DIMENSIONS OF LEARNING ORGANIZATION AND DEVELOPMENT OF KNOWLEDGE-BASED ECONOMY FROM THE STANDPOINTS OF LIBRARIANS AND INFORMATION TECHNOLOGY STAFF MEMBERS

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ABSTRACT
Current research deals with knowledge-based economy and dimensions of learning organization and the relation with organizational development. By reviewing the documented literature, a direct relationship was found between dimensions of learning organization and knowledge-based economy. A descriptive method and a practical approach were adopted. The study population included librarians and information technology staff members in Tehran University Central Library. The used tool was a 40-item standard questionnaire for dimensions of learning organization. Besides of exploring the extent of the fulfilled dimensions, the participants shared their ideas about optimum conditions. The results showed that the fulfilled dimensions of the learning organization had a positive significant effect over development of knowledge-based economy in Iran. Top dimensions according to the participants' ideas were organizational culture, organizational structure and leadership criteria. Hence, Tehran University Central Library should be committed to its development considering organizational structure and culture dimensions.

Keywords: knowledge economy, learning organization, organizational dimensions

INTRODUCTION
Organizations need knowledge to improve their abilities in offering better services and consequently benefiting customers and consumers. The improved services should be accompanied with changes in systems, structures and problem solving methods. Employing technology in an organization has been emerged as the most important differentiation factor of success and failure in the highly competitive global economy. And knowledge is absolutely vital for competitive excellence in the field of quality, speed, innovation and price. By promoting the development and deployment of systems and distributing their intellectual results, organizations will be able to convert knowledge into organizational strength. After so many different revolutions, the world is now witnessing an information revolution in which the information was valuable source of wealth creation leading to the formation of knowledge-based economy (Monavarian, 2004).

Knowledge-based economy is directly based on production, distribution, and consumption of knowledge and information (Standard Committee ANSI).In addition, the nature of learning organizations is such that,byhaving many personnel and with different cultures, they are constantly growing and doing activities. Learning organizations are usually agile and the hierarchy of traditional systems cannot be seen in these organizations. The economy in these organizations is different from that of traditional organizations and its approach is toward intellectual properties and application of knowledge in products and services, and a major part of the organizational output is due to the production of information and knowledge (OECD, 1996). The organization increases its capacity constantly and by developing individuals' knowledge will provide the required conditions for the group's learning and then implements it in creating new technologies and competitive advantages.

In industrial economies natural sources and physical facilities were considered as important factors of national wealth production, while in new economy of knowledge, learning, technology, and basic capabilities are the main factors of producing wealth and well being in a society (Aukland, 2000).

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Studying these organizations' features, we will understand that knowledge-based economy is present there (Azimi, 2010).

Studies show that the bases of knowledge-based economies have been improved during 1995 to 2012 but the extent of these bases' development is not in accordance with the global development in other countries. Besides, as figure 1 shows, one of the important subsystem of learning organizations, is the knowledge subsystem which aim is to obtain knowledge, create it, distribute and maintain it, and finally employ it in the direction of strategic objectives of the organization in line with its outlook.

Figure 1: system model of learning organization (Zali, 2006)

Progression of organizations to learning organizations can lead to progression of the knowledge impact and finally progression of the index of the knowledge-based economy in Iran. Thus, observation of organizations' progress in becoming learning organizations is the major step toward improving the index of the knowledge-based economy. By the end of the Iranian fourth development plan as the first step in the path of the Outlook document goals, evaluation of the extent of achievement of one of the four key goals in the overall policies of this plan – economic growth – shows that during the fourth plan, the economic growth continually decreased from 6.9% in 2005 to 2.7% in 2008. Also, according to the Central Bank of the Islamic Republic of Iran, the economic growth of the country in 2008 and 2009 were 0.8% and 3% respectively. According to the statistics published by the Central Bank, decrease of the country's economic growth is due to not achieving the forecasted growth rates in different sections of economy (Nobakht, 2012).One of the four poles which the World Bank has mentioned as the main parts of a knowledge-based economy is "up-to-dateand appropriate information infrastructure".Furthermore, in the economic literature it is believed that the overall efficiency of the production factors depends on access to knowledge (Torkan, 2010).

In this paper we will identify the knowledge-based economy and learning organizations, and also the required conditions of implementing them. In addition to recounting the advantages of knowledge-based economy we will examine its components and the degree of its fulfillment in an organization by the defined criteria.

