

Assessment of Knowledge Management Correlation with Organizational Learning with Research Performance

Leila Davoudi^{1*} and Hossin Zaianlipour²

¹ Department of Educational Management, Islamic Azad University, BandarAbbas Branch, BandarAbbas, Iran.

² Hormozgan University, Bandar Abbas, Iran

*Corresponding author's e-mail: Leila.davoudi@gmail.com

ABSTRACT: It could be say that each university has two major roles, including the role of education and research. Research is related to other variables such as knowledge management and organizational learning. Therefore, the present study investigated the relationship between knowledge management and organizational learning, faculty research performance, Hormozgan University of Medical Sciences in educational year 2013. Methods the study was correlational study. 105 faculty members, Hormozgan University of Medical Sciences were selected classification random sampling as sample of this research. Tools for data collection in this study included: a demographic questionnaire, the questionnaire of knowledge management (Lawson), Organizational Learning Inventory and the inventory of Geravand's Research Performance. The results showed that the dimensions of knowledge management variables were entered into the regression results showed that only three dimensions of knowledge creation, knowledge capture and dissemination of knowledge, significant predictors of research performance. When the dimensions of organizational learning variables were entered into the regression results showed that only two dimensions, significant predictors of research performance. In totally when dimensions of knowledge management and organizational learning were entered into the regression equation, the result showed, only two dimensions of knowledge creation, knowledge capture were predictor of research performance. In general it could be say that the knowledge management and organizational learning have a crucial role in the performance of faculty research. Thus, strategies for knowledge management and organizational learning, can significantly improve the professional faculty and the University to create a science competition.

Keywords: knowledge management, organizational learning, research performance and faculty member of university.

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INTRODUCTION

The success of any institution, particularly universities, is mostly dependent on the performance and influence of its members [1]. All educational institutions possess knowledge at their core and context, process information, transform it into knowledge on a daily basis, and form the basis of decision making and future operations of the organization by combining values, strategies, and experiences [2]. We can say that any university plays two major roles which include the role of education and the role of research. Even though, the role of education can eventually transfer information and deals with information consumption, the role of research is responsible to supervise production of the necessary information and provide solutions for the current problems in the society [3, 4]. We must note that the research performance consists of fundamental and practical studies of faculty members which include articles having official approval of domestic or abroad conferences from authorities [e.g. ministry of sciences, research and technology), as well as articles published in scientific university journals and books published by faculty members, together with their technical and publication report. The research performance of faculty members is an issue strongly correlated with variables like information technology, knowledge management, organizational learning, organizational culture, personal motivation, etc. among these variables, knowledge management and organizational learning are very closely related with the research performance of officials in educational and research organizations [3, 5].

Nonaka and Takochi consider knowledge management as the process during which an organization produces capital from its knowledge or intellectual assets [6]. Gorlik believes that knowledge managements is the system which in order to create and distribute the existing knowledge, creates a collaborative environment, provides opportunities to create new knowledge, and presents required tools to practice what the organization knows to

realize its strategic objectives [7]. According to the theory of Snowden, also known as the theory of change, it is rather concentrated on information distribution for decision makers at a specific time. According to this theory, the understanding of an organization regulates it through the desirability of the phenomena of the adaptive system which is constrained by the free actions of men [8].

Another variable, closely related to knowledge management, and also the research performance, is the organizational learning. We must note that organizational learning mostly refers to a group or learning on an organizational level. Organizational learning occurs when a group learning to be collaborative, share its knowledge, and act as a group, such that the cumulative capacity of the group is increased and the ability to understand and act effectively is accomplished. In summation, we can say that organizational learning is defined as a way by which organizations can produce, complete and organize knowledge, normalize their actions on its basis, and introduce it into their own culture [9].

