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Investigating and Providing the knowledge Management System Dissemination Model in Improving the Organizations' Information Flow and Security

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ABSTRACT

The knowledge management includes all processes and activities associated with the creation, acquisition, sharing, and use of knowledge, skill and expertise. Nowadays, the knowledge management and knowledge-based activities are always taken into account by all organizations and experts in different fields of community. These new technologies enable the organizations to utilize the knowledge management systems in order to disseminate and store the unstructured information. There is a growing interest in the field of knowledge management in organizations and academic centers now. The knowledge management covers the whole cycle of data transfer, from production to organization, transfer, dissemination and use of information. The utilization of accurate and timely information is ones of the important tools for making accurate and timely decisions. The information, as a strategy, helps the managers to study the fields, select the preferred option, and investigate the effects of each selected option. The information security is literally the prevention of unauthorized access to information or products and changing or removing them through a series of processes. This research provides the knowledge management dissemination system and investigates its impact on improving the information flow and security in Telecommunication Company of Tabriz. According to the obtained results of hypothesis test, there is a significant correlation between the knowledge management system dissemination model and improvement of information security and flow. Furthermore, there is a significant correlation between the variables of knowledge management system dissemination model and improvement of information security and flow.

KEYWORDS: Knowledge management, information flow, information security.

1- INTRODUCTION

In this era, the customers and employees' needs can be met only by relying on the updated knowledge in sync with the world information through the new technologies and saving the time and resources. The employees' needs in being along with the new global knowledge and application of new scientific advances are the conditions for survival of organizations in today's' turbulent world. If the organization of have no modern knowledge and information in accordance with the global advances, they will not be able to make the right and timely decisions. Due to the knowledge, as the driving force to promote the affairs, the managers have emphasized on the power of knowledge in the organization instead of relying on the staff physical power. Under such circumstances, the knowledge creation cannot solely be the solution to achieve the vision and missions of organization. In fact, the created knowledge should be flowed in the body of organization and transferred to all levels. In this regard, the optimal utilization of information is significantly important. For optimal effect of information on the management, the decision makers at every point of management cycle should utilized that information. Nowadays, the high quality information proportional to the organizational needs on the one hand, and their reliability and validity on the other hand are among the fundamental priorities, otherwise, the traditional decisions waste the resources and worsen the complicacy of organizations. Furthermore, the evidence-based decision making, and policy-making on this basis and even information-based budgeting are the inevitable issues of proper management. Given the characteristics of current era, called the information age, the information is the most important asset for any individual or organization, thus the information security is one of the most important issues in this era. The information security is in fact the protection of information against a range of threats including the unauthorized access, use, disclosure, interruption, modification or destruction of information which is performed with the aim at ensuring the continuity of business activities, minimizing the work risks and maximizing the return on investment and opportunities. This research provides the knowledge management system dissemination model and its impact on improving the information flow and security in Telecommunication Company of Tabriz.

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2- Knowledge management:

The knowledge management covers a range of strategies and practices which are performed in the organization with the aim at identifying, producing, providing, distributing, and utilizing the ideas and experiences. These ideas and experiences are called the knowledge which can be in individual mind or managed as a set of processes and methods in the organization and applied by everyone. The knowledge management is perhaps dates from a quarter of a century as a scientific discipline. Some researchers have attributed it to a Swedish scientist who introduced the intellectual capital theory in accounting of organization. Others have attributed it to the Japanese scientists, Nonaka and Takeuchi who theorized the implicit and explicit knowledge (Nonaka, I. & H. Takeuchi, 1995).The basic concepts of knowledge management terms are as follows:

Data: Objective and abstract facts associated with the results of events

For instance, the time of purchase, the number of produced items, or rate of sales

Information: The data interpretation and conceptual relationship between them for a common understanding

For instance, analyzing the information trend of market share in a certain period

