutional objectives. According to Smith & McKeen (2005), another research performed in the United States of America found that the use of technology in classroom teaching has had a beneficial impact on the accomplishment of students' learning outcomes. Although this effort received positive feedback, the teaching staff and administration were not enthusiastic about the system, and there were a variety of obstacles to technological incorporation into classroom instruction. Kdiwell Linde and Johnson (2000) stated that higher education institutions and business communities use knowledge

management practice methods as well as information communication technology to thrive.

The use of knowledge management techniques allows universities to better serve their students at all times and in any location. In Pakistani universities, there exist discrepancies between theory and reality when it comes to knowledge management. Shah and Mahmood (2015) found in their study that knowledge management is a relatively young and rapidly developing field both in Pakistan and in academic institutions there. Furthermore, according to the authors, it has received little attention in Pakistan. Therefore, it is essential to find out the current practices of the universities for knowledge management, and also to find out the available facilities for Knowledge management. The study highlights the current position of knowledge management in Pakistani higher educations, and this would help find solutions to the issues which hinder the universities from managing the treasure of their knowledge.

Research Design

The study used a quantitative design. A questionnaire was developed for investigating the available facilities and perceptions about knowledge management in Pakistani Universities from the perspectives of HEC approved supervisors in Pakistan. The adopted questionnaire was arranged on Google form. Data was collected by sending emails to selected participants, through Google form and personal visits to the Universities. Before sending the survey for data collection, permission was sought from the participants of the study.

Population and Sampling Technique

The population of the study comprised all HEC Ph.D. approved supervisors at Pakistani Universities. There was a total of 4634 supervisors HEC approved at the time of this study. The sample of 357 PhDs for the study was selected via the use of multi-stage selection methods developed by the researchers. Universities were chosen in the first step and then approved Ph.D. supervisors were chosen according to their academic area.

Research Tool

Data were gathered via the use of an adapted (Cranfield 2011) questionnaire. The research tool was used in the United Kingdom. The tool was modified according to the Pakistani context.

Reliability &Validity

The tool for data collection must be valid and reliable. Therefore, the tool was validated by four experts in the field of knowledge management, all their recommendations were incorporated. Reliability of the study was also found, and the reliability coefficient of the tool was .94, which was excellent.

Data Collection

Four hundred and sixty-five questionnaires were sent/conveyed to Ph.D. approved supervisors through Google form, e-mail, and personal visits to the target institutions in Pakistan, three hundred and twenty-six (364) questionnaires were returned by respondents. The period of data collection was six months. Six questionnaires were incomplete, so they were not considered for analysis.

Data Analysis

For this study, descriptive statistics (percentage) and inferential statistics (chi-square) were used to analyze the data, with inferences drawn from the results using SPSS 17 version.

Table - 1

Acceptance of the Concept of Knowledge Management at Pakistani Universities

Choices	%	Mean	SD	Df	χ^2	Sig
Yes	27					
No	37	2.089	.789	2	5.96	.051
Do not know	36					

Table1 shows that there are three types of responders. In the first group, 27% of respondents said their universities have a clear concept of knowledge management, while 37% said their institutions do not have such a concept. Despite this, 36% of those surveyed had no idea whether or not their institutions had a formal concept of knowledge management in place. The mean score was 2.610 with a standard deviation of 1.1386, df 3, and 5.96 was found to be statistically significant at.05. As a consequence of these findings, respondents supported a university-level

knowledge management strategy. According to the mean score, respondents thought it was still in progress and hadn't been fully realized.

Table - 2

Views on Local Knowledge Management Plans or Strategies in University

Choices	%	Mean	SD	df	$\chi 2$	Sig
Yes	21					
No	42	2.51	1.183	2	23.74	.000
Do not know	37					

Table 2 summarized the local knowledge management plans and initiatives in place at Pakistani institutions. According to respondents'(43%) answers, universities lack a knowledge management plan. In Pakistani universities, just 21% of respondents said that they had plans for knowledge management. The fact that 37% of respondents did not know, illustrates the enigma surrounding the phenomenon. Additionally, the three categories of the questions allow for deducing the viewpoint of HEC Ph.D. supervisors about the local knowledge management approach in Pakistani universities. Additionally, with a mean of 2.51 and a standard deviation of 1.183, the majority of respondents were ignorant of the existence of a university-level plan for managing local knowledge. Additionally, the chi-square value of 23.74 with df 2 was statistically significant at.000, suggesting that the majority of respondents believed institutions lacked a plan for managing indigenous knowledge.