HYPOTHESIS
In this research we will examine this hypothesis:
"Fulfillment of organizational dimensions in accordance with learning organization has a positive and meaningful affect on the growth of knowledge-based economy in Iran".

QUESTIONS OF THE RESEARCH
In this study, in addition to scrutinizing the indexes of knowledge-based economy and learning organization, we will answer the below listed questions:

From the viewpoint of the knowledge employees, what is the degree of attention to leadership characteristics in the Central Library of the University of Tehran, with knowledge-based economy approach?

From the viewpoint of the knowledge employees, what is the degree of attention to human resource features in the Central Library of the University of Tehran, with knowledge-based economy approach?

From the viewpoint of the knowledge employees, what is the degree of attention to organizational structure features in the Central Library of the University of Tehran, with knowledge-based economy approach?

From the viewpoint of the knowledge employees, what is the degree of attention to the characteristics of organizational culture in the Central Library of the University of Tehran, with knowledge-based economy approach?

From the viewpoint of the knowledge employees, what is the degree of attention to the characteristics of mission – strategy in the Central Library of the University of Tehran, with knowledge-based economy approach?

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LITERATURE REVIEW

Mohammad Amir Rizvandi in his thesis titled "AStudy of Knowledge-based Economy and Searching for the Institutional Requirements of the Transition to it in Iran" says a study of the conditions of knowledge-based economy in Iran, utilizing the World Bank method shows that the index of knowledge-based economy in Iran in 2009 was 3.75 which is not a good condition. He also believes that the low level of knowledge-based economy indexes from 1995 to 2009 shows an obvious imbalance among the indexes, which indicates lack of a coherent and prearranged plan for transition to knowledge-based economy in Iran. He confirms that one of the institutional problems of Iran in transiting to knowledge-based economy is the traditional education and lack of proper interaction between universities and institutions (Rizvandi, 2011). Behzad Heydari in his thesis titled "Knowledge-based Economy and the Role of Knowledge in Economic Development of Iran" has studied the impacts of knowledge in the economic growth of Iran and found out that knowledge is one of the major determinants of the economic growth in Iran which has a positive and meaningful impact on it. He concluded that only two pillars of human capital and information and communication technology have the expected theoretical indication, but innovation and economic regime, have demonstrated an indication contrary to theoretical expectations (Heydari, 2007). Sajjad Saeednia in his thesis titled "An Explanation of Academic Entrepreneurship Pattern in Iran According to the Role of Universities in Knowledge-Based Economy" mentioned that universities have to make a structural and internal culture change in order to be converted to an entrepreneur environment (Saeednia, 2008). Abbasali Ghadirian in his paper titled "the Impact of Knowledge-based Economy in Organization Leadership" believes that the economy of knowledge will impact everything especially new ideas of management, methods and organization's structure. These changes will cause a role alteration of organization's management and demands different types of skills. In the new age, the focus of leaders is on intellectual properties, organizational ideals, telling the success stories of organization, and changes in organization. Thus, leaders in the new age have to change themselves continually as teacher, designer, and service provider and create a new identity for themselves. They should be able to employ different work teams and beneficiary groups and also employ different management styles simultaneously. In this paper we will cover the role of and required skills for leadership in the new age, description of necessary duties and roles in leading an organization, specially learning organizations, with introducing effective models in business and risk taking behavior. Masoud Sadeghi and Dr. Karim Azarbayjani in their paper titled "the Role and Place of the Knowledge-based Economy in Workforce Demand in Iran" states that knowledge and technology have a very important role in the increase of workforce demand and reduction of unemployment rate. In knowledge-based economy, spreading knowledge and skills will lead to innovation which consequently increasesproductivity and incomes, and reduces inflammation and unemployment. Offering technology-based products will develop the markets and increases labor demand. On the other hand, the workforce who is more knowledgeable and skilled is able to make the production cyclesdynamic, create technological development, increase the production capacity of knowledge export and enhance the competition power in international markets. Diverse and new job opportunities are results of technological development. Technology will reduce the number of difficult jobs and add to the number of more specialized jobs. The new jobs created by technology will utilize technology or develop it (Sadeghi and Azarbayjani, 2006). Soufi Majidpour and Hosseinikia in their paper titled "Evaluation of Effective Factors on the Creation of New (Digital) Economy" have mentioned that there are several effective factors in converting a traditional economy to a new digital one, such as availability of appropriate data, information technology, deregulation, globalization, the Internet, and managers' view points. As in transition from the traditional economy to the new economy veryremarkable changes have occurred in the economic process of communities. And creation of this economy – the new (digital) economy –has led to communication of customers and vendors without time and place limits, quick access to high volume of information, time saving, reduction in trade costs, fast procedure of converting companies from local to multinational, globalization, customer satisfaction, improvement of the quality of goods and services, creating jobs, and etc. (Soufi Majidpour and Hosseinikia, 2008).