Knowledge: A systematic collection of information, experiences, and technology

For instance, the project management knowledge collection

The data constitutes the first level of knowledge management and is in fact the numbers, figures, charts or special characters which are obtained from the observation, experience, or calculation, but it does not itself generate the meaning. The data can be considered as the raw elements necessary for making decisions. The second level of knowledge management consists of the information. The information includes the data in a specific context. At this level, the data is grouped, filtered and organized in order to be meaningful. The information refers to a set of data, relevant descriptions and interpretations and other issues related to the text according to the special purposes, processes or events. The knowledge is considered as the organized, integrated or classified information which is exhaustive and increases the understanding. Due to the complexity of knowledge concept, different views are created about it. However, according to the different definitions, the knowledge refers to the information which is processed in individual or group minds through the processes such as the deep-thinking, exchange of ideas and learning, thus the information is the knowledge creation material which may be placed in the books, reports, computer files, etc. The knowledge is a concept beyond the data and information and refers to a set of organized information, the relevant practical strategy, the results of its utilization in different decisions and its associated education. The important role of knowledge management is its nature as a methodology of change. On the one hand, the knowledge management can be the most important factor of change in the organization by absorbing the new knowledge to system and on the other hand by effective administration of knowledge. Due to the proximity to the organizational decisions and measures, the knowledge can improve the performance more than the data and information and then improve the quality of service in the organizations in general, and the banks in particular. The knowledge management includes all methods by which the organization manages its knowledge assets, namely, the way of knowledge collection, storage, transfer, application, updating and creation. The knowledge management creates value for organization by converting the human capital into organized intellectual assets. In the information era, the managers seek to utilize the knowledge management strategies and techniques at all organizational levels by understanding the knowledge importance and value in their decision making processes. According to the main hypothesis of knowledge management, the organizations which better manage their knowledge are more successful in communicating with challenges of workplaces. The knowledge management is considered as an axis for achieving the processes and improved service, administrative decisions and organizational adaption and change (Handzic, Meliha et al, 2007).The knowledge management promotes an integrated approach to determine, acquire, retrieve, share and assess all information assets of business. These information assets may include the databases, documents, policies, procedures as well as the implicit and explicit skills and experiences in individual mind (Malhotra, Y. & Galletta, D., 2005).According to Veiga (2002), the main difference between the new generation of knowledge management with the previous generation (first generation: Searching for business potential benefits and designing the knowledge management projects, and the second generation: emphasis on the systematic organizational change) is the integration of third generation with the philosophy of entrepreneurship, strategy, objectives, operations, systems and procedures and how the knowledge management (KM) has become a part of every employee's working life and motivated him. It seems that the third generation of knowledge management focuses on the relationship between knowledge and action. All types of knowledge are inherently social and cultural, and the organizational knowledge can be understood through the activities of organization (Metaxiotis Kostas et al, 2005). According to the Asian Productivity Organization (APO) model(2007), the leadership, people, processes and technology are among the factors facilitating the knowledge management in public sector organizations. This model has a strong emphasis on the leadership and considers the leadership support in the organization as factor affecting the knowledge creation and success of knowledge management system.

3- Knowledge management system dissemination model:

This model is a comprehensive plan for the dissemination of knowledge management system and is proposed by Mohammad Quaddus (Quaddus, Mohammad; Jun Xu., 2005).This model is resulted from the information obtained from six large companies in Australia and North America and is designed based on viewpoints by key experts who have participated in implementation of knowledge management in organizations. This model has 16 main and subsidiary factors and 64 variables. According to this model, four variables are more important for dissemination of knowledge management system and they have been taken into account by all participants in research. These four variables are the organizational culture, top managers' support, usefulness for individuals, and dream about the knowledge management system. This model indicates the processes of knowledge management system dissemination from the beginning to the sustainable use along with the details.

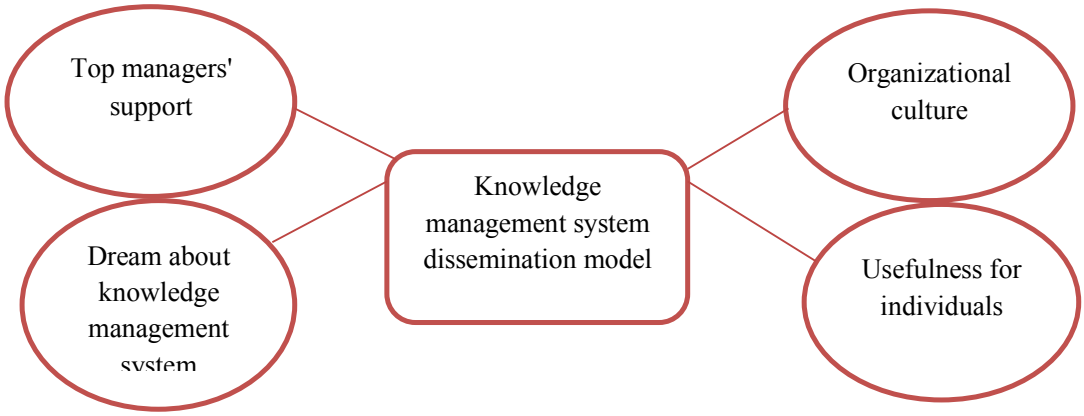

Figure 1: Knowledge management system dissemination model

4- Information flow:

