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Original Research

Challenges of Knowledge Flow in Islamic Azad University Libraries

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Abstract

Knowledge management has an increasing role in knowledge-based organizations. Academic libraries have become an essential part of knowledge organizations, and knowledge management is vital. Therefore, this study addresses the challenges of knowledge management processes in Islamic Azad University libraries. This is applied research using the survey-analytical method. The study's statistical population included 60 managers of central libraries at Islamic Azad University. Due to the limited managerial staff, we employed the complete enumeration method. Data were analyzed using SPSS software. The study of eight factors showed that knowledge characteristics, knowledge source, communication channels, time, management, and technological factors had lower scores than the population average, which is a challenge for libraries. Both organizational and personal factors score higher than the population average, which is an opportunity for libraries. It seems that to improve the current situation, the managers of the libraries of the Islamic Azad University need to pay serious attention to the establishment of knowledge management and use the organizational ability and motivated workforce to meet the challenges and improve productivity.

Keywords: Knowledge Sharing, Knowledge Management, University Libraries, Knowledge Flow Challenges, Islamic Azad University.

Introduction

In the twenty-first century, knowledge gains its highest value in organizations, and organizing and the success of organizations in this century depend on using knowledge in critical processes. Knowledge is a competitive resource for organizations and a strategic asset in the information economy. All scientific establishments emphasize the importance of knowledge, understanding of Information or Knowing about a subject. As stated by many authors, knowledge is widely recognized as one of the core assets/enablers for any organizations, service or manufacturing (Davenport & Prusak, 1998).

The evolution of the information and knowledge society has altered how services are provided in academic libraries, making knowledge management an imperative (Koloniari & Fassoulis, 2017). It plays an irrefutable and unavoidable role in organizations. However, being a multidisciplinary field (Dalkir, 2011), knowledge management lacks a universally

acknowledged definition. All the knowledge resources within an organization at the individual or organizational level are organizational knowledge. Knowledge is commonly regarded as an important organizational resource, and its effectiveness is key to the success of organizations that wish to enhance employee productivity and reduce redundancies associated with recreating knowledge repeatedly (Ou, Davison & Wong, 2016).

Academic libraries are conscious of the role and benefits of knowledge management not only for self-performance but also for enhancing the organizational and competitive performance and future career options of the library and information profession (Islam, Agarwal & Ikeda 2015). They manage their knowledge assets, including how to collect, store, transfer, use, update and create knowledge (Alipur, 2014). Meanwhile, organizations with high creativity and performance manage their knowledge effectively (Curado & Ramos, 2010). This signifies that knowledge is an important asset for university libraries. Knowledge is primarily of two types: explicit and tacit knowledge. Explicit knowledge is characterized by external appearances and can be expressed in the form of books, the web, and documents. This type of knowledge is easy to store and circulate through technology. Another type is tacit knowledge. This type of knowledge resides in individuals' minds and behavior, internal intuition, and common sense. This knowledge is hidden, is often based on experience, and is difficult to express through technology (Ajie, 2019).

Today's libraries' emphasis has shifted from ownership of information to access; thus, librarians have the task of developing themselves to meet the ever-changing user needs. Librarians must invest in training and professional development in knowledge management. There is a lack of implementation and clarity in fundamental knowledge management issues in academic libraries. Therefore, implementing a knowledge management system in an organization aims to understand what obstacles exist in the flow of knowledge and how it affects its progress. It seems necessary for organizations to identify barriers that they may encounter while developing and sharing knowledge and knowledge management programs (Desouza, 2003).

As a staff member of the libraries of the Islamic Azad University, the researcher observed that there was limited knowledge sharing, creation, retention, transfer, storage, and application in the library. The libraries lacked a formal knowledge management structure that enables library staff to participate in knowledge management processes. This has taken a toll on the efficient and effective function of University Libraries. Against this backdrop, this article investigates knowledge management processes at libraries of the Islamic Azad University in Iran. Therefore, in this research, the researcher pursues the following goals:

- To determine the knowledge management Level at the Libraries of the Islamic Azad University
- To determine the challenges of knowledge management in the libraries of the Islamic Azad University
- To determine the benefits of knowledge management in the Islamic Azad University Libraries
- To establish how knowledge is created and retained at Libraries of the Islamic Azad University
- To evaluate knowledge characteristics, sources, and communication channels, as well as temporal, organizational, managerial, individual, and technical factors in knowledge flow.