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Shams-al- Sadat Zahedi and Seyed Mehdi Kheyrandish in their paper titled "An Explanation of Structural Factors in Knowledge-based Economy" have stated that in spite of ongoing interest of organizations to knowledge-based economy and their escalating emphasis on employing knowledge workers as a competitive advantage, there is a need for the required structural transformation of organizations (Zahedi and Kheyrandish, 2007).

METHODOLOGY
Regarding the objective, this research is an applied research, and with regard to its nature and methodology is a descriptive study, applying survey method.

STATISTICAL POPULATION
Statistical population of this research is the knowledge employees (bookkeepers and IT clerks) of the Central Library of the University of Tehran, and the tool utilized in this research is standard questionnaires for measuring characteristics of a learning organization with a knowledge-based economy approach – a standard questionnaire by Dr. Ghorbanizadeh utilizing five option Likert scale. By "characteristics of learning organizations" we mean the characteristics of 1- leadership, 2- human resource, 3- organizational chart, 4- organizational culture, and 5- mission and strategy.Tovalidate the measuring tool of a learning organization's characteristics, Ghorbanizadeh interviewedand polledthe management professors of the University of Tehran, using the Delphi method. The questionnaire has two sets and 40 questions. Questions 1 to 11 are about the leadership characteristics, 2 to 21 are regarding the human resource characteristics. Questions 22 to 27 are about organizational structure and questions 28 to 35 are about organizational culture, and the rest of them are about mission and strategy. The testee would answer the questions twice, once while being in the organization and once in optimal condition.

RESEARCH FINDINGS
Examination of research questions
First question: by a knowledge-based economy approach, what is the degree of attention to the leadership characteristics at the Central Library of the University of Tehran from their knowledge employees' point of view? To answer this question in the field of inferential statistics utilizing a univariate t-test, the mean of examinee in each of the dimensions, including the leadership characteristics dimension, was compared to the simulator meanof 3.

Table 1: study of the average of leadership component items

Number	N	min	max	Average	Std. Deviation
Question 1	29	1.00	4.00	2.8966	.67320
Question 2	30	1.00	4.00	2.5667	1.07265
Question 3	31	1.00	5.00	2.7742	1.14629
Question 4	31	1.00	5.00	2.9677	1.11007
Question 5	30	1.00	5.00	3.4000	1.03724
Question 6	29	1.00	5.00	2.7931	1.01346
Question 7	31	1.00	4.00	2.3871	1.05443
Question 8	31	1.00	4.00	2.6452	1.05035
Question 9	26	1.00	4.00	2.7308	1.00231
Question 10	26	2.00	5.00	3.7308	.72430
Question 11	26	2.00	4.00	3.1538	.67482
Valid N (list wise)	20			average: 2.91	

The result of examining the answers is the mean number of 2.91 which indicates the Central Library has the <u>medium</u> situation regarding the leadership characteristics.

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With the same method we determined that the examinees believe considering the leadership characteristics' dimension for the growth of the knowledge-based economy of the organization is of <u>high</u> importance by the mean number of 3.8.

Second question: by a knowledge-based economy approach, what is the degree of attention to the human resource characteristics at the Central Library of the University of Tehran from their knowledge employees' point of view?

Table 2: Analysis of questions number 12 to 21 of the questionnaire in the current situation

Number	N	min	max	average	Std. Deviation
Question 12	29	1.00	5.00	2.8966	.93903
Question 13	28	1.00	5.00	3.0357	.96156
Question 14	28	2.00	5.00	3.3929	.73733
Question 15	28	2.00	5.00	3.1071	.78595
Question 16	29	1.00	4.00	2.6552	.85673
Question 17	28	1.00	5.00	2.9286	.89974
Question 18	29	1.00	4.00	2.7241	.84077
Question 19	29	1.00	4.00	2.7241	.70186
Question 20	29	1.00	5.00	2.4828	.98636
Question 21	27	1.00	5.00	2.7407	1.02254
Valid N (list wise)	26			average: 2.86	

The result of examining the answers is the mean number of 2.86 which indicates the Central Library has the <u>medium</u> situation regarding the human resource characteristics.