Information refers to any data, document and file which can be transferred to another person. Legally, the information is either free (advertising) or with economic value and financial matters (intellectual property rights and its various branches, stocks, bonds and E-Money), or with preliminary value for exchange (business information exchange), or among the individual privacy, or finally the state information (a wide range of bureaucratic information related to the national security).The information technology (IT) is the main available global technology for creating the information dissemination systems in communities. In general, the data and information have certain life cycle; they are produced and used and also changed inside the databases and systems. Then the applicable information is archived and eventually deleted. Therefore, it can be concluded that the information has a predictable and manageable life cycle. The process of managing this information flow includes the information about the identification and classification of data, definition of policies and organization of processes with data and applying this organization for applicable information. Various stages of this information flow process are generally as follows:

- Identifying and classifying the content of information which should be managed;
- Recording the data in manageable databases;
- Organizing the information for subsequent access;
- Managing the databases for periodical update of contents, archiving the older data and adding the new data;
- Utilization of information;
- Archiving the inactive information at the end life cycle

The principles of information flow as the organizational values are as follows: The leadership and providing the necessary context for learning, collaboration and teamwork, coordination for organizational development.

5- Information Security:

The information has the semantic diversity from the everyday application to technical environment. Generally, the concept of information depends on the perception (thought), communication, control, data, form, education, knowledge, concept, model, perspective and view. The information is a set of knowledge and nature/place, and way of a subject as well as the details of issue we need. According to the computer meaning, the information refers to the processed data which has the value and validity. The information security means protecting the information and protecting the information and its systems against any risk and threat. The risks and threats of this area include the unauthorized access, application, disclosure, interruption, modification or destruction of information. The information security has the positive and dramatic impact on the organization. Furthermore, the information security controls to ensure the continued protection of organizational property

against the damage or loss. In other words, the information security refers to the information protection and minimizing the risk of information disclosure in unauthorized sectors. The information security is a set of tools to prevent the theft, assault, crime, espionage and sabotage and also the science of investigating the data protection methods in computers and communication systems against the unauthorized access and changes. According to the provided definitions, the security refers to a variety of measures, methods and tools to prevent the unauthorized access and changes in computer and communication systems. The global and trade network is another factor for the importance of information security. Due to the expansion of the Internet and globalization, our daily lives have been changed and the modern organizations have utilized the Internet for their business operations, and thus they are dependent on it. This has been led to the e-commerce which has changed the business operations. This reliance on the electronic business has also raised the need for information protection and has created various approaches to implementation of information security. This approach seeks to prevent the harm to the organization operation and it can be argued that the organizational information security has been important for business continuity. Nowadays, the exchange of information has become important even with the emergence of virtual organizations in terms of geography, dispersion and without boundary, and maintaining the security of information has become vital and it has become the necessity for development of virtual organizations.

Despite the fact that the issues of access to the information and on the other hand the information security have been raise locally for the governor since the past, and the access to the military and national information has led to the destruction of nation, a new dimension is added to the information security due to the IT development and utilization of information as a business tool and profitable capital. In today's business, the information plays the role of capital in a company and the organizational information protection is one of the leading pillars to its survival. The economic globalization has led to the completion at the global level and most of the companies have been forced to cooperate with other companies in order to survive at the global level; therefore, the classification, valuation and protection of organizational information sources (whether about the information system or the organization members) are considered crucial. The software and hardware problems of system may be considered as the threat to the information security of system. The information security refers to the information protection and minimization of risk for disclosure of information in unauthorized sectors. Maconachy et al have investigated the important aspects of information security. They have paid attention to the main characteristics of information security (access, accuracy, reliability) and security measures (technology, policies, procedures, education and awareness), and information status (status of transfer, memories and processing) to achieve the information security (Maconachy et al, 2001).

The issue of information security in information era should not be considered as a commodity or product, but as an organizational process (Crowston& Williams, 2000) and the security should not be degraded as a product whether software or hardware. Each of these cases have special place with certain weight and the weight of a parameter should not be considered more than what it is and another parameter ignored or the unacceptable weight be specified for it with an excuse to engage in information security. However, the surprising emergence of new technologies in current era has had its own threats. The users' information security awareness and training is among the factors affecting the human factors in providing the information security (Wilson & Hash, 2003), (Shaw et al., 2009).In general, an effective security structure should be a combination of technical and functional elements in order to have mutual effect on the risks of removable information. The faster pace of technological changes will lead to the further need for additional security measures, thus the proper administration of removable information, and informing all employees about these policies, solutions and application procedures should be the parts of security policies and be associated with the appropriate policies. The employees, who deal with the critical information, should be fully aware of removable information security concept. If the security awareness and educating is considered as a part of jobs, the people feel responsible for their tasks and jobs (Thomson & Von Solms, 1998).