Given the set goals, the researcher tries to answer the question: What are the challenges of

implementing knowledge management and its solutions in the libraries of the Islamic Azad University?

Literature Review

A review of the research literature clarifies how knowledge flows in academic settings. How can deploying knowledge management in libraries improve staff knowledge, optimize technology, and direct knowledge resources to educational and research services? This review focused on the challenges of knowledge flow and management in libraries and their quantitative methods.

Knowledge sharing

Knowledge sharing is coordinating learning activities whereby individuals mutually exchange their knowledge and jointly create new knowledge. Its processes include bringing and getting knowledge (Yang, 2004). Today, understanding the importance of knowledge as a vital resource in business environments for organizations is increasing. Due to its nature, organizations have not considered knowledge, unlike other human resources, financial resources, and technical resources. Many organizations face many risks because of the lack of knowledge or sharing of knowledge resources. The breadth and depth of knowledge management systems depend on the amount injected into the system. Therefore, knowledge participation is critical to the knowledge management process (AL-Busaidi, Olfman, Ryan & Leroy, 2010).

Sharing is primarily a process in which a source gives a resource to the recipient. This understanding of the term sharing makes it possible for individuals to interpret knowledge sharing as equivalent to transferring. One can interpret this definition, so that knowledge sharing is a one-way process from which only one person benefits. Therefore, such aprocess requires more than coordination and needs cooperation. Phung, Hawryszkiewycz and Chandran (2017) found that environmental and personal factors affect knowledge sharing and innovative work behavior. In addition, Mustika, Rahardjo & Prasetya (2020) research showed that perceived organizational support has a positive and significant effect on knowledge sharing, and an innovative work behavior approach positively affects knowledge sharing and innovative work behavior. Knowledge sharing also has a positive and significant impact on innovative work behavior. On the other hand, it is noteworthy that knowledge sharing is the biggest challenge in establishing knowledge management because barriers to knowledge sharing are negatively related to knowledge storage, distribution, and dissemination. Thus, lack of self-efficacy to represent individual factors, information technology to represent technological factors, and organizational rewards for representing organizational factors hinder knowledge sharing behavior among members of the organization and create a negative relationship between knowledge sharing and inhibitory factors (Zawawi et al., 2011).

Bello (2018) argues that Knowledge has become a key driving force in our lives. Due to the complicated nature of knowledge, it is difficult to estimate the value of knowledge management in academic libraries. Academic libraries occupy a central position in an institution to generate knowledge, equip the academic community with knowledge to serve society, and enhance knowledge to humankind. Knowledge sharing requires that people want to develop new capabilities in their colleagues (Senge, 1997). Indeed, the process should contain three major dimensions: effectiveness, efficiency, and degree of innovation. The process must be as clear and straightforward as would be well understood by workers in the organization (AlRashdi &Srinivas 2016). Knowledge is a powerful asset that can be modified,

manipulated, and communicated. Knowledge sharing is a communicational process and has two sides. Knowledge is not like other commodities that can be passed around freely; it is tied to a knowing subject. This process involves at least two parties in a relationship, one that possesses knowledge and the other that acquires knowledge. As a result, effective communication becomes essential in knowledge sharing (Hendriks, 1999).

