STUDY OF INFRASTRUCTURES OF ESTABLISHMENT ANDIMPLEMENTATION OF PROCESS-ORIENTED KNOWLEDGE MANAGEMENT SYSTEMS IN ZAHEDAN UNIVERSITY OF MEDICAL SCIENCES

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Abstract

This research aimed to evaluate the establishment and implementation of process-orientedknowledge management systems in ZahedanUniversity of medical sciences. The method of research is descriptive –analytic. The statistical population of this research includes all experts of ZahedanUniversityof Medical Sciences(600 person) which sample size is 234.Sampling methodwas simple random sampling and the instrument of research was questionnaire and the content validity of the research was investigated and its reliability was confirmed with Cronbach's alpha of 0.87.The results suggested that the amount of establishment of process-orientedknowledge management systemsisat a veryfavorablelevel. Also the results indicated that there is a positive and significantrelationship between individual and organizationalperformanceandhigh-levelmanagementcommitment and support,sharingculture and encourage the knowledge and education of knowledge. Findings also showed that there is a

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positive and significantrelationship between individual and organizationalperformance and knowledge' relationship and continuity and assessment, manpowercapacityandits changes, the information technology infrastructure and the voice of the customer.

Keywords: knowledge management; knowledge management infrastructures; ZahedanUniversityof Medical Sciences

IntroductionandProblem Statement

In current centuryorganizations arefacedwith suchhuge open volume ofinformation and datawhich arein troubleandconfusion inthe management ofthis massivewave. Trying todeal withthisproblemled to the emergence ofa phenomenon calledknowledge management has becomeanongoingdiscussionintoday's organizations. Subsequently, the knowledge management systems are widelyandincreasinglybecome important for organizations asastrategicborderandacritical resource.Karayanis (1999) and Litraz (2002) believe that the study and investigation of knowledge managementdates backtothe time of Platoand Aristotle.Variousstudiesanddiscussionsonthetopicof knowledge management are focused on thetopicof technology andhuman. Today, the knowledge management provides a specific concept such as comfortable and gradual application which is takeninto considerationmainly because of the incomprehensible elements of knowledge and education. This expresses the fact that as the world changes from knowledge transfer stage into the knowledge age it is necessary to have a better understanding of knowledge.

Petrides (2004) stated that the basis of knowledge management is forming, supporting and managing this effort through a careful balance between attentions to theorganizational processes, technological capitals and personnelwho are involved in processes. Understanding the information and broad organizational principles of knowledge also needs to understanding how the personnel, processes and technology support together in this effort andthiseffortincludeslawobviousachievements, culture and informational politics of educational organizations. Knowledgemanagement uses the knowledge to form the activities which are dependent to data and information. It is believedthattheeducational institutions which increase the initiative to sharing the knowledge for achieving the educational purposes have a lot of value.

According to Dyer and Macdanan (2001) the main objectives of an organization in the context of better management of knowledge include the maintenance of key members of organization, promoting the motivational system, knowing the environment and improving the servicesto the clientele. In general, there are different classifications about theknowledge managementapproaches. Apostolo (2003) is classified the knowledge management approaches into 3 classes of process-oriented approach, commodity-based approach and a third approach obtained from the combination of two previous approaches which Menzas (2000) and Apostolo et al. (2003) have called knowledge network solution.

Process-oriented approach, which is used in present research, knows theknowledgemanagement a communication-social process. In this approach,knowledge isstronglytiedtothe person whodeveloped itandissharedmainlythroughperson topersonconfrontation.The aim ofinformationtechnologyin thisapproachis that help the people to transfer the knowledge instead of saving it. This approach sometimes called "personalization" approach (Apostolo, 2003)

Conversionof subjective(implicit) knowledge into the officialrecorded(explicit)knowledge is one of the key goals of knowledge managementthat reduces therisk of theloss of valuableknowledgeof organization due todropofpersonneland reduces the riskofthe loss of organizationmemory whenhuman resourceisadjusted. The knowledge management implies the efforts conducted systematically to find, organize, and make available the intangible assets of organization, promoting the culture of continuous learning and sharing the knowledge in organization.Manyof organizationsfocusing onknowledge managementand broad investmentsininformation technologyare seekingaccess tothe benefitsofknowledgemanagement. Successful implementation ofknowledge managementrequiresa holisticand comprehensiveapproachto thevarious elements ofthe organization.The mainchallenge fororganizationsisunderstanding theknowledge managementand the manner ofits implementation.Todaythe greatest wishof organizationsis definingappropriateknowledge managementsystem and itsadministrationwith aneffectivemethod. However, understanding that how they will be succeeded in this matter (designing and implementing knowledge management) would be possible by identifying the key factors which is discussed in this paper.Furthermore, since the development programs of the country are developed with knowledge management

approach it is expected from universities to act as center of knowledge creation (Kazemi, 2011:35).