The examinees believe considering the human resource characteristics' dimension for the growth of the knowledge-based economy of the organization is of <u>medium</u> importance by the mean number of 3.4.

Third question: by a knowledge-based economy approach, what is the degree of attention to the organizational structure characteristics at the Central Library of the University of Tehran from their knowledge employees' point of view?

Table 3: Analysis of questions number 22 to 27 of the questionnaire in the current situation

Number	N	Min	Max	Average	Std. Deviation
Question 22	28	1.00	4.00	2.8214	.77237
Question 23	29	1.00	4.00	2.8621	.74278
Question 24	28	1.00	5.00	3.3571	.86984
Question 25	29	1.00	4.00	2.2414	.91242
Question 26	26	1.00	4.00	2.5769	.98684
Question 27	29	1.00	4.00	2.5862	.82450
Valid N (list wise)	26			average: 2.74	

The result of examining the answers is the mean number of 2.74 which indicates the Central Library has the <u>medium</u> situation regarding the organizational structure characteristics.

The examinees believe considering the organizational structure characteristics' dimension for the growth of the knowledge-based economy of the organization is of <u>high</u> importance by the mean number of 3.69.

Fourth question: by a knowledge-based economy approach, what is the degree of attention to the organizational culture characteristics at the Central Library of the University of Tehran from their knowledge employees' point of view?

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Table 4: Analysis of questions number 28 to 35 of the questionnaire in the current situation

Number	N	Min	Max	Average	Std. Deviation
Question 28	28	1.00	4.00	2.6786	.98333
Question 29	30	1.00	5.00	2.9667	.96431
Question 30	29	1.00	4.00	2.6207	1.01467
Question 31	30	1.00	4.00	2.5667	1.04000
Question 32	30	1.00	4.00	2.1333	.89955
Question 33	29	1.00	4.00	1.8966	.93903
Question 34	30	1.00	5.00	2.8667	.97320
Question 35	28	1.00	4.00	2.4286	.95950
Valid N (list wise)	27			Average: 2.51	

The result of examining the answers is the mean number of 2.51 which indicates the Central Library has the <u>weak</u> situation regarding the organizational culture characteristics. The examinees believe considering the organizational culture characteristics' dimension for the growth of the knowledge-based economy of the organization is of <u>high</u> importance by the mean number of 3.79. Fifth question: by a knowledge-based economy approach, what is the degree of attention to the mission – strategy characteristics at the Central Library of the University of Tehran from their knowledge employees' point of view?

Table 5: Analysis of questions number 36 to 40 of the questionnaire in the current situation

Number	N	Min	Max	Average	Std. Deviation
Question 36	30	1.00	4.00	2.2333	.93526
Question 37	29	1.00	4.00	1.8621	.87522
Question 38	29	1.00	4.00	2.4483	1.05513
Question 39	28	1.00	5.00	2.6429	1.02611
Question 40	29	1.00	4.00	2.6552	.93640
Valid N (list wise)	27			Average: 2.36	

The result of examining the answers is the mean number of 2.36 which indicates the Central Library has the <u>weak</u> situation regarding the mission – strategy characteristics. The examinees believe considering the mission – strategy characteristics' dimension for the growth of the knowledge-based economy of the organization is of <u>medium</u> importance by the mean number of 2.91.

Thus, the situation of different dimensions is summarized as follow:

