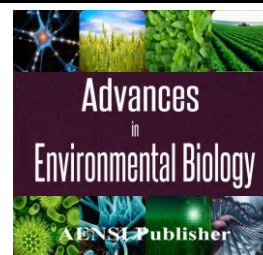




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Evaluation of Strategic Knowledge Management and Productivity in Tabriz Universities

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ABSTRACT

This study examines the status of strategic knowledge management and productivity of Tabriz universities at 2013 year. This study is a survey in terms of methodology, and in terms of objective is applied. 2628 number of employees of Tabriz universities are population of this research and 336 selected as a sample. Statistical sample size was achieved through Krejsi and Morghan table. Results of descriptive statistics and testing hypothesis by one sample T tests showed that in Tabriz universities status of productivity is higher than the Test Value average and status of SKM is higher than the Test Value average.

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INTRODUCTION

Organizations have got a number of sources and assets to accomplish and achieve their goals. Some of these sources are really pivotal and they have got a strategic value to gain the competitive advantage. Knowledge is one of these sources for all the organizations in a way that many management experts, consider it as the final substitute for production, wealth and monetary property. Knowledge Management (KM) is a process in which an organization uses production, capturing and science to improve the productivity of the organization as a whole. Knowledge is an intangible property which is more important than the traditional property in the modern economics. Knowledge is a competitive advantage in the modern times while being one of the most important factors of production which should be directed and managed. Knowledge is known as a tool to enhance productivity and achieving the goals. As well as being the main strategic source of business for the organization. Thus, KM has gained an increasingly important role by the aim of creating and maintaining the competitive advantage.

Since 1970s and with the development of top technologies, especially in the field of communications and computing, the pattern for world economic growth changed dramatically. Afterwards, since 1990s knowledge, as the most important property, replaced monetary and physical assets. With the turn of the millennium rapid changes in technologies happened. In such circumstances, a competitive strategy requires a new type of organization that is able to have a qualitative knowledge. Therefore, the managers are expected to have a deep understanding of the organizational performances. They must also improve their organization's performance through investing on knowledge-based projects. In today's competitive world, knowledge is regarded as a great source for the competitive advantage of the agencies. Successful businesses are those able to manage their knowledge properties in a sustainable operational performance so as to reach their overall aims and the utmost productivity. Knowledge and organizational abilities are kinds of strategic assets which improve the long term goals of the organization from competitive and environmental aspects. These assets are used strategically in dynamic environments. Converting the mental knowledge (implicit) to registered knowledge (explicit) is one of the key goals of knowledge management. This phenomenon decreases Non-Governmental Higher Education Centers and Universities in Iran 74 Another model for implementing KM has been proposed by 'Bukowits and Williams'. This model covers 7 factors: Discovering, Application of learning process, Sharing, Assessment, Creation, Maintenance, and Removal. All these factors must be managed interestedly to create the knowledge-based capital. This model has not considered the identification of knowledge objectives and the method of

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knowledge development, and so it might cause some problems for the organization in the process of implementing KM. One of the most comprehensive and practical models has been proposed by Probst, Raub and Romhard dubbed as "Basics of KM". The designers of this model regard KM as a dynamic cycle which includes eight components consisting of two internal and external cycles.

- Internal cycle consists of identification, acquisition, development, sharing, application and knowledge storage.
- External cycle includes knowledge objectives and their evaluation complemented by feedback cycle. Such factors as identification, acquisition, and knowledge development mean knowledge production.

