

Analyzing the Difference between the Current and Desired Situation of Knowledge Management Case Study: the Faculty Members of Birjand University of Medical Sciences

درابه مستوى التفاوت الموجود بين الحالة الموجوده و الحال المطلوبه في مجال مديريه العلم (الدرابه على اعضاء و الهيئه العمليه في جامعه بيرجند للعلوم الطبيه)

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Background: The present study aimed to analyze the situation of knowledge management among the faculty members in the four components, including creation, linking, organization and storage, and application.

Methods: This is a survey research and the results are presented descriptively and analytically. The study tool was a questionnaire of knowledge management with 84 questions (creation of knowledge, linking and sharing of knowledge, organization and storage of knowledge and application of knowledge) in Likert scale. The reliability and validity were 0.80 and CVI=0.93, respectively. The data were analyzed by SPSS 16.

Results: The results of the study showed that the average scores of the four components of the faculty members were as follows: creation of knowledge (33±7.09), linking of knowledge (67±15.17), organization and storage of knowledge (47±9.33), and application of knowledge (28±6). Analyzing the relationship between knowledge management and its components with academic degree and the background of the results, it was shown that there is statistically significant difference in the component of the application of knowledge ($p < 0.05$).

Conclusions: The status of the faculty members of Birjand University of Medical Sciences was not desirable in the components of linking knowledge, and organization and storage of knowledge. Consequently, it seems essential to take special measures in order to empower team-working and motivate the teachers to share knowledge, such as development of group evaluation processes, group incentive programs and teaching of organization and storage of knowledge.

Keywords: Knowledge management, Knowledge creation, Sharing knowledge, organization of knowledge, Application of knowledge, Faculty members of Birjand University of Medical Sciences

التصويد و الهدف: تم اجراء هذه الدرابه بهدف تبين كيفية الاداره المعرفيه عند اعضاء الهيئه العمليه من خلال اربعه عوامل الانتاج، التبادل، الإِدخار، التنظيم و الاستعمال.

الطوب العلم: تمت هذه الدرابه بشكل توصيفي و تحليلي و تم استخدام استمارات اشتملت على 84 سوال (الانتاج العلمى، تبادل و اشراك العلم، تنظيم و ادخار العلم و الاستعمال)، ليكترت 0.80 و الثبوت (CVI=0.93) تم تحليل المعلومات عبر البرنامج الاحصائى SPSS.

النتائج: اشارت نتائج الدرابه الى العلامات التاليه:

انتاج العلم (33±7.09)، تبادل المعلومات (67±15.17) تنظيم و ادخار المعلومات (47±9.33)، استخدام المعلومات (28±6). في تحليل مستوى ارتباط الاداره المعرفيه و عناصرها مع الشرايه العلميه و التجريه اشارت النتائج الى تفاوت ذو قيمه في مجال عنصر استعمال العلم ($P < 0.05$).

الاستنتاج: يستلزم امر اجراء اداره معرفيه قويه الى النظر في جميع العوامل المؤثره مثل تحضير البنى التحتية الاداريه معرفيه، معرفه موانع تبادل المعرفه و الاقدام في مجال ازالة هذه الموانع، تدوين قوانين اداريه في مجال تقويه العمل الجماعى و تحفيز الاساتذه الى التبادل العلمى مثل تدوين استمارات تقييم العمل الجماعى.

كلمات المفتاح: ادارة المعرفه، انتاج العلم، تبادل المعرفه، تنظيم العلم، استخدام العلم، اساتذه جامعه بيرجند للعلوم الطبيه.

بررسی تفاوت بین وضع موجود و مطلوب مدیریت دانش (مورد مطالعه: اعضای هیأت علمی دانشگاه علوم پزشکی بیرجند)

زمینه و هدف: مطالعه حاضر با هدف بررسی وضعیت مدیریت دانش اعضاء هیأت علمی در چهار مولفه خلق، تبادل، سازماندهی و ذخیره سازی و کاربرد انجام گرفته است.