Knowledge management

The knowledge management process is socio-technical. It should be noted that developing a knowledge-based culture and high-quality system functionality is essential for the success of the knowledge-sharing process and, consequently, the organizational knowledge management systems. Knowledge management is a planned and structured vision for sharing and storing knowledge as an organizational asset that is designed to enhance the organization's ability, speed, and effectiveness in delivering products and services to customers in line with business strategy (Akhavan, Olyiaee, Dastranj Mamaghani & Saghafi 2011). Knowledge management has become an important subject facing libraries today. It should be focused on the following: effective research and development of knowledge, creation of knowledge bases, exchange and sharing of knowledge between library staff and users, training of librarians, speeding up of processing of the implicit knowledge and realization of its sharing (Alegbeleye, 2010). Since knowledge management is rooted in excellent organizational learning and innovation systems, it has not been a new idea itself, and successful managers have always used the intellectual capital and recognized its value. However, the efforts were not organized, and there was no guarantee that the knowledge gained would be appropriately shared and distributed to the maximum resources of the organization (Turban, Leidner, McLean & Wetherbe, 2006). Therefore, knowledge management is essential in the third millennium, and institutions must plan to implement it. The success of organizations increasingly depends on how effectively they can collect, store and retrieve knowledge from the staff at different levels (Hassan Beigi, 2011). Poonkothai (2016) considers knowledge management an important tool that can help libraries better adapt to the digital age's new needs and meet users' needs. Academic institutions have significant opportunities to apply knowledge management practices to support each part of their mission.

The study of Fakandu, Musa and Isa Ibrahim (2021) on the concept of knowledge management from the perspective of business, science, and library showed that, by implementing knowledge management, we could expand and support activities through decision making, strategy development, design and implementation of initiatives. Knowledge achieved the benefits of saving time. These benefits help libraries turn knowledge management processes into reality. A study by Nunes, Kanwal and Arif (2017) showed that limited research on knowledge management in higher education institutions had been conducted theoretically and practically by specialists. The study also revealed various factors that affect the main factors of knowledge management in the field of the professional activities of such practitioners as professors, administrative staff, librarians, and information specialists in higher education institutions. Another study found that knowledge management processes are used in the library of St. Paul University, although various documents and knowledge management processes are not formal (Sirorei & Fombad, 2018).

A study on knowledge management in Romanian academic libraries revealed a deep awareness of the importance of knowledge management application in libraries but little progress in its effective implementation within academic libraries (Madge, 2017). In addition,

establishing knowledge management in organizations is one of the ways to achieve optimal productivity in them. The most critical element of knowledge management is its implementation in the organization because other knowledge management issues are considered a prelude to laying the groundwork and using them for the practical realization of knowledge management (Ripoor & Khajeh Ansari, 2015).

Challenges of establishing knowledge management in academic libraries

Individual and organizational learning processes can be considered indicators to assess knowledge's power and benefits, and management. Knowledge management has become one of the main imperatives of the information age economy (Alavi & Leidner, 2001). As a result, researchers have designed knowledge management systems to boost the organization's knowledge management effectiveness. Knowledge sharing or contribution is a key process in an organization's knowledge management. The breadth and depth of a knowledge management system depend on the magnitude of knowledge contributed to the system. Without codified knowledge, MS cannot operate. Therefore, examining the factors that affect individual knowledge-sharing behavior is essential to deploy organizational knowledge management systems successfully. Individual experts spend time and effort to create explicit knowledge and store it in a knowledge repository (organizational memory) for future organizational reuse. However, limited studies have focused on individual knowledge management systems use (such as knowledge contribution) (Kankanhalli & Tan, 2004).

Challenges to knowledge management implementation usually create barriers that cause temporary constraints, lack of employee motivation, lack of awareness, and inadequate coordination between sectors, which imposes a heavy burden on the organization. Recognizing these obstacles and eliminating them can facilitate and improve the knowledge management process (Zandhessami & Haghighttalab, 2014).

Ugwu (2016) believes that the success of establishing knowledge management requires the dimensions of its organizational structure, which include the support of senior management leadership, compensation plans, and cooperation. The research of Tajabadi, Asnafi and Haji Zin Al-Abedini (2020) showed that knowledge flow in the central libraries of governmental universities in Tehran in the seven dimensions of APQC knowledge flow is not optimal: they are average in the dimensions of creating, identifying, and using knowledge; and are weak in the dimensions of collecting, reviewing, sharing, and accessing knowledge. Akbari, Noushinfard and Hariri (2018a) studied comparing barriers to the knowledge flow in the libraries of the Universities of the Ministry of Science, Research and Technology and Islamic Azad universities. They found that both libraries had significant differences in the dimensions of knowledge source and technological factors, meaning that the situation of governmental university libraries was better. There was no significant difference between channel communication, management, and individual factors, although management barriers were evident in both groups. In comparing knowledge management processes, knowledge sharing in governmental university libraries performed better than in the Islamic Azad university libraries. Still, there was not much difference between the two groups in the processes of creating, identifying, collecting, reviewing, and applying knowledge.