The definition of the concept of KM presented by Petrish puts: KM is achieving the proper knowledge for the right people at the right time and place in a way that they can utilize the knowledge effectively to attain the organizational goals. Snowden introduces KM as the optimal planning and active management of the intellectual capital. This knowledge can be the explicit knowledge present on human-built constructions or it can be in the form of implied knowledge which is available to individuals or groups. Semen believes that KM is the intellectual designation of processes, tools and structures with the aim of increasing, renewal, sharing and improving the knowledge that can be found in each of the three elements of intellectual capital (structural), social and humanistic properties. KM is a process which helps organizations identify, choose, organize and publish the important information and skills that are regarded as the memory of organization and so these elements are usually organized in this manner. Researches in the field of KM indicate that the factors expressed in these researches are whether very general or very detailed. Besides, in some of these researches some components of KM cycle have been listed among the key factors of success showing a high overlap for the mentioned factors. Meanwhile, in most of the studies choosing the key factors has been done according to their frequency neglecting the original environmental conditions. It is just Holsapple and Joshi that have utilized Delphi method and a panel consisting of 31 researchers of KM field. They have categorized the factors of success to three groups: management, resources and environment. The impact of management subcategory includes coordination, control, measurement and leadership; the second one contains knowledge, individuals, materials and financial resources; and finally the last one includes competition, markets, time pressure, economic and governmental atmosphere. According to Rockart the key factors of success include a limited number of areas of activity which will have a successful competitive performance. In another definition of key factors for success Bruno and Leidecker mention that these factors include characteristics, conditions or variables which will have a considerable effect on the competitive position of the organization if they are managed properly. Pinto and Slevin define these factors as ones that improve the chance of implementing the projects considerably. Skyrme and Amidon identified seven factors for implementing KM including strong commitment to business, architecture and perspective, knowledge leadership, the culture of knowledge sharing and knowledge creation, continuous learning, infrastructure of developed technology, and the processes of organizational knowledge. According to Nanonka Takuchi and Davenport, nowadays the main challenge in universities is the gap between traditional, classical structure of the organization and the structure of information age. Knowledge-oriented universities need new structure to be able to adapt themselves to the knowledgeable societies; they need multifaceted communication channels to help them in decision making. The new structure of university provides communication among the members of academic staff in educational groups and faculties as well as the administrative employees and students so that they could learn and grow [32].

It is agreed that successful companies are those that create new knowledge, disseminate it widely throughout the organization and quickly embody it into new technologies and products. According to Wiig (1997), the objectives of KM initiatives are [4]:

- to enable an enterprise to act as intelligently as possible in securing its viability and overall success
- to otherwise realize the best value from its knowledge assets.

Benefits of KM by Gary are presented as follows:

- 1) To prevent loss of knowledge
- 2) Improving decision making
- 3) Flexibility and adaptability
- 4) Competitive management
- 5) Development Properties
- 6) Increasing product
- 7) Customer-oriented Management
- 8) Application of investments in human capital.

In another study by Ernst & Young Center done for Business Innovation, the knowledge's benefit for the organization was studied and respectively benefits such as improving decision making, increasing accountability, efficiency, innovation, flexibility, quality improvement, reduction of duplication and the ability of an organization's KM, has been given. Akhavan *et al* [6] concluded that the benefits of KM include coordination of internal efficiency, and enhancement of customer service quality and efficiency of the organization.

Table 1: KM benefits (Anand &Singh, 2011)

Reference	KM Benefits	Serial Number
Singh et.al.(2006),Dalkir(2005),Chase(1997	Best decision making.	1.
Singh et.al.(2006), Dalkir(2005),	Smoother collaboration	2.
Dalkir(2005)	Enhanced learning	3.
Chase (1997)	Improved communication	4.
Dalkir(2005), Chase (1997)	Improved employee skill	5.
Dalkir(2005)	Increased employee satisfaction.	6.
Chase (1997)	New or better way of working	7.
Davenport(1998), Singh et.al.(2006), Dalkir(2005), Chase (1997)	Sharing best practices	8.
Beijerse(1999)	Enhanced the continuity of the organization	9.
Anantatmula & and Kanungo(2006), Beijerse(1999)	Improved employee loyalty and retention	10.
Singh et.al.(2006), Anantatmula & and Kanungo(2006),Chase (1997)	Improved productivity/efficiency	11.
Anantatmula & and Kanungo(2006)	Increased empowerment of employees	12.
Singh et.al.(2006), Anantatmula & and Kanungo(2006),Chase (1997) .	Increased sales/profits.	13.
Singh et.al.(2006), Chase (1997)	Cycle time reduction	14.
Anantatmula & and Kanungo(2006), KPMG(2000),	Develop new business opportunities	15.
Beijerse(1999)	Developing core competencies	16.
Singh et.al.(2006), Chase (1997)	Enhanced flexibility	17.
Anantatmula & and Kanungo(2006)	Improved business processes	18.
Beijerse(1999)	Faster new product development	19.
Singh et.al.(2006), Dalkir(2005), Chase (1997)	Improved responsiveness	20.
Beijerse(1999)	Reduced risk	21.
Dalkir(2005).	Enhanced customer relation	22.
Chase (1997), Dalkir(2005),	Enhanced products or services quality	23.
Dalkir(2005),	Enhanced customer satisfaction	24.
Demarest(1997)	Better management of intellectual capital	25.
Davenport(1998), Singh et.al.(2006), Dalkir(2005), Chase (1997)	Increased speed of innovation.	26.
Singh et.al.(2006), Anantatmula & and Kanungo(2006)	Improved revenues through licensing of patents	27.
Singh et.al.(2006)	Reuse of information and Knowledge	28.