روش: این پژوهش پیمایشی می باشد و نتایج بصورت توصیفی - تحلیلی ارائه شده است. ابزار مطالعه پرسشنامه مدیریت دانش 84 سوالی (خلق دانش، تبادل و اشتراک دانش، سازماندهی و ذخیره سازی دانش و استفاده و کاربرد دانش) در طیف لیکرت با ضریب پایایی 0/80/0 و روایی (CVI=0/93) می باشد. داده ها پس از جمع آوری با نرم افزار SPSS 16 مورد تجزیه و تحلیل قرار گرفت

یافته ها: یافته های تحقیق نشان داد که، میانگین نمره اساتید در خلق دانش 33±7/09 و در مولفه تبادل دانش 67±15/17، در مولفه سازماندهی و ذخیره سازی دانش 47±9/33، در مولفه کاربرد دانش 28±6 می باشد. در بررسی رابطه مدیریت دانش و مولفه های آن با مدرک تحصیلی و سابقه نتایج نشان داد که در مولفه کاربرد دانش این تفاوت معنادار می باشد ($P < 0/05$).

نتیجه گیری: لازمه وضعیت مناسب مدیریت دانش توجه به تمام عوامل تأثیرگذار نظیر فراهم آوردن زیر ساخت های مدیریت دانش، شناخت موانع تبادل دانش و اقدام برای رفع آن، و تدوین سیاست های مدیریتی در راستای تقویت کارگروهی و تشویق اساتید به تبادل دانش مانند تدوین فرایند های ارزشیابی های گروهی و مشوق های گروهی می باشد.

کلمات کلیدی: مدیریت دانش، خلق دانش، تبادل دانش، سازماندهی دانش، کاربرد دانش، اساتید دانشگاه علوم پزشکی بیرجند

اکیڈمیک کونسل کے ارکان کی علمی صلاحیتوں کے کی موجودہ صورتحال اور مطلوب صورتحال کا جائزہ - (بم تحقیق بیرجند یونیورسٹی آف میڈیکل بیک گراؤنڈ: یہ تحقیق یونیورسٹی کی اکیڈمیک کونسل کے ممبران کی علمی صلاحیت اور علم تخلیق کرنے، اس کا تبادلہ کرنے اور تنظیمی صلاحیتوں اور ذخیره سازی اور عملی طور پر علم کو استعمال کرنے کی صلاحیتوں کا جائزہ لینے کے لئے یہ تحقیق انجام پائی ہے۔

روش: یہ ایک تحلیلی تحقیق ہے، تحقیق کا هدف حاصل کرنے کے لئے ایک سوالنامہ تیا رکیا گیا تھا جس میں مذکورہ بالا صلاحیتوں کے بارے میں چوراسی سوالات تھے۔

نتیجے: اس تحقیق سے پتہ چلتا ہے کہ علمی صورتحال کو بہتر بنانے کے لئے اس راہ میں موجود رکاوٹوں، انہیں ہٹانے کی کوششوں، مینجمنٹ کی پالیسیاں تدوین کرنے اور اساتذہ کو ایک دوسرے سے اپنی علمی کاوشوں کا تبادلہ کرنے کی ترغیب دلانا ضروری ہے۔

کلیدی کلمات: علمی صلاحیتیں، تخلیق علم، تبادلہ

INTRODUCTION

Knowledge is one of the most important assets of an educational organization that is essential for its solidity (1). Universities are the main tools of societies for the constant pursuit of knowledge. Knowledge management in the educational institutions is an influential factor that connects students, teachers and researchers, business and industry of foreign entities. Knowledge management activities in the higher education institutes could include discovery or acquisition (research), publication or sharing (education), software knowledge and its storage (libraries, treasuries) that has great importance. In other words, knowledge management could be categorized in five main tasks of universities, including research process, the processes of development of curriculum, services for students and graduates, official services, and strategic planning (2), furthermore, therapy could be considered as the main duty of universities of medical sciences.

Karimi Monghi and his colleagues (2014) declared that knowledge management could be applied in medical sciences for production, sharing, storage and application of medical knowledge. The importance of knowledge management at universities has been focused in many studies (3). The results of the research of Nemati et al (2015) showed that knowledge management results in the enhancement of teachers' performance (4). McCarthy (2006) stated that teaching and learning were improved by the application of knowledge management at universities, moreover, the development of knowledge management could assist the employees and the stakeholders of knowledge especially those involved in research (5). The results of other studies have acknowledged the importance of knowledge management at universities, including Gholizadeh (2004) (6), Kiani and Ramezandeh (2015) (7), Rajaei and Rahimpour (2008) (8), Ferdowsi Alavi (2010).