Table -3

Point of Contact for the Execution of the Knowledge Management Strategy at Universities

Choices	%	Mean	SD	df	χ^2	Sig
Yes	15					
No	48	2.56	1.134	2	52.90	.000

Do not know 37

The existence of a central point of coordination for knowledge management in Pakistani institutions is described in Table 3. In the study majority of respondents (48 percent) said that universities lack a central point of coordination for knowledge management. Additionally, only 15% of respondents expressed an opinion on the presence of a coordinating center for knowledge management. For those wishing to respond with an option for unfamiliarity, the question's last item was unknown. 37% of PhD-accredited supervisors are unaware of who is responsible for knowledge management at Pakistani universities. The mean of the responses was 2.56 with a standard deviation of 1.134, indicating that respondents were ignorant of the main coordination point for implementation. At.000, the chi-square value 52.90 (df 2) shows that respondents were unaware of their institutions' primary coordinating center for executing a knowledge management plan.

Table- 4

Using Modern Technologies to Improve the Flow of Information Across Pakistani Universities

Choices	%	Mean	SD	Df	χ^2	Sig
Very satisfactorily	15					
Satisfactory	54					
		2.37	1.064	4	258.26	.000
Unsatisfactorily	18					
Very Unsatisfactorily	4					
Unsure	9					

According to the data in table 4, Ph.D. faculty at Pakistani universities are satisfied with the technology utilized to facilitate knowledge management procedures for sharing and transferring knowledge across institutions. There were five different types of questions

in the test. A total of 15% of Ph.D. faculty members were satisfied with the orientation to the technology utilized in Pakistani institutions. There was a 54% approval rating for the statement "satisfactory" when it came to university technology transfers and information exchange. Unsatisfactory responses at universities to knowledge transfers and sharing were 18%. Only 4% of Pakistani Ph.D. faculty members responded to the survey asking how satisfied they were with their jobs. Less than 10% of respondents at Pakistani institutions had no idea that technology was being used to promote knowledge exchange and transfer. On the technical ease of knowledge exchange and transfer with the institution, the mean score was 2.37 with a standard deviation of 1.064. The findings indicated that respondents were pleased with the technological facilitation of knowledge exchange and transfer. Additionally, the chi-square value of 258.26, which is significant at.000, indicates that respondents agree that technology does promote knowledge exchange and transfer among institutions.

Table - 5

Existing Knowledge Groups at Pakistani Institutions are Assisted by Technological Means

Choices	%	Mean	SD	df	χ^2	Sig
Strongly agree	16					
Agree	58					
		2.33	1.101	4	309.30	.000
Disagree	12					
Strongly disagree	5					
No opinion	9					

Table 5 demonstrates how technological tools employed in Pakistani institutions assist knowledge groups or communities of practices. The question had five choices. The percentage of Ph.D. faculty members who strongly believe that their communities of practices have been aided by technological instruments remained 16% responses agree that communities of practices are aided by technological tools received a 58 % reply. A response rate of 12 percent was received when asked about

disagreements about knowledge groups supported by technology. The answers obtained from Ph.D. faculty members at Pakistani institutions for strongly disagreeing with each other were just 5%. In Pakistani universities, no view on communities of practice is backed by technological tools. A mean score of 2.33 with a standard deviation of 1.101 shows that the knowledge community has agreed on the statement. Knowledge management methods benefited from technology instruments, according to the findings. It is clear from the chi-square value of 309.00 those respondents rely on technology tools in their knowledge management activities.