In any organization issue arises on mission, strategies, goals and long-term policy. The claim of any management method is to improve organizational performance. Managers and employees using the principles and concepts of strategic management can better understand activities and priorities of the organizations. Strategic management makes it possible to provide more efficiency for the organization. And the most important thing is that the method makes it possible for the organization way to do things in an effective way. Based on the experience of decades ago, especially in the late 90th century, the ability to develop strategic thinking in senior management was considered an important issue. Bonn indicated that most executives in 35 companies out of 100 companies which are the biggest production companies in Australia, consider lack of strategic thinking as a core issue of recognizing . Focus on identifying and developing opportunities is to create value, by creating an environment for creative dialogue between people who can be effective in the main orientation of the organization.

Productivity means having power of production and efficacy of an individual and something. Today productivity is considered as a thought viewpoint and it means intelligence working. In deed productivity was used by Kavirzani for first time in 1766 in an agriculture magazine. Also, productivity means power of returned production by using defined set of inputs. High productivity means achieving more output with less or equal input, so increase of productivity leads to high life standard, less inflation, promotion of trading balance and high quality life. Mandel believes that productivity involves efficacy and effectiveness in most of the definitions this concept is related to efficiency and efficacy.

Two indices of efficacy and effectiveness are used for evaluation of organization performance. Chasterbox is one of the first theorists that have compared efficacy and effectiveness. Pitter Draker defines both vocabularies as follow: efficiency is doing competently and in best way and efficacy means doing competent and proper works. Organization efficacy involves a grade or level that the organization approaches to its goals, while efficiency involves amount of input that is used for production of a product.

Kinds of Productivity:

Partial productivity: the relationship between output and one of the input resources. Human productivity, capital productivity and material productivity are called partial productivity. Total productivity is net output to sum of inputs of work force and capital ratio. Net output is value added. Total productivity is total output divide to sum of inputs.

Human Resources Productivity:

Human resources productivity is optimal utilization of talents, potential and active capabilities of human resources in order to qualitative and quantitative increase of production and reduction of losses and defects so that the individuals could have optimal working life accompanied to doing work in better way. According to the results of the researches among effective factors on promotion of productivity human plays an important role. Any promotion of productivity requires to coordination with human. Human and his creativity play main role in all activates so he could substantiate productivity goals and wanting.

Effective Factors on Productivity:

Employees are the valuable capital. Achieving organization goals requires to correct management of these valuable resources. Work force is the main productivity factor and in case of motivation and hope to future the productivity will be increased. Effective factors and values of organization influence on work force productivity it can be referred to continuous education of managers and employees, promotion of motivation for more and better work, providing appropriate context for managers and staff creativity, establishing appropriate payment discipline based on performance and establishing reward and punishment discipline, work conscience and social discipline as self-control factor, revolution in systems and methods that play a key role, empowerment of governance and domination of organization polices on affairs.

Management Viewpoint about Productivity:

According to managers productivity involves all organizational aspects effective on organization performance. This approach covers efficacy and efficiency, product quality, beneficent satisfaction.