However, it should be considered that for providing any preparation and developing the infrastructures in order to upgrade the knowledge management of faculty members that are the most crucial factor and knowledge capital of universities, the current situation should be scrutinized in the beginning and then have further plans to make changes. Therefore, the present research has studied four components, including creation of knowledge, linking and sharing of knowledge, organization and storage of knowledge, and application of knowledge.

METHODS

The present descriptive-analytic study was conducted in 2014. The study population was 100 faculty members of Birjand University of Medical Sciences that were selected via random sampling, 85 questionnaires were completed thoroughly. Krejcie and Morgan table was used to determine the sample size. The data were gathered using a standard questionnaire of 84 questions that had Likert scale. There were four subscales, including creation of knowledge, linking and sharing of knowledge, organization and storage of knowledge, and application of knowledge. The reliability and validity were 0.80 and CVI=0.93, respectively.

The interpretation and analysis of the questionnaire were in accordance with the minimum score of the participants in each subclass of knowledge management. The maximum score in the subscales was considered as follows: creation of knowledge 205, linking and sharing of knowledge 100, organization and storage of knowledge 50 and the application of knowledge 35. On the condition that the participants gained two thirds of the score of the knowledge management questionnaire overall and also in the subscales, their knowledge management was considered desirable and if their score was lower, their status of knowledge management was undesirable. After distribution and collection of the questionnaire, the data were analyzed by SPSS, ver. 16.

RESULTS

34 percent of the study population was male and 65.3% was female. The academic degrees of the participants were as follows: 4.2% Bachelor's degree, 5.10% Master's degree, and 34.6% PhD. 44.2 percent of the study population had 1 to 5 years of work experiences. The results of the study showed that the average score of knowledge creation was 33 ± 7.09 and 89.5% of the teachers were in good condition of this component. The average of linking knowledge component was 67 ± 15.17 and 80 percent of the participants were in good condition. The results of the study suggested that the score of the organization and storage component of knowledge was 47 ± 9.33 that is lower than the theoretical average (48). Although 72.6 percent of the participants were in good condition in the component of storage and organization, the rest of the teachers were in a very unfavorable situation in this component according to the great deviation of mean score. The mean of the component of knowledge application was 28 ± 6 out of the theoretical average (21) and 90.5% of the teachers are in a desirable situation in the component of knowledge application (table 1).

Furthermore, the results of the study showed that the average score of application of knowledge management was different among male teachers 281.15 ± 33 and female teachers 280.15 ± 55.77 ; this is a significant difference in this component ($p < 0.05$).

The results of the analysis of the relationship between knowledge management and its components with the academic degree showed that there is no significant difference between the score of application of knowledge management and its components and the participants' academic degree ($p > 0.05$). However, there is significant difference in the component of application of knowledge ($p < 0.05$); the average score of application of knowledge was higher among the participants who had PhD. and upper degrees (30.90 ± 2.07) than the teachers who had M.A. or lower degrees (26.2 ± 7.15).

The results of the study showed that there is a significant relationship between the application of knowledge management, its components and work experience ($p < 0.05$), the teachers who had 21-25 years of experience and their average of knowledge creation was 155.5 ± 29.44 gained the highest mean score and the teachers that had 6-10 years of experience with average of 116 ± 38.27 gained the _____

Table 1. the condition of knowledge management and its components in the study population

Components	Condition	Frequency	Percentage of Frequency	Average score of each component	Theoretical Mean	Maximum Score of Component																																				
Knowledge creation	Undesirable	10	10.5	137.61±26	120	205																																				
	Desirable	85	89.5				Linking of Knowledge	Undesirable	19	20	67.20±17.15	60	100	Desirable	76	80	Organization of Knowledge	Undesirable	26	27.4	47.21±9.33	48	80	Desirable	69	72.6	Application of Knowledge	Undesirable	9	9.5	25.5±26	21	35	Desirable	86	90.5	Application of Knowledge Management	Undesirable	11	11.6	280.54±52.68	249
Linking of Knowledge	Undesirable	19	20	67.20±17.15	60	100																																				
	Desirable	76	80				Organization of Knowledge	Undesirable	26	27.4	47.21±9.33	48	80	Desirable	69	72.6	Application of Knowledge	Undesirable	9	9.5	25.5±26	21	35	Desirable	86	90.5	Application of Knowledge Management	Undesirable	11	11.6	280.54±52.68	249	390	Desirable	84	88.4						
Organization of Knowledge	Undesirable	26	27.4	47.21±9.33	48	80																																				
	Desirable	69	72.6				Application of Knowledge	Undesirable	9	9.5	25.5±26	21	35	Desirable	86	90.5	Application of Knowledge Management	Undesirable	11	11.6	280.54±52.68	249	390	Desirable	84	88.4																
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	Desirable	84	88.4																																							