6- RESEARCH LITERATURE

Piccoli et al suggested a framework and model for knowledge management development in higher education institutions in their research. This study investigates the knowledge creation, management and conversion concerning the faculty members and students' activities in a web-based virtual learning environment. The research, production and learning engines are three main elements in this model. The model provided by Piccoli et al is one of the key models as it comprehensively introduces the process of knowledge creation and transfer, and can be implemented by students and faculty members in higher education system (Mac Carthy, 2006).

Praba Nair (2009) provided a simple plan of knowledge management for organization in a research on providing the knowledge management framework model in Asian Productivity Organization(APO).In this model, the knowledge management is considered as an integrated approach to the knowledge creation, sharing and application for growth, productivity and profitability of organization. Furthermore, it is emphasized on the

importance of knowledge management in the success of organization and highlighting the key factors of success in the knowledge management system (PrabaNair, 2009).

Cheng and Hou (2005) studied the organizational factors influencing the implementation of information security management. These researchers have emphasized on the need of organizations to managerial structures to protect the information assets as well as considering these security structures as the effective weapons for survival in competition arena. According to research findings, the IT managers' abilities and the environmental uncertainty have led to a positive impact on the organizations in implementing the information security management and BS7799standard.Moreover, the findings suggest that the organizational factors, including the organizational size and type of industry, significantly affect the application of information security management (Cheng, K., 2005).

Kuzma (2010) investigated the web security vulnerability in European digital libraries and examined the security issues in 30 European digital libraries through website vulnerability test. The results indicate that the majority of digital libraries have serious security flaws in web-based applications. Most of the Western European libraries have critical security problems (25%) or at the middle level (40%) leading to the unsafe online trade. Furthermore, the findings indicate that despite the laws about the data protection, the librarians do not implement the necessary steps to online secure information systems (Kuzma, Joanne, 2010).

Mahabi (2010) studied the Information Security Awareness from the system administrators and end-user perspectives at Florida State University. The results indicate that the system administrators have more focused on the external and technical threats than the internal and non-technical ones resulting from various factors such as there source availability, behavior with user and satisfaction with the technical tool. The second section of study, which is about the investigation of relevant end users, indicates the need for users' training and promoting their knowledge in order to be protected against the security threats. The results of this study emphasize on the importance of human factors in information security (Mahabi, Victoria, 2010).

Tintamusik (2010) examined the relationship between the organizational systems and information security awareness. This research focuses on the study of vital relationship between the organizational systems within the framework of organizational behavior theory and information security awareness (ISA) within the framework of information security theory. The main issue in this study is the user unawareness of security issues as a deterrent to companies in defending against the cyber attacks. Based on the findings, there is a significant relationship between the users' awareness of information security and the dimensions of formal organization structure, the dimensions of organizational culture and human resources practices and policies (Tintamusik, Yanarong, 2010).

In a research on evaluating the staff information security awareness in international mining companies, Kruger and Kearrney achieved important results in different security cases. They classified the levels of information security awareness into three groups of knowledge, attitude and behavior; and the evaluating fields at these levels included the adherence to policies, creating and maintaining the secure codes, the Internet and email, mobile equipment safety in data transfer, reporting of security incidents, and appropriate action and reaction (Kruger &Kearrney, 2006).

In an important study by Choi, Kim and Joe, the findings indicate that an increase in the user knowledge and knowledge management will lead to a direct impact on the way of users' information security and operation management, and thus will improve the performance of the organization (Choi et al, 2008).

In a research conducted by Veiga & Eloff, a framework is provided for creating the information security culture. According to the explanation of their model, some components such as the leadership in the organization, change, security policies, procedures and operations lead to the creation of information security culture in the organization by affecting the behavior either individual or group and organizational (Veiga & Eloff, 2010).

Kruger, Drevin conducted another research entitled as "A prototype for assessing information security awareness". They have concluded that an increase at the level of employee information security awareness is so useful through the vocabulary test and there is a certain relationship between the information security learning and change in users' security behavior (Kruger, Drevin & Steyn, 2010).