Table 6: Summary of results' analysis of different organizational dimensions

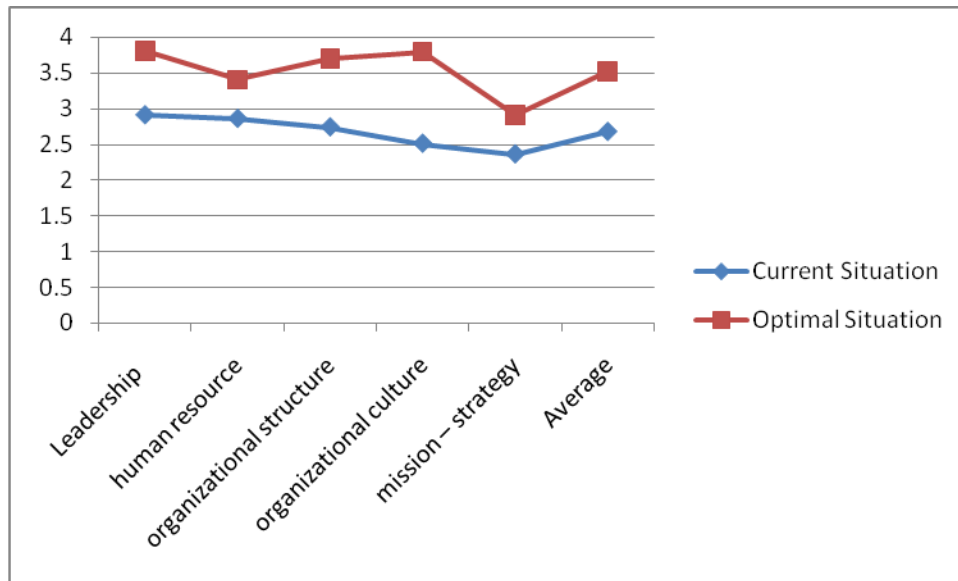| Dimensions	Current Situation	Optimal Situation
Dimension of Leadership characteristics	2.91	3.8
Dimension of human resource characteristics	2.86	3.4
Dimension of organizational structure characteristics	2.74	3.69
Dimension of organizational culture characteristics	2.51	3.79
Dimension of mission – strategy characteristics	2.36	2.91
Average	2.676	3.51

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Figure 2: comparing the current situation of the Central Library regarding organizational dimensions with its optimal situation

An analysis of the survey in optimal situation (average of 3.51) shows that the knowledge employees of the Central Library of the University of Tehran believe "fulfillment of organizational dimensions in accordance with learning organization has a positive and meaningful affect on the growth of knowledge-based economy in Iran".

CONCLUSION
The findings of this research show that "fulfillment of organizational dimensions in accordance with learning organization has a positive and meaningful affect on the growth of knowledge-based economy in Iran". From the view point of the knowledge employees of the Central Library, the dimensions of high importance include the organizational culture, the organizational structure, and leadership characteristics which regarding the analysis of the results, the Central Library of the University of Tehran needs to manage for a growth and development in its organizational structure and organizational culture dimensions. Analysis of the thesis results by Rizvandi showed that according to the World Bank report, the index of knowledge-based economy of Iran in 2009 with the number of 3.75 out of 10 does not have an appropriate situation. And this point is in accordance with the analysis of the survey done in the Central Library of the University of Tehran. This indicates lack of a coherent and prearranged plan for transition to knowledge-based economy in Iran. Also Heydari in his thesis concluded that only two pillars of human capital and information and communication technology have the expected theoretical indication, which our research confirms it regarding the human capital dimension. By studying the Explanation of Academic Entrepreneurship Pattern in Iran According to the Role of Universities in Knowledge-Based Economy by Saeednia, and the current research, we conclude that universities have to make a structural and internal culture change in order to be converted to an entrepreneur environment.
Furthermore, according to the results of an analysis of the Impact of Knowledge-based Economy in Organization Leadership by Ghadirian and the current paper, it is concluded thatthe economy of knowledge will impact everything especially new ideas of management, methods and organization's structure. These changes will cause a role alteration of organization's management and demands different types of skills. In the new age, the focus of leaders is on intellectual properties, organizational ideals, telling the success stories of organization, and changes in organization. Thus, leaders in the new age have to change themselves continually as teacher, designer, and service provider and create a new identity for

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themselves. They should be able to employ different work teams and beneficiary groups and also employ different management styles simultaneously.

So several effective factors, such as availability of appropriate data, information technology, deregulation, globalization, the Internet, and managers' viewpoints have important roles in converting a traditional economy to a new digital one. And as Shams-al- Sadat Zahedi and Seyed Mehdi Kheyrandish in their paper titled "An Explanation of Structural Factors in Knowledge-based Economy" have stated that in spite of ongoing interest of organizations to knowledge-based economy and their escalating emphasis on employing knowledge workers as a competitive advantage, there is a need for the required structural transformation of organizations. Therefore, for the Central Library and Documentation Center of the University of Tehran to play an effective role in the growth of knowledge-based economy, it should have a long term perspective in this field and plan according to it. It should also make the organization agile and create organizational changes and move from the hierarchical structure to the lattice structure. It also should prioritize staff training to update their knowledge, promote teamwork and measure and assess team performance and improvement, and necessary changes should be made by senior management.

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