Rading's research showed that knowledge management provides the context necessary for a static organization to progress towards a learner organization, as well as create a knowledgeable organization through learning [10]. Davarzani considers knowledge management as one of the factors most effective in the learning capability of the organization and observes a direct relationship between the proposed ideas and the ability to learn [11]. Rezqi's research showed that even though results of research confirms the positive effect of integrating knowledge management on improving the performance of managers, there is a significant difference between the knowledge-based thoughts of junior and senior managers and this shortcoming must be overcome to promote junior managers [12]. Cruz concluded that improving organizational learning increases the probability of the success of knowledge management [13].

Therefore, we can say that educational and research performance, especially among faculty members can be one of the goals of knowledge management and organizational learning deployment. The importance of this study is intensified when officials of health and medical organizations can utilize the knowledge management tools to transform learning hospitals and take an effective step towards achieving capabilities of these organizations. Despite the importance of knowledge management and organizational learning and their role in the performance of faculty members, the search of the research showed no prior study directly investigating the relationship between knowledge management and organizational learning with the research performance of faculty members. Therefore, this gap of information encouraged the researcher to find a suitable answer for this question that "is there a significant relationship between knowledge management and organizational learning with the research performance of faculty members of the medical Sciences University of Hormozgan?"

MATERIAL AND METHODS

This study is a correlation research. The statistical population consists of all faculty member of the medical sciences University of Hormozgan (120 individuals). Stratified random sampling was employed as the sampling method, such that a proportional number of faculty members of each department [i.e. medical, health, and nursing] were selected as samples. The sample size was approximated 92 people using the Korgesi and Morgan table. Considering subject churn, the researcher handed about 110 questionnaires to the faculty members and a total number of 105 questionnaires were filled and returned. Therefore, the sample of this study included 105 people of faculty members of the medical Sciences University of Hormozgan.

The tools employed in this study consisted of the questionnaire about demographic characteristics [i.e. Age, sex, education, military service and the location of service], a research performance questionnaire, an organizational learning questionnaire, and a knowledge management questionnaire.

In order to evaluate the research performance, Ground research performance question are, including 24 questions, was used. Its content and visual validity was reported favorable by Ground and its durability, by the alpha method, was reported higher than 0.70 [14]. The organizational learning questionnaire of the education and development community of United States (containing 22 questions) was used to investigate the organizational learning. This questionnaire consisted of 5 dimensions, i.e. maintaining values, the effect of management, the performance of group, the effect of structure on group performance, and the role of behavior [15]. Margaret used the Cronbach's alpha to evaluate the durability of this questionnaire. The coefficients for different dimensions were reported as follows: maintaining values 0.79, the effect of management 0.81, the performance of group 0.75, the effect of structure on group performance 0.84, and the role of behavior 0.73 [16]. Lawson knowledge management questionnaire was used to assess knowledge management, which contained 24 questions. This questionnaire possessed six subscales (knowledge creation, knowledge absorption, knowledge organization, knowledge storage, knowledge propagation, and knowledge application). The durability of this tool using Cronbach's alpha was reported respectively knowledge creation 0.84, knowledge absorption 0.89, knowledge organization 0.86, knowledge storage 0.88, knowledge propagation 0.89, and knowledge application 0.80 [17].

SPSS 19, Pearson correlation coefficient test, and multivariable regression were exploited to evaluate data.

RESULTS

A total of 105 faculty members of the medical Sciences University of Hormozgan participated in this study. The frequency ratio of each department is presented in table 1. About 55.2% (58 people) of the participants were men and 44.8% (47 people) were women. About 10.5% [11] people aged 20 to 30, 51.4% (54 people) aged 31 to 40, and 38.1% (40 people) aged more than 40 years. Moreover, the education and scientific degree of faculty members are presents in table 2.

The first finding of this study is that the multiple correlation coefficients of predicting variables of dimensions of knowledge management (knowledge creation, knowledge absorption, knowledge organization, knowledge storage, knowledge propagation, and knowledge application) and the investigated variable (research performance) equals 0.57. Generally, dimensions of knowledge creation, absorption and propagation are considered significant predictors of research performance. Knowledge organization, storage, and application are not significant predictors for research performance. As we can see in table 3, knowledge creation with beta equal to 0.36 at alpha level of 0.01, knowledge absorption with beta equal to 0.29 at alpha level 0.01, knowledge propagation with beta equal to 0.19 at alpha level 0.02 are respectively significant predictors of the research performance .