Organizational barriers in implementing knowledge management in the libraries of Ferdowsi University of Mashhad and Mashhad University of Medical Sciences are almost moderate in all organizational factors. The barriers to establishing knowledge management in the libraries of Mashhad universities are not above average. Organizational culture and human

resources components were the most challenging, and the technology component was the least challenging in establishing knowledge management (Jamshidfard, Nowkarizi, & Kaffashan Kakhki, 2019). A study by Akbari, Noushinfard and Hariri (2018b) aimed to identify barriers to knowledge flow in university libraries based on the knowledge management maturity model. They found that managerial factors, knowledge source, organization, time, communication channels, personal characteristics, technology, and knowledge create the most to the least challenges, respectively. Regarding knowledge management maturity levels, innovation, optimization, standardization, development, and start levels have the most to the least obstacles, respectively. Organizational structure factors, including human, environmental and technological factors, are influential in establishing knowledge management in the libraries of medical universities. Establishing knowledge management in university libraries is a capability that can integrate knowledge investments in promoting educational and research services (Akbari, 2022). Because university libraries are part of the community education and research system and manage the knowledge flow, the situation requires that their challenges and opportunities be explored. Although research has been done on knowledge management and knowledge flow models, no research shows that academic libraries use a specific model to improve organizational growth and development. Therefore, the question has always been: what is the status of knowledge flow in universities?

Problem statement

Because understanding the challenges of knowledge management is the solution to many problems related to organizational knowledge flow, and libraries, as great institutions, are responsible for knowledge management, organizations must have a successful and acceptable performance. Although extensive theoretical and practical research has been more or less carried out on the flow of knowledge and knowledge management models at university libraries to date, there are still challenges to knowledge management in these organizations. The diversity of the stages in the knowledge management cycle with different forms has imposed high costs on the flow of knowledge management in organizations. Therefore, it is vital to identify the existing challenges, understand the causes that hinder the flow of knowledge, and establish knowledge management in academic libraries.

Given organizations' experience in knowledge management, using cognitive knowledge and implicit and explicit types, previous studies show that the dynamic method is more efficient than other methods since it pays enough attention to both implicit and explicit types of knowledge. According to the experiences of organizations in the field of knowledge management, the use of the "cognitive model," and the implicit and explicit types, the results of studies show that the dynamic method is more efficient than other methods because it pays enough attention to both tacit and explicit knowledge. Therefore, we used knowledge process grouping, a "basic model of knowledge management building". Due to more practical aspects in the field of information science and the cognitive and dynamic cycle in knowledge management, this model can examine several factors affecting the performance of knowledge flow. Therefore, the challenges of knowledge flow factors, including knowledge characteristics, knowledge source, knowledge reception, contextual knowledge factors, and knowledge transfer mechanisms (Lin, Wu, Yen, 2012), were studied in the libraries of Islamic Azad University.

Materials and Methods

The present research has a survey-analytical method and is applied research. The study's statistical population includes 78 managers of central libraries of the Islamic Azad University. The Central Organization of the Islamic Azad University provided the details of the libraries. Due to the limited statistical population, the complete enumeration method was used. A questionnaire was sent to all managers, 60 of whom participated in the research and answered the research questionnaire. Data collection was done using a 5-point Likert scale questionnaire constituting eight components: Knowledge characteristics 1-6; Knowledge Resources 7-16; Knowledge channels 17-21; Time factors 22-27; Knowledge Management 28-35; Organizational factors 36 - 39; Individual factors 45-40; and technical factors 45-50. To assess the validity of the questionnaire, the initial sample was presented to 18 experts, and after applying comments and making corrections, the final questionnaire was developed. The reliability coefficient of each subject's items was calculated according to Cronbach's alpha, which was 0.79.

According to the study's objectives, the data were analyzed using a t-test in SPSS software version 24.