The most important underlying factors of knowledge-based organizations are structure, culture and information technology. The success of anyorganization inimplementinganystrategyincludingknowledge managementlargelydepends on thesupportoforganizational culture from thatstrategy.The effortof organizationsto becomea knowledge-basedorganizationwill be successfulif there arecultural characteristicsrequiredfor the implementation ofknowledge management in organization.Information technologyplaysan important roleinimplementingthe knowledge management.Perhapsthemost importanteffective factors are the development of suitable infrastructure of information technology and organizational structure. In this paper we will try to examine these factors. This paper intends evaluate the contextual factors affecting the process-oriented knowledge management in the Zahedan University of Medical Sciences, so thatthesestudies becomea basis forthe implementation ofknowledge management in thisuniversityandsimilar organizations in order forits better implementation to improve the efficiency and productivity of organization.

Research background

Rowley (2000) has investigatedthe capability of application ofthe concepts ofknowledge managementinCanadianuniversities. He has expressed that there are problemsto createknowledge basedenvironment in universities. Hisresearch resultshave shown thatthe effectiveimplementationofknowledge managementinCanadianuniversitiesrequiresmodification oftheorganizational structureandrewardsystem. Unlike thetwopreviousinfrastructures, Rowley knows appropriate the level of infrustructure of information technology in Canadianuniversities to facilitate knowledge sharingactivities.

Papavasilho et al. (2002) introduced a framework for modeling knowledge-oriented processes which take into account the tasks related to knowledge and knowledge objects. Lijen and Betz (2003) established a framework for analyzing and improving the knowledge-oriented aspects of an administrative process.Kimet al.(2003) offered a process-oriented framework of knowledge management for two-step analyzing of knowledge flow. Denow, Harris and Tezman(1999)

emphasizes thateffective knowledge managementrequires acombination oforganizationalelements, including technology, human resources, organizational culture and organizational structure.

StankovskyandBaldanza(2001) believe that organizational culture, organizational structure, information technology, leadership andteaching and learning are the basic factors and infrastructures in the implementation ofknowledge management. Councilofinformationinterfaces(2001) knows thethree elementsof people, processes and technologyasinfrastructuralaffectingfactors inthe implementation ofknowledge management processinthe public sector.LeeandLee(2006) introducefour factors oftechnical, structural, culturalandindividuals as infrastructural factors of knowledgemanagement.

Zaim et al. (2007) in addition to consider thetechnology, organizational culture and organizational structureas themost importantelements in theimplementation ofknowledge management, consider the intellectual capital as fourth element. Abdullah et al. (2008) experimentally studied the implementation of knowledge management system in Malaysian public highereducation institutions. Their results indicated a lake of awareness among users during the implementation and ofknowledge managementsystem. They conclude that modifying the of framework knowledge management system emphasized further on increase awareness of system and recognition the advantages of knowledge management. Their results also suggest that encouragesandrewardsarecritical to the successof knowledgemanagement system implementation.

Zavavi et al. (2011) investigated the hindering factors in knowledge sharing. These factors include the lack of self-efficiency indicating individual factor in knowledge sharing; the lack of information and communication technology facilities indicating the technical factor; and lack ofinstitutionalencouragementto showtheorganizationalfactorthathinderknowledge sharing.They measured the relationship between these factors by correlation test. They also used regression analysis to determine the most effective factor among the factors under consideration. Their regression estimation results revealed a negative relationship between these three factors as well as knowledge sharingbehaviorand the organizational encouragement that is most effective factor.

Conceptual model

The conceptual model of this paper is Damerest model emphasizeson four key dimension ofknowledge management.