Table- 6

Knowledge Management Unit at Institutions of Higher Learning

Choices	%	Mean	SD	Df	χ^2	Sig
Yes	18					
No	46	2.17	.7169	2	37.40	.000
Do not know	36					

The information in table 6 pertains to Pakistani universities' institutional Knowledge Management units. Only 18% of PhDs authorized supervisors at Pakistani universities to believe their institutions to have knowledge management units. According to the study's sample, 46% of respondents said their institutions did not have any kind of knowledge management unit. Thirty-six percent of Ph.D. authorized supervisors did not know about their institutions' knowledge management departments, according to the third question category. Also, the mean score was 2.17, and the standard deviation was.7169, indicating that the respondents had no idea what their university's institutional knowledge management strategy was. Additionally, the chi-square value of 37.40, which is significant at a p-value of.000, indicates that respondents were ignorant of the university-level institutional strategy for the development of knowledge management techniques.

Table-7

Availability of Funds Specifically for Knowledge Management Practices in Universities

Choices	%	Mean	SD	Df	χ^2	Sig
Yes	17					
		2.30	.746	2	46.40	.000
No	35					
Do not know	48					

Table 7 findings indicated that universities have funds set out for knowledge management strategies. Three choices are provided in the question. A small percentage (17%) of respondents said that they had specific funds in universities. The majority of Ph.D. authorized supervisors are unaware of (48 percent) expenditures for knowledge management methods. Of 35% of respondents selected the No option when asked about their views on knowledge management budgets at their institutions. Respondents' mean scores were 2.30 with a standard deviation for university-level knowledge management activity budget heads .746 showed that Universities do not have a dedicated budget line for knowledge management operations. A substantial chi-square value of 46.40 at.000 indicates that the universities do not have a distinct budget head for university knowledge management methods, which supports the findings of the study.

Findings

1. Pakistani institutions lacked formal definitions for knowledge management methods. There are a very small number of Pakistani universities that have formalized their knowledge management concept.
2. The research found that in Pakistani academic institutions there was no efficient coordination point for knowledge management.
3. More than half of respondents said that their respective Pakistani organizations utilized conventional document management as a supporting technology tool. Some of Pakistan's most sophisticated and oldest institutions use information management technologies such as web portals, and e-learning systems.

4. Contemporary technology may enhance the flow of information among Pakistani institutions.
5. The establishment of communities of practice at Pakistani institutions is helped by technological advances.
6. In Pakistani institutions, there is no specific budget allocated specifically for knowledge management initiatives.

Discussion

The findings of the study on the idea of knowledge management used in universities are backed by Cranfield (2011) who concluded that there was no clear description of what knowledge management was in the universities. According to Dhamdhere's (2015) research, barriers to knowledge management adoption include people, organizations, and accessible technology. The results of the study corroborated with the findings of Shujahat, M., Sousa, Hussain, Nawaz, Wang, and Umer (2019)), who investigated the obstacles to knowledge management methods in the Kingdom of Saudi Arabia and found that organizational, technological, leadership support, learning knowledge management are barriers to the implementation of knowledge management system in universities. Another research, conducted by Petrides and Nodine (2003), confirmed the existence of obstacles to knowledge management in educational settings. Cranfield (2011) found that the majority of institutions lack funds dedicated particularly to knowledge management, which corroborates the conclusions of this study.

Conclusions

1. Pakistani universities are lacking formal definitions of knowledge management. This may be one of the reasons that they do not have a clear execution plan for the implementation of the knowledge management system.
2. The institutions of higher learning are lacking an implementation plan, and there was no single point for the activities of knowledge management in universities which made it difficult to make and execute a plan of knowledge management.

3. Pakistani institutions do not allocate a specific budget for knowledge management, and this may be one of the main reasons that the universities are lacking a management system. **Recommendations**

1. Definitions, plans, and budgets for Knowledge Management may all be incorporated in Education Policy as well as in universities' mission and vision.
2. For university knowledge management, a separate unit and coordinating point may be established.
3. Some of the most up-to-date and sophisticated technology needed for knowledge management may be made available at universities.