Data Analysis and Interpretation

Descriptive findings related to demographic information of the directors of data are shown in Table 1.

Table 1

Demographic information on gender and type of education of managers

ID	Case	Frequency	F- Percent	Total
Gender	Female	35	58.3	60
	Male	25	41.6	
Type of degree	Librarianship	36	60	60
	Non-librarianship	24	40	

As shown in the above table, out of 60 directors, 35 are women, and 25 are men. Moreover, 36 library directors have formal education in librarianship, knowledge, and information science, and 24 directors have non-librarianship degrees.

According to Table 2, 19 personnel (32 percent) have up to 5 years of experience in libraries, 12 people have 6-10 years (20 percent),18 people have 11-15 years (30 percent), 5 people have 16-20 years (8 percent), and six people have more than 21 years (10 percent) of work experience in directing libraries. In addition, in terms of the type of academic degree, 15 people have bachelor's degrees (25 percent), 24 people have master's degrees (40 percent), and 21 librarians have Ph.D. degrees (35 percent).

Table 2
Demographic information of the background and academic degree of the managers

ID	Case	Frequency	F- Percent	Total
experience	≤ 5	19	32	60
	6-10	12	20	
	11-15	18	30	
	16-20	5	8	
	21-	6	10	
academic degree	Bachelor's	15	25	60
	Master's	24	40	
	Ph.D.	21	35	

Descriptive findings related to basic research questions

The following results are presented in response to this research question: what are the barriers to the flow of knowledge in the libraries of universities based on knowledge characteristics, knowledge resources, knowledge channels, and time factors of knowledge, managerial factors of knowledge, organizational factors, technical factors, and knowledge transfer mechanisms? The data show (Table 3) the average scores of eight questions related to the respondents' dimensions of knowledge management barriers, including standard deviation, skewness, kurtosis, and their maximum and minimum scores, respectively.

Table 3
Descriptive statistics of the dimensions of knowledge management challenges

Dimensions Knowledge	Mean	Median	Mode	Std. Deviation	Variance	Minimum	Maximum	Skewedness	Kurtosis
Characteristics	17.7	18	18	4.34	18.90	6	30	-0.16	0.40
Sources	27.7	27	27	7.27	52.97	10	45	0.35	-0.097
Channels	14.47	15	17	3.63	13.18	6	23	-0.15	-0.39
Time factors	16.9	17	14	4.42	19.54	6	27	.060	-0.29
Management factors	23	22	22	5.45	29.78	11	36	0.076	-0.43
Organizational factors	12.9	13.5	14	3.11	9.70	6	19	-0.28	-0.64
Individual factors	19.34	19	16	4.11	89.16	11	28	-0.015	-0.68
Technical factors	14.43	15	15	4.21	17.74	5	19	-0.25	-0.024

For measuring the components of knowledge management challenges, 50 questions were used. And then, a 5-point Likert scale was employed with an average of 3. For knowledge characteristics, the average score of the population is (6×3)18, and the average score is 17.7, which is significantly lower than the average of the population. For knowledge sources, the average score of the population is (10×3) 30, and the average score is 27.7, which is significantly lower than the average population. For the knowledge channels component, the average score of the population is (5×3)15, and the average score is 14.47, which is significantly lower than the average of the population. For the knowledge time factors component, the average score of the population is (6×3)18, and the average score is 16.9, which is significantly

lower than the average of the population. For the knowledge management factors component, the average score of the population is (8×3) 24, and the average score is 23, which is significantly lower than the average. For the organizational knowledge factors component, the average score of the population is (4×3) 12, and the average score is 12.9, which is significantly higher than the average of the population. For personal knowledge factors, the average score of the population is (6×3)18, and the average score is 19, which is significantly higher than the average of the community. For knowledge of technical and technological factors, the average score of the population is (5×3)15, and the average score is 14.43, which is significantly lower than the average population (Table 4).