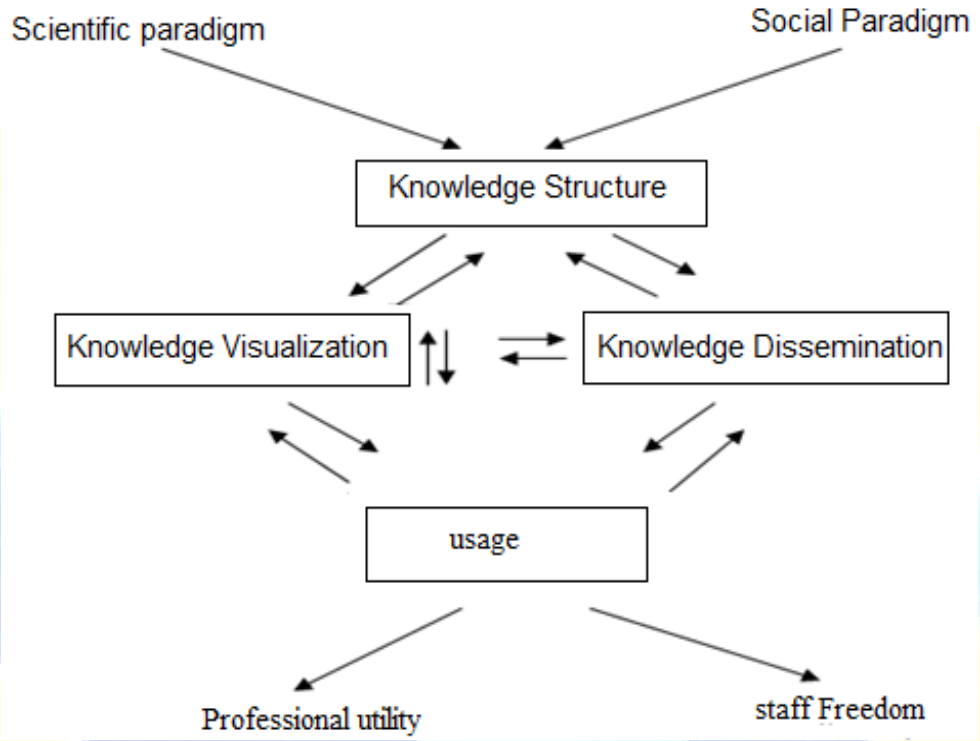

Figure 1: Damerst's model of knowledge management, 1997

Research findings

The mainhypotheses: the level of establishmentof process-orientedknowledge management is above average in Zahedan University ofMedical Sciences.

Table 1: Results of one-sample t test on the amount of implementation of process-oriented knowledge management

Variable	N	M	SD	Test Value	T	Df	Sig
Knowledge sharing culture	234	19.84	4.32	15	17.15	233	0.000
Knowledge sharing Encouragement	234	19.45	4.76	15	14.29	233	0.000
Knowledge education	234	19.61	4.68	15	15.07	233	0.000
Technologyinfrastructure	234	16.39	4.39	15	4.84	233	0.000
establishmentamount ofknowledge	234	169.32	33.76	135	15.54	233	0.000

management							

As table 1 show, the amount of implementation of process-oriented knowledge management systems in ZahedanUniversity of medical science is at a relatively high level.

Table 2:Results of descriptive statistics and Pearson correlation coefficients between individual and organizational performance with the research hypotheses

Variables	N	Mean	SD	R	Sig
High-level management' commitment and support	234	19.78	5.07	0.71**	0.000
Individual and organizationalperformance	234	169.32	33.76		
Knowledge sharing culture	234	19.84	4.32	0.89**	0.000
Individual and organizationalperformance	234	169.32	33.76		
Knowledge sharing encouragement	234	19.45	4.76	0.88**	0.000
Individual and organizationalperformance	234	169.32	33.76		
Knowledge education	234	19.61	4.68	0.89**	0.000
Individual and organizationalperformance	234	169.32	33.76		
Communicationand continuityof knowledge	234	19.60	4.70	0.87**	0.000
Individual and organizationalperformance	234	169.32	33.76		
Knowledge assessment	234	19.85	5.05	0.88**	0.000
Individual and organizationalperformance	234	169.32	33.76		
Human resourcecapacityandtheirchanges	234	18.87	4.53	0.85**	0.000
Individual and organizationalperformance	234	169.32	33.76		
Information technologyinfrastructure	234	16.39	4.39	0.58**	0.000
Individual and organizationalperformance	234	169.32	33.76		
Customer voice	234	15.88	4.82	0.56**	0.000
Individual and organizationalperformance	234	169.32	33.76		