The second finding of this study is that the multiple correlation coefficient of predicting variables of dimensions of organizational learning (maintaining values, the effect of management, group performance, the effect of structure on group performance, and the role of behavior) and the investigated variable (research performance) equals 0.38. as we can see in table 4, maintaining values with beta equal to 0.22 at alpha level 0.01, effect of structure on performance with beta equal to 0.14 at alpha level 0.04 are significant predictors of the research performance. Generally, in our regression model, maintaining values and the effect of structure on performance are significant predictors for the research performance of faculty members of the medical Sciences University of Hormozgan.

At the next stage, dimensions of organizational learning and knowledge management simultaneously entered the regression equation. Results indicated that the multiple correlation coefficients of learning and knowledge management with the research performance of faculty member equal 0.60.

Moreover, table 5 presents results that indicate none of the dimensions of organizational learning, coupled with the dimensions of knowledge management at the regression equation are a significant predictor of the research performance of faculty members. On the other hand, knowledge creation and absorption are the only significant predictors of the research performance. As we can see in table 5, knowledge creation with beta equal to 0.32 at alpha level 0.01 and knowledge absorption with beta equal to 0.28 at alpha level 0.01 are considered significant predictors of the research performance.

Table1. Frequency ratio of people in the population and the sample size

Department	Frequency of people in the population	Percentage of people in the population	Frequency of people in the sample	Percentage of people in the sample
Medical	85	71	75	71
Nursing	16	13	13	13
Health	19	16	17	16

Table2. Frequency of the research population regarding education and scientific degree

Education	Frequency	Percentage	Cumulative Percentage	Scientific Degree	Frequency	Percentage	Cumulative Percentage
Bachelor	1	1	1	Trainer	27	25.7	25.7
Masters	31	29.5	30.5	Assistant Professor	67	68.8	89.5
Doctorate	9	8.6	39	Associate Professor	1	1	90.5
Post-Doctorate	35	33.3	79.4	Professor	3	2.9	93.3
	29	27.6	100	Other	7	6.7	100
Total	105	100		Total	105	100	

Table3. Regression coefficients of dimensions of the knowledge management variable

Title	β	T	P	R	F	P
Knowledge Creation	0.36	4.23	0.01	0.57	8.33	0.01
Knowledge Absorption	0.29	3.14	0.01			
Organization	-0.09	-1.04	0.29			
Storage	-0.11	-1.16	0.24			

Propagation	0.19	2.21	0.02
Knowledge Application	-0.06	-0.72	0.47

Table4. Regression coefficients of dimensions of the organizational learning variable

Title	β	T	P	R	F	P
Maintaining Values	0.22	2.22	0.01	0.01	3.44	0.38
Effect of Management	0.14	1.38	0.29			
Group Performance	0.20	2.02	0.24			
Effect of Structure on Performance	0.14	1.43	0.04			
Role of Behavior	0.13	1.38	0.47			

Table 5. Regression coefficients of dimensions of knowledge management and organizational learning variables

Dimensions	Title	β	T	P	R	F	P
Dimensions of organizational learning	Maintaining Values	0.13	1.42	0.15	0.01	4.90	0.60
	Effect of Management	0.03	0.35	0.72			
	Group Performance	0.15	1.71	0.09			
	Effect of Structure on Performance	0.06	0.65	0.51			
	Role of Behavior	0.05	0.56	0.57			
Dimensions of knowledge management	Knowledge Creation	0.32	3.41	0.01			
	Knowledge Absorption	0.28	2.85	0.05			
	Organization	0.10	1.10	0.26			
	Storage	0.10	1.05	0.29			
	Propagation	0.15	1.64	0.10			
	Knowledge Application	0.07	0.77	0.44			