Table 4

T-test results of the components of knowledge management challenges

Dimensions of Knowledge	N	Mean	Std. deviation	t	df	p-Value
Characteristics	60	17.7	4.34	29.49	59	0.001
Sources	60	27.7	7.27	29.72	59	0.001
Channels	60	14.47	3.63	27.54	59	0.001
Time factors	60	16.9	4.42	27.60	59	0.001
Management factors	60	23	5.45	34.66	59	0.001
Organizational factors	60	12.9	3.11	27.42	59	0.001
Individual factors	60	19.34	4.11	31.94	59	0.001
Technical factors	60	14.43	4.21	23.75	59	0.001

Discussion

The results showed that the "knowledge characteristics" that play an effective role in collecting and organizing information in libraries and information centers are not normal and challenging for collection. Libraries need to acknowledge the lack of tangible revenue generation as a principle since knowledge changes rapidly, and it takes steps to understand these characteristics. These results are consistent with Akbari et al. (2018b).

The "knowledge resource" results showed that many libraries face challenges in decision-making and targeting due to a lack of knowledge resources. Communication with publishers and knowledge providers has significant potential in providing knowledge resources. This potential is rarely exploited in libraries. The results of the findings of Ou, et al. (2016) and AL-Busaidi (2010) indicated that there is an insufficient reward, fear of losing ownership, and lack of identification of knowledge sources, which are consistent with the present findings.

The "Knowledge Communication Channels" results showed that the infrastructure and communication channels are not available at the desired level for libraries. Libraries are challenged to identify communication channels and communicate with other centers. These results are consistent with the findings of Akbari et al. (2018a) on the island environment operation of libraries.

"Time factors" is one of the basic elements of knowledge that focuses on the rapid and timely development of receiving and sending scientific products and more efficient processes. This factor is not at the expected level in libraries, and its limitations create a challenge in exchanging information. These results are consistent with Fakndu, Musa, and Isa Ibrahim (2021) and Akbari et al. (2018a).

The "Management factors" results indicated that it is significantly below the population's average. What is certain is that the issue of weakness and inefficiency is rooted in management

and leadership. Lack of experience and lack of understanding of the nature of knowledge management by administrators is a big challenge for libraries. The findings of Ugwu (2016) also confirm the weakness of library management factors. Therefore, it is necessary to solve library management challenges scientifically.

The results concerning "organizational factors" showed that the score of this component is significantly higher than the average level of the population. One of the strengths of libraries is that they focus on new skills, innovative products, better ideas, and more efficient processes. The findings of Mustika et al. (2020), Alegbeleye (2010), and Akbari (2022) are consistent with the results of this study in the sense that libraries, with the help of organizational agents, can consciously implement the existing capabilities. Optimal use of this feature helps to upgrade libraries.

The findings concerning "personal factors" showed that employees are highly willing to use and apply explicit and implicit knowledge. Personal agents are an opportunity for university libraries to implement knowledge management. These results are consistent with the findings of Phung et al. (2017) in that personal factors affect knowledge-sharing behavior and in how innovative work behavior innovates.

The results concerning "technological factors" showed that although it is responsible for half of the burden of knowledge flow, an inefficient workforce, insufficient infrastructure, and poor technical support is lower than the average population. These constraints on libraries constitute a significant challenge to establishing knowledge management. These results are consistent with Zawawi et al. (2011) and Akbari (2022).

Conclusion

The challenges of knowledge management in the libraries of Islamic Azad universities based on the components of the "knowledge building stone management model" are significant. The libraries of the Islamic Azad University have not been able to manage the existing knowledge properly. Their services are still limited to traditional methods, although they have the human and organizational factors necessary to establish knowledge management. Therefore, it seems that library management should formally implement the knowledge management process in the libraries of the Islamic Azad University. Because the establishment of knowledge management in academic libraries improves services by creating an organizational culture that supports knowledge sharing, value change, the use of intellectual property, and the reconstruction of functions, roles, and responsibilities, it can contribute to improving productivity and reducing challenges.

Recommendation

In the light of the results of this study, the researcher is proffering the following recommendations:

- Assess the barriers to knowledge management in other libraries.
- Provide a quality management model for the knowledge management model of academic libraries.
- Provide the right rewards/incentives that can spring the knowledge creation among staff.
- Encourage the creation of knowledge (documentation) and provide access to that knowledge for future use.
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