Discussionand conclusion

Knowledgemanagement is a more important issue from the knowledge itself which in organizations is looking for explaining the manner of transformation of theindividualandorganizationalinformation and knowledge into theindividual and group

knowledge andskills (Pervest, 2000:163). Hence, the organizations should create an environment for sharing, transferring andinteractionof knowledgeamongtheir members and teach the individuals to make meaningful their interactions (Nonaka, 1994: 20). The overall aim of thisstudy was to determine the amount of establishment and implementation of process-oriented knowledge management policies in Zahedan University of medical sciences. The results of examine the main hypotheses of research indicate that the amount of establishment of process-oriented knowledge management systems in Zahedan University of medical sciences is at relatively high level. This finding is consistent with the findings of Griffith University (2002) and Dier and Denov(2001) while is inconsistent with the results of HosseiniZadeh (2004), Hassanzadeh (2009) and Parham (2010).

The results of the research firsthypothesisshowed that there is asignificant and positive relationship betweenindividual and organizationalperformanceandhigh-levelmanagementcommitment and support. This finding is consistent with the results of Vashit et al. (2011) and Zavavi et al. (2011), while is inconsistent with the results of Hassanzadeh (2009). The results of the research secondhypothesisindicated thatthere is a significant positive relationship betweenindividual and organizationalperformanceand knowledge sharing culture. This result is consistent with the results of Al-alavi et al. (2007) and Holotzki (2002). The results of the research thirdhypothesisindicated thatthere is a significant positive relationship betweenindividual and organizationalperformance and knowledge sharing encouragement. This finding is consistent with the results of Zavavi et al. (2001), Vashit et al. (2011), and Holotzki (2002). Also the results of the research fourthhypothesisindicated thatthere is a significant positive relationship betweenindividual and organizationalperformance and knowledge education. This finding is consistent with the results of Marsh and Jones (2002), and Lay and lee (2007) whereas is inconsistent with the result of Dier and Denov (2001).

Also the results of the research fifthhypothesisindicated thatthere is a significant positive relationship betweenindividual and organizationalperformance andcommunicationand continuityof knowledge. This finding is consistent with the results of Delang and Fahi (2000).The results of the research sixthhypothesisindicated thatthere is a significant positive relationship betweenindividual and organizationalperformance and knowledge assessment. This finding is consistent with the findings of Gopta et al. (2000), Hosseini (2004), and Pavlin and

Mason (2010). The results of the research seventhhypothesisindicated thatthere is a significant positive relationship betweenindividual and organizationalperformance and human resourcecapacityandtheirchanges. This finding is consistent with the results of Abdullah et al. (2008).The results of the research eighthhypothesisshowed thatthere is a significant positive relationship betweenindividual and organizationalperformance and their information technologyinfrastructure. This finding is consistent with Zavavi et al. (2011), Al-alavi et al. (2007) and Holotzki (2002). Finally, The results of the research ninthhypothesisshowed thatthere is a significant positive relationship betweenindividual and organizationalperformance andcustomer voice. This result is consistent with the results of Al-alavi et al. (2007), Holotzki (2002), and Hosseini (2004).

Today'schanging worldrequires that organizations be looking for new tools to survive. Oneof the tools thatcanhelporganizations to meetthis goal is knowledge management.Inpresent world, the situation andcompetitive environmentinmost organizationsis very more complex, variable and wide relative to the past,so thatthe pace of changeinmost organizationsis farfaster thanspeed ofresponsiveness andadapting withnew requirements.Knowledge-basedagein whichthe knowledge is just like the most important of organizations requires a different managerial approach to the issuesof the organizationand staff.

Changing the nature of organizations' activities to knowledge works has made more important the application of knowledge management in organizations.Hence, successful organizationscontinuously measure and evaluate the amount of creating, publishing, sharing and applying the knowledge among their staff by different methods to find the strategies to achieve organizational goals. In general, findings of this study showed that the amount of establishment of process-oriented knowledge management systems is at desired level. Also the results indicated that the organizational and individual performance have a positive and significant relationship with high-level management' commitment and support, knowledge sharing culture,knowledge sharing encouragement,knowledge education,communicationcontinuity,and assessment of knowledge,human resourcecapacityandtheirchanges,Information technologyinfrastructure and customer voice.

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