lowest mean in this component. In addition, in the analysis of knowledge linking component, the teachers who had 21 to 25 years of experience with the average of 86 ± 10.39 and the teachers who had more than 25 years of experience with the average of 66.08 ± 11.05 had the lowest average. In the component of knowledge organization and knowledge application, the teachers with 21 to 25 years of experience had higher average (333 ± 8.50) and the teachers with 6-10 years of experience had the lowest average (60.235 ± 2.78).

In the comparison of the status of knowledge management and its components with different academic ranks, the results presented that the teachers who had the academic rank of professor had the highest average 305.67 ± 75.35 , while the teachers whose academic rank was instructor gained the lowest average score 18.281 ± 75.41 .

DISCUSSION

Many researchers similar to McCarthy have insisted on the importance of knowledge management in the organizations in accordance with the current situation (5). University of Medical Sciences that has three main goals, including education, research and treatment also play a crucial role in the society (11). Consequently, it is important to upgrade knowledge management strategy. As the results presented, generally knowledge management of faculty members is higher than the average and could be stated that it is desirable. The result is consistent with the research of Sirjani (2010) (12), however, it should be noted that the development of sciences requires enhancement in this respect. It is essential to provide the infrastructures and also scrutinize each component of knowledge management carefully in order to reach the more desirable situation.

In the analysis of learning knowledge as a sub-component of knowledge creation, it is necessary to provide the essentials, and also required educations in this arena. The results of Alipoor Hafezi and his colleagues (13) Vimin (2004) and Rezaee Sharif Abadi (15) have presented similar requirement. The results of this study presented that the faculty members of Birjand University of Medical Sciences do not have a desirable situation in the component of linking knowledge _____

and the obstacles of the linking should be determined and enhance the culture in this respect.

Zavari (2011) stated that the reasons that prevent the linking of knowledge are: lack of efficacy, and the shortage of information technology and communication and also lack of organizational motivation (16), furthermore, Alizadeh et al (2010) mentioned the existence of powerful organizational culture (17). Kim and Ju (2008) explains about the trust between the members, open social relationships between members, cooperation between people, and also a system that makes motivation for sharing knowledge (18). Ferdowsi Alavi (2010) stated that attention to the matter of linking knowledge (9) is one of the influential factors on sharing knowledge that should be considered.

The results of the component of organization and storage of knowledge demonstrated that although 72.6 percent of the participants were in good condition in the component of storage and organization, the rest of the teachers were in a very unfavorable situation in this component according to great deviation of mean score. Alipoor Hafezi (13) and Rafigh (2009) (19) declared that the low quality and quantity of software and hardware at university, moreover, the problem that the teachers have to learn working with internet are the main issues to access the data. In regard to the fact that organization and storage need appropriate background as well as skill and mastery, therefore, there should be necessary training in relation with appropriate storage and organization of personal knowledge and educational and scientific experiences.

The application of knowledge was in desirable condition in the faculty members that is consistent with the study of Mirghafoori and his colleagues (2010) (11).

In accordance with the results, it is essential to provide the required infrastructure so that the teachers use knowledge management at universities. Educational institutes, especially the higher education, should consider that although the development of education could be beneficial, if the knowledge is not managed and its development does not occur in accordance with the needs of the society, it could not be helpful to solve many problems. Consequently, for the _____

enhancement of the component of creation of knowledge among the faculty members, training workshops should be held about ways of recognition, production, and acquisition of knowledge. Regarding the results of the study, the average score of linking, organization and storage of knowledge were lower than the desired, therefore, further researchers could be conducted in order to study the obstacles and challenges of linking and sharing of knowledge among the teachers, and after recognition, measurements should be taken to solve them.

One of the limitations of the present study was that the faculty members did not complete the questionnaire due to lack of _____

time that could have influenced their responses. However, this problem could not be controlled by the researchers.

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