The following articles reviewed the knowledge management and information security: (Mariel A. Ale, et al, 2014), (Terence Ahern, et al, 2014), (Mariya Terzieva, 2014), (Maisa Mendonça Silva, et al, 2014) and (Derek L. Nazareth, Jae Choi, 2014).

7- Statistical population and research sample:

The statistical population of this study consists of 356 managers and employees with bachelor degree and higher in Telecommunication Company of Tabriz. The Cochran formula of sample size is utilized for determining the sample size. In this formula, p and q are equal to 0.5 and e is equal to 0.095, so we have:

$$Z_{\alpha/2} = 1.96$$
$$N = 356$$
$$p = 0.5$$
$$q = 0.5$$
$$e = 0.095$$

$$n = \frac{N(Z_{\alpha/2})^2 \times p.q}{e^2(N-1) + (Z_{\alpha/2})^2 \times p.q}$$

$$n = \frac{356(1.96)^2 \times (0.5 \times 0.5)}{(0.095)^2 \times (356-1) + (1.96)^2 \times (0.5 \times 0.5)} = 82.10 \cong 83$$

8- Research hypotheses:

Main hypotheses:

- There is a significant relationship between the knowledge management system dissemination and improved information flow.
- There is a significant relationship between the knowledge management system dissemination and improved information security.

Secondary hypotheses:

- There is a significant relationship between the organizational culture variable in knowledge management system dissemination and improved information flow.
- There is a significant relationship between the top managers' support variable in knowledge management system dissemination and improved information flow.
- There is a significant relationship between the usefulness for individuals variable in knowledge management system dissemination and improved information flow.
- There is a significant relationship between the variable of dream about knowledge management system dissemination and improved information flow.
- There is a significant relationship between the organizational culture variable of knowledge management system dissemination and improved information security.
- There is a significant relationship between the top managers' support variable in knowledge management system dissemination and improved information security.
- There is a significant relationship between the usefulness for individuals in knowledge management system dissemination and improved information security.
- There is a significant relationship between the variable of dream about knowledge management system dissemination and improved information security.