Table 2: Management theorist viewpoints about productivity

Management theorist	Brief explanation of view points	Productivity criteria sample
Scientific management (1911)	Study of work and time, importance of planning standards, control and coordination, responsible organization, best alternative	Maximization of production, minimization of cost, superiority of method, optimal utilization of resources, specialization of duty
Management principles (Tylor, 1916-1925)	Completion of management establishment theory, learning of management	Division of work, explicit supervision and discipline, unity of leadership, directing of discipline and hierarchal ,fairness and innovation and collaboration
Human relations (Mayo,1933)	Importance of emotional factors, concept of social relations in group efforts ,need to identification and interpersonal skills of organization as collaboration discipline	Productivity by employee satisfaction, satisfaction by attention to stuff physical and emotional needs
Bureaucracy theory (Vier)	Attention to structure, separation of ownership and management, explicit definition of goals, definition of productivity and efficiency	Division of work, competency and personal capabilities ,job compatibility ,hierarchical organization ,documents, standardization of processes and activities
Decision making and information management (Simon,1947)	Productivity according to confined rationality, efficiency based on defined goals	Saving in resources by goals rational development, information process efficacy
Behavioral management (Mack Garigor ,Likert,1967-1961)	Importance of organization needs related to organization demands, power proportionate, participatory management	Employees satisfaction, integration, loyalty, open communication
Exigency theory (Lorenes and Loresh,1967)	Designing of organization based on environmental factors, difference in the best method of action based on situation necessity and different conditions	Mistake of specialization, organization fitness ,capability to change in appropriate time and fitness of leader and conditions
Functional(industrial and organizational psychology (Perichard,1992)	Productivity involves all organization aspects that important in effective performance of the organization	
Iranian scholars	Productivity by effective using compatible performances, goal achievement, human and organization culture integration based on environment necessities that productivity is function of efficacy ,efficiency and capability to change	Achieving priorities , multiple goals, consideration to organization culture and atmosphere, optimization of cost and time, satisfaction of beneficent and attention to necessities of change capabilities

Methodology:

The present study is a descriptive survey. The total 2628 staff constitute the population from among which 336 were selected as sample population using Morgan table through random sampling procedures. A researcher-made questionnaire of five-degree Lickert scale was prepared , the grading of which is as follows; very little: 1, little: 2, average: 3, much: 4 and very much: 5. The questionnaire includes such factors as; 1) Strategic codification, 2) Implementing Strategy and 3) Evaluation of strategy. Using Cronbach's alpha, the reliability of the questionnaire was estimated (0.089).

Result:

According to Table (3), the average of employees' productivity is 128.68 and its standard deviation is 9.46, the average of strategic knowledge management is 59.44 and its standard deviation is 9.68, and the average of strategic knowledge management components including codification, implementation and evaluation is 17.65, 21.92 and 21.2, and their standard deviation are 3.53, 4.34 and 4.32, respectively.

By comparing the obtained averages of variables and Test Value, it can be noted that the average of efficiency is significantly different from Test Value average (96) and is higher than the average.

The obtained average of sample study on strategic knowledge management and its sub-components shows that the status of strategic knowledge management and its components is significantly different from Test Value average and this difference is negative. Therefore, strategic management and its components are lower than the average.

Table 3: Descriptive indices of variables.

Maximum	Minimum	Standard Deviation	Mean	Variables
158	96	9.46	128.68	Productivity
81	46	9.68	59.44	Strategic knowledge management
20	16	3.53	17.65	Strategic codification
24	20	4.34	21.92	Implementing Strategy
25	10	4.32	21.2	Evaluation of strategy

Discussion and conclusion:

The results of the study indicate that strategic knowledge management, as the heart of an organization, enjoys a favorable state. Moreover, the more optimal the state of strategic knowledge management, the better we are able to apply and establish the principles of KM. In other words, the applied of strategic knowledge management in Tabriz Universities is lower than average. The findings of this study validates the results of the researches by Azadeh Shahraki [12], Asgari [11], Zare [38], Asgari [11], Holt *et al* (2007) and Akbarpur and Kazemi Ashtiani [5]. Hosseini [22], Shirvani *et al* [34], Han and Wang (2009), and Akbarpur and Kazemi Ashtiani [5] have already found the same results. Generally, the results from the present study show that the use of organizational knowledge and applying it with modern management tools like KM is one of the most important challenges that organizations especially universities face. The application of the already mentioned factors empowers organizations in this competitive situation and paves the way for their success. A vital issue in the application of KM is an awareness of the extent of readiness or the application of KM factors in the organization to accept and apply it. The strategic knowledge management including aforementioned indexes creates proper grounds for the discussion and exchange of ideas among high rank managers and members as well as other organizational members in which they are able to express their ideas and opinions without any bias. Furthermore, mutual trust in organizations in terms of sharing knowledge and other activities lead to the cooperation in organizational teams which in turn contributes to the creativity and innovation especially in scientific organizations like universities.

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