DISCUSSION

There is no doubt that the research performance of people, particularly faculty members, cannot be independent of other effective components of their occupation and we can expect that components like knowledge management, organizational learning, or even different factors including economic and social predominant views of universities are effective in the research performance of the faculty members. The first finding of this study showed that the three dimensions (i.e. knowledge creation, absorption, and propagation) in the current regression model are significant predictors of the research performance of faculty members of the medical Sciences University of Hormozgan. While, knowledge organization, storage, and application in the current regression model were no significant predictors of the research performance of faculty members of the medical sciences university of Hormozgan. This conclusion is also in line with the findings of Mahini [18]. According to the view of Halawi, Arson, and McCarty, the knowledge management system in knowledge-based organization consist of attributes like system quality, knowledge quality, service quality, application trend, and user satisfaction which evaluate the success of knowledge management systems [19]. Nonaka believes that guiding individualistic knowledge in line with organizational objectives required creating an environment based on knowledge sharing, evolution and collaboration among members. Based on this notion, the success of any organization requires the involvement of all its employees [20]. With a general perspective of the conclusions of this study regarding the place of knowledge management and its relationship with the degree of research performance of the faculty members of the medical sciences university of Hormozgan, we can also implicate that: knowledge creation in the context of knowledge management has the highest position, and after that, knowledge absorption and propagation. Regarding the

insignificant relationship between knowledge organization, storage, and application and the research performance of faculty members, we can say that knowledge management must be considered in an extended context of factors including the position of the investigated people in the organization, the technological infrastructure and the facilities of the university, organization leadership, and the organizational culture [21].

The second finding showed that maintaining values and the effect of structure on performance in the current regression model are significant predictors for the research performance of the faculty members of the medical Sciences University of Hormozgan. While, management, group performance, and the role of behavior in the current regression model were no significant predictor of the research performance of the faculty members of the medical sciences university of Hormozgan. This conclusion is in line with findings of McCarty [22], Dwaresny [11], Martin [23], and Cruz [13]. We must note that learning creation in the university is not limited to the student, but includes three levels of individuals (faculty members, students, and others), team level learning (teams and groups of the university), and at the organizational level (organizational learning) [2].

The third finding indicated that none of the dimensions of the organizational learning, when coupled with dimensions of knowledge management in the regression equation, are significant predictors of the research performance of faculty members. On the other hand, among dimension of the knowledge management, knowledge creation and absorption were the only significant predictor of the research performance. While, other dimension of the knowledge management were not significant predictors of the research performance of faculty members. This conclusion is in line with results of Shirzad Kebria and Khoshnazar [21], Dehghani and Maaroufi [24], Badri Azarin, Seyyed Ameri, and Imanpour [25], Davarzani [11], Javarabchi [26], and Rezqi [12]. In implication of this finding, we must note that since the medical sciences university plays an increasing role in the health of the people of society, considering this role without knowledge management is inefficient. The reason for this is that maintaining and expanding the health system without taking into account the knowledge management and utilizing the necessary ability regarding research in sync with the health system of society will be unsuccessful. On the other hand, knowledge management as a key instrument of the modern day management, is a systematic strategy and processes to define, access, transfer, and apply the information and knowledge by organization employees which create innovation, competition capability, and utilization promotion, and not only helps solve problems, decision making, strategic planning, dynamic learning, but prevents deterioration of mental assets and enhance organization's awareness and flexibility.

In summation the findings of this research implicated that both knowledge management and organizational learning play an important role in the research performance of faculty members. Therefore, knowledge management strategies significantly promote the quality of education processes, learning and research, free scientific collaborations, knowledge mixture, and the level of specialized and expert knowledge of faculty members and provides a sustainable competitive advantage for the university. This study also faces some limitations, among which are possible untrue answers of the participants to questionnaires and the limitation of the research sample [105 people].

According to the results of this study, it is recommended that educational courses or workshops are provided for the faculty members regarding the effect of organizational learning and knowledge management on the research performance. Furthermore, studies with quality or combination (quantative and qualitative) strategies regarding the relationship of knowledge management and organizational learning variables and the research performance of faculty members of universities seem helpful.

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