9- **Conceptual model of research:**

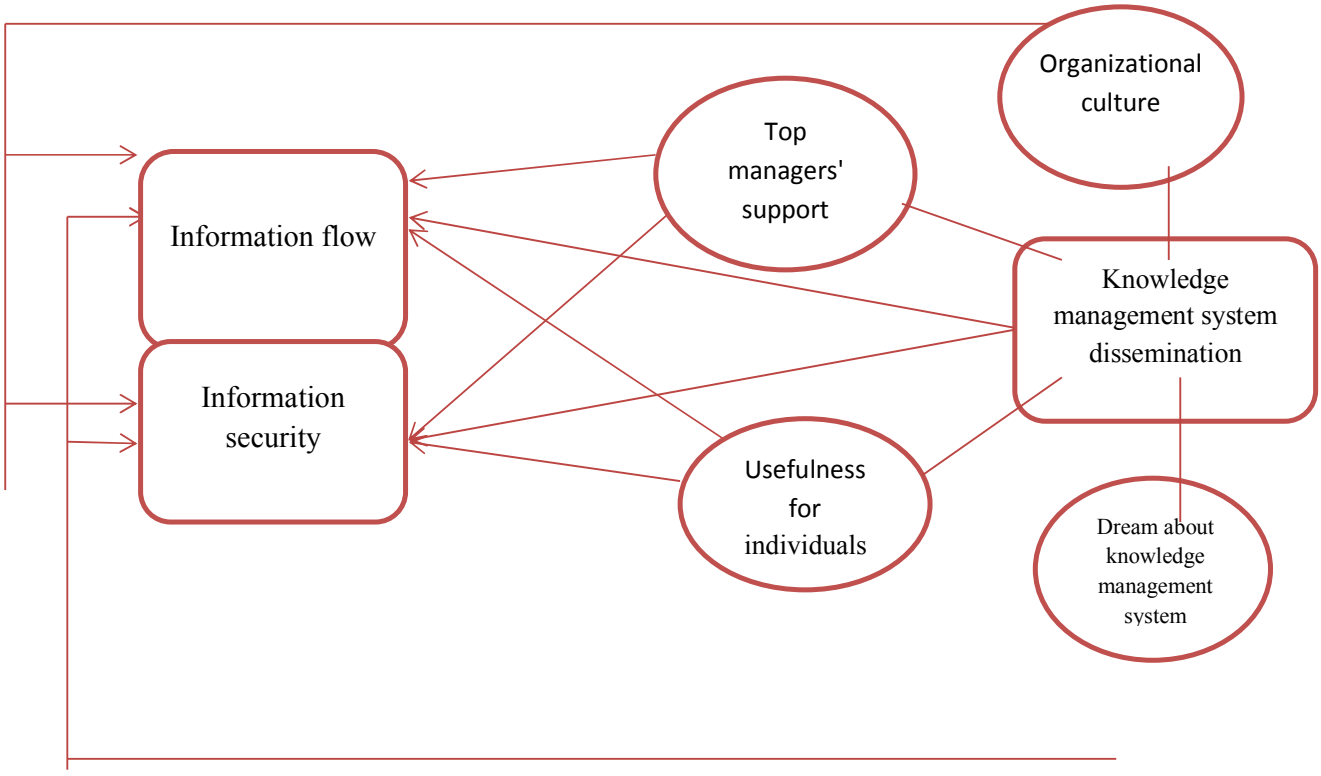

Figure 2: Conceptual model of research

10- Hypotheses test:

First main hypothesis: There is a significant relationship between the knowledge management system dissemination and improved information flow.

H_0: The knowledge management system dissemination model has no direct relationship with improved information flow.

H_1: The knowledge management system dissemination model has a direct relationship with improved information flow.

Table 1: Correlation between knowledge management system dissemination model and improved information flow

Variable	Test	Improved information flow
Knowledge management system dissemination model	correlation coefficient	0.863
	Significance level	0.002
	No.	83
	Mean	-0.4125
	Standard deviation	0.2065
	T value	-11.641

According to the data of table above, the test results indicate that the significance level (sig) of test is less than 1%. Thus, H_0 is rejected. In other words, it can be concluded that the knowledge management system dissemination model affects the improved information flow at the significance level of 99%. Furthermore, the pairwise correlation coefficient is equal to 0.863. Given the value of sig, it can be argued that there is a direct and significant relationship between the knowledge management system dissemination model and improved information flow ($p < 0.01$).

Second main hypothesis: There is a significant relationship between the knowledge management system dissemination and improved information security.

H_0: The knowledge management system dissemination model has no direct relationship with improved information security.

H_1: The knowledge management system dissemination model has a direct relationship with improved information security.

Table 2: Correlation between knowledge management system dissemination model and improved information security

Variable	Test	Improved information security
Knowledge management system dissemination model	correlation coefficient	0.865
	Significance level	0.002
	No.	83
	Mean	-0.4355
	Standard deviation	0.2165
	T value	-11.321

According to the data of table above, the test results indicate that the significance level (sig) of test is less than 1%. Thus, H_0 is rejected. In other words, it can be concluded that the knowledge management system dissemination model affects the improved information security at the significance level of 99%. Furthermore, the pairwise correlation coefficient is equal to 0.865. Given the value of sig, it can be argued that there is a direct and significant relationship between the knowledge management system dissemination model and improved information security ($p < 0.01$)

First sub-hypothesis: There is a significant relationship between the organizational culture variable in knowledge management system dissemination and improved information flow.

H_0: The organizational culture variable in knowledge management system dissemination model has no direct relationship with improved information flow.

H_1: The organizational culture variable in knowledge management system dissemination model has a direct relationship with improved information flow.

Table 3: Correlation between the organizational culture variable in knowledge management system dissemination model and improved information flow

Variable	Test	Improved information flow
Organizational culture variable in Knowledge management system dissemination model	correlation coefficient	0.753
	Significance level	0.002
	No.	83
	Mean	-0.4865
	Standard deviation	0.2523

	T value	-10.741

According to the data of table above, the test results indicate that the significance level (sig) of test is less than 1%. Thus, H_0 is rejected. In other words, it can be concluded that the organizational culture variable in knowledge management system dissemination model affects the improved information flow at the significance level of 99%. Furthermore, the pairwise correlation coefficient is equal to 0.753. Given the value of sig, it can be argued that there is a direct and significant relationship between the organizational culture variable in knowledge management system dissemination model and improved information flow ($p < 0.01$)

Second sub-hypothesis: There is a significant relationship between the top managers' support variable in knowledge management system dissemination and improved information flow.
H_0: The top managers' support variable in knowledge management system dissemination model has no direct relationship with improved information flow.
H_1: The top managers' support variable in knowledge management system dissemination model has a direct relationship with improved information flow.