Reference

Abass, F., Hayat, M., Shahzad, A., & Riaz, A. (2011). Analysis of knowledge management in the public sector of Pakistan. *European Journal of Social Sciences*, *19*(4), 471-478.

Ahmed, S., Sheikh, A., & Akram, M. (2018). Implementing knowledge management in university libraries of Punjab, Pakistan. *Information Discovery and Delivery*.

Alavi, M., & Leidner, D. (1999). Knowledge management systems: issues, challenges, and benefits. *Communications of the Association for Information systems*, *1*(1), 7.

Cranfield, D. (2011). *Knowledge management and higher education: A UK case study using grounded theory* (Doctoral dissertation, University of Southampton).

Cletus, H. E. (2019). Evaluation of the Conceptual Theories, Elements, and Processes of Knowledge Management in Modern Day Organizations. HOLISTICA–Journal of Business and Public Administration, 10(1), 37-54

Darroch, J. (2005). Knowledge management, innovation, and firm performance. *Journal of knowledge management*.

Davenport, T. H., De Long, D. W., & Beers, M. C. (1998). Successful knowledge management projects. *MIT Sloan Management Review*, *39*(2), 43.

Dhamdhere's, S. N. (2015). Importance of knowledge management in higher educational institutes. *Turkish Online Journal of Distance Education*, *16*(1), 162-183.

Easa, N. (2011). Knowledge creation process & innovation in the Egyptian banking sector. In *Organization Learning, Knowledge and Capabilities Conference*.

Higher Education Commission (2005). *The curriculum of business administration.* Islamabad: Higher Education Commission.

Linderman, K., Schroeder, R. G., Zaheer, S., Liedtke, C., & Choo, A. S. (2004). Integrating quality management practices with knowledge creation processes. *Journal of operations management*, *22*(6), 589-607.

Moffett, S., McAdam, R., & Parkinson, S. (2003). An empirical analysis of knowledge management applications. *Journal of knowledge management*.

Nonaka, I. & Kenney, M. (1994). Towards a New Theory of Innovation Management: A Case Study Comparing Canon, Inc., and Apple Computer.
Journal of Engineering and Technology Management, Vol 8, No.1, 67-83.

Nonaka, I., & Takeuchi, H. (1995). The Knowledge-creating company: How Japanese companies create the dynamics of innovation

Pawlowski, J. M., & Bick, M. (2015). The global knowledge management framework: Towards a theory for knowledge management in globally distributed settings. *Leading Issues in Knowledge Management, Volume Two*, *2*, 134.

Petrides, L. A., & Nodine, T. R. (2003). Knowledge management in education: defining the landscape.

Samir, M. (2020). The Impact of Knowledge Management on SMEs Performance in Egypt. Open Access Library Journal.

Shah, R., Rizvi, A. A., & Jumani, N. B. (2018). Status of Knowledge Management Practices in Pakistani Universities. *International Journal of Innovation in Teaching and Learning (IJITL)*, *4*(2).

Shah, S. R., & Mahmood, K. (2015). Research on knowledge management of Pakistan: A literature review. *Library Philosophy and Practice*.

Shujahat, M., Sousa, M. J., Hussain, S., Nawaz, F., Wang, M., and Umer, M. (2019). Translating the impact of knowledge management processes into knowledge-based innovation: The neglected and mediating role of knowledge- worker productivity. *Journal of Business Research*, *94*,442- 450.

Smith, H. A., & McKeen, J. D. (2005). Developments in practice XVIII-customer knowledge management: Adding value for our customers. *Communications of the Association for Information Systems*, *16* (1), 36.

Whyte, J., Ewenstein, B., Hales, M., & Tidd, J. (2008). Visualizing knowledge in project-based work. *Long-range planning*, *41*(1), 74-92.

Zinzou, E. F., & Doctor, T. R. (2020). Knowledge Management Practices among the Internal Quality Assurance Network (IQAN)-Member Higher Education Institutions (HEIs) in Thailand. *World Journal of Education*, *10*(5), 108-121.