Table 4: Correlation between the top managers' support variable in knowledge management system dissemination model and improved information flow

Variable	Test	Improved information flow
Top managers' support variable in knowledge management system dissemination model	correlation coefficient	0.703
	Significance level	0.002
	No.	83
	Mean	-0.4663
	Standard deviation	0.2321
	T value	-10.531

According to the data of table above, the test results indicate that the significance level (sig) of test is less than 1%. Thus, H_0 is rejected. In other words, it can be concluded that the top managers' support variable in knowledge management system dissemination model affects the improved information flow at the significance level of 99%. Furthermore, the pairwise correlation coefficient is equal to 0.703. Given the value of sig, it can be argued that there is a direct and significant relationship between the top managers' support variable in knowledge management system dissemination model and improved information flow ($p < 0.01$)

Third sub-hypothesis: There is a significant relationship between the variable of usefulness for individuals in knowledge management system dissemination and improved information flow.
H_0: The variable of usefulness for individuals in knowledge management system dissemination model has no direct relationship with improved information flow.
H_1: The variable of usefulness for individuals in knowledge management system dissemination model has a direct relationship with improved information flow.

Table 5: Correlation between the variable of usefulness for individuals in knowledge management system dissemination model and improved information flow

Variable	Test	Improved information flow
Variable of usefulness for individuals in knowledge management system dissemination model	correlation coefficient	0.714
	Significance level	0.002
	No.	83
	Mean	-0.4323
	Standard deviation	0.2121
	T value	-10.231

According to the data of table above, the test results indicate that the significance level (sig) of test is less than 1%. Thus, H_0 is rejected. In other words, it can be concluded that the variable of usefulness for individuals in knowledge management system dissemination model affects the improved information flow at the significance level of 99%. Furthermore, the pairwise correlation coefficient is equal to 0.714. Given the value of sig, it can be argued that there is a direct and significant relationship between the variable of usefulness for individuals in knowledge management system dissemination model and improved information flow ($p < 0.01$)

Forth sub-hypothesis: There is a significant relationship between the variable of dream about knowledge management system dissemination and improved information flow.
H_0: The variable of dream about knowledge management system dissemination model has no direct relationship with improved information flow.
H_1: The variable of dream about knowledge management system dissemination model has a direct relationship with improved information flow.

Table 6: Correlation between variable of dream about knowledge management system dissemination model and improved information flow

Variable	Test	Improved information flow
Variable of dream about knowledge management system dissemination model	correlation coefficient	0.692
	Significance level	0.002
	No 479	83
	Mea	-0.6123
	Standard d	0.2976
	T value	-10.765

According to the data of table above, the test results indicate that the significance level (sig) of test is less than 1%. Thus, H_0 is rejected. In other words, it can be concluded that the variable of dream about knowledge management system dissemination model affects the improved information flow at the significance level of 99%. Furthermore, the pairwise correlation coefficient is equal to 0.692. Given the value of sig, it can be argued that there is a direct and significant relationship between the variable of dream about knowledge management system dissemination model and improved information flow ($p < 0.01$).

Fifth sub-hypothesis: There is a significant relationship between the organizational culture variable in knowledge management system dissemination and improved information security.

H_0: The organizational culture variable in knowledge management system dissemination model has no direct relationship with improved information security.

H_1: The organizational culture variable in knowledge management system dissemination model has a direct relationship with improved information security.

Table 7: Correlation between the organizational culture variable in knowledge management system dissemination model and improved information security

Variable	Test	Improved information security
Organizational culture variable in Knowledge management system dissemination model	correlation coefficient	0.758
	Significance level	0.002
	No.	83
	Mean	-0.4365
	Standard deviation	0.2223
	T value	-10.432

According to the data of table above, the test results indicate that the significance level (sig) of test is less than 1%. Thus, H_0 is rejected. In other words, it can be concluded that the organizational culture variable in knowledge management system dissemination model affects the improved information security at the significance level of 99%. Furthermore, the pairwise correlation coefficient is equal to 0.758. Given the value of sig, it can be argued that there is a direct and significant relationship between the organizational culture variable in knowledge management system dissemination model and improved information security ($p < 0.01$)

Sixth sub-hypothesis: There is a significant relationship between the top managers' support variable in knowledge management system dissemination and improved information security.

H_0: The top managers' support variable in knowledge management system dissemination model has no direct relationship with improved information security.

H_1: The top managers' support variable in knowledge management system dissemination model has a direct relationship with improved information security.

Table 8: Correlation between the top managers' support variable in knowledge management system dissemination model and improved information security

Variable	Test	Improved information security
Top managers' support variable in knowledge management system dissemination model	correlation coefficient	0.743
	Significance level	0.002
	No.	83
	Mean	-0.4163
	Standard deviation	0.2021
	T value	-11.531

According to the data of table above, the test results indicate that the significance level (sig) of test is less than 1%. Thus, H_0 is rejected. In other words, it can be concluded that the top managers' support variable in knowledge management system dissemination model affects the improved information security at the significance level of 99%. Furthermore, the pairwise correlation coefficient is equal to 0.743. Given the value of

sig, it can be argued that there is a direct and significant relationship between the top managers' support variable in knowledge management system dissemination model and improved information security ($p < 0.01$)

Seventh sub-hypothesis: There is a significant relationship between the variable of usefulness for individuals in knowledge management system dissemination and improved information security.

H_0: The variable of usefulness for individuals in knowledge management system dissemination model has no direct relationship with improved information security.

H_1: The variable of usefulness for individuals in knowledge management system dissemination model has a direct relationship with improved information security.

Table 9: Correlation between the variable of usefulness for individuals in knowledge management system dissemination model and improved information security

Variable	Test	Improved information security
Variable of usefulness for individuals in knowledge management system dissemination model	correlation coefficient	0.738
	Significance level	0.002
	No.	83
	Mean	-0.5323
	Standard deviation	0.3021
	T value	-10.748

According to the data of table above, the test results indicate that the significance level (sig) of test is less than 1%. Thus, H_0 is rejected. In other words, it can be concluded that the variable of usefulness for individuals in knowledge management system dissemination model affects the improved information security at the significance level of 99%. Furthermore, the pairwise correlation coefficient is equal to 0.737. Given the value of sig, it can be argued that there is a direct and significant relationship between the variable of usefulness for individuals in knowledge management system dissemination model and improved information security ($p < 0.01$)

Eighth sub-hypothesis: There is a significant relationship between the variable of dream about knowledge management system dissemination and improved information security.

H_0: The variable of dream about knowledge management system dissemination model has no direct relationship with improved information security.

H_1: The variable of dream about knowledge management system dissemination model has a direct relationship with improved information security.

Table 10: Correlation between variable of dream about knowledge management system dissemination model and improved information security

Variable	Test	Improved information security
Variable of dream about knowledge management system dissemination model	correlation coefficient	0.727
	Significance level	0.002
	No.	83
	Mean	-0.6652
	Standard deviation	0.2976
	T value	-11.435

According to the data of table above, the test results indicate that the significance level (sig) of test is less than 1%. Thus, H_0 is rejected. In other words, it can be concluded that the variable of dream about knowledge management system dissemination model affects the improved information security at the significance level of 99%. Furthermore, the pairwise correlation coefficient is equal to 0.727. Given the value of sig, it can be argued that there is a direct and significant relationship between the variable of dream about knowledge management system dissemination model and improved information security ($p < 0.01$).

Conclusion:

The knowledge is the main tool of competition in most of the organizations. The business and academic communities believe that an organization can maintain its competitive advantage by knowledge. The managers should pay attention to the knowledge management in the organization I order to direct the knowledge towards the organizational objectives as well as gaining the sustainable competitive advantage. The managers should enhance their capabilities in this regard, be familiar with knowledge management strategies, and create the cultural, knowledge-based and interactive environment between human resources in order to easily share and manage the information and knowledge among them. Therefore, they will be able to convert the existing knowledge into the sustainable competitive advantage. Nowadays, the organizations are faced with new sources of information and knowledge resulted from their intellectual capital. The existence of appropriate infrastructures and contexts for knowledge creation and identification of facilitators and the correlation and interaction between different levels of organization will lead to the creation of driving force called the

knowledge in the organization. If this driving force is not well managed, the knowledge will become as an island dominated by individuals and thus the meeting points will be lost at the organizational level. The knowledge management includes the identification and analysis of existing and essential knowledge capital processes and the processes associated with the knowledge capital and subsequent planning and control of operation for development of capital and processes in order to achieve the desired objectives. Itsprocesses are the production, development, dissemination, maintenance, utilization and application of knowledge. The information security is a set of tools to prevent the theft, assault, crime, espionage and sabotage and is the science of investigating the data protection methods in computers and communication systems against the unauthorized access and changes. This research provides the knowledge management system dissemination model and its impact on improving the information flow and Telecommunication Company of Tabriz. According to the obtained results of hypotheses testing, there is a significant correlation between the knowledge management system dissemination model and improved information flow and security. Furthermore, there is a significant correlation between the variables of knowledge management system dissemination model and improve information flow and security.

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