EVALUATION OF KNOWLEDGE MANAGEMENT COMPONENTS IN IRANIAN AUTOMOTIVE INDUSTRIES AND THEIR RANKINGS BY AHP (CASE STUDY: PARS KHODRO)

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ABSTRACT
The organizations have been faced by different challenges due to rapid changes in today world but those organization are successful that can use the appropriate opportunities by the help of management tools and modern technologies to their advantages. In spite of that knowledge management is a vital and important source to the survival of the organizations and the access to the deep knowledge and understanding at all levels is the provision for the success of the organizations but again many organizations do not pay attention to the innovation and the knowledge management. Importantly, other organizations have been tot valued due their performances but their value is what they are capable to do it. In this paper, we try to evaluate and rank the fundamental components and indicators of knowledge management in Pars Khodro Company and then indicate the success rate of each component and identify the gap between each level. The methodology of this paper is a descriptive- survey method. For this purpose, there has been considered a questionnaire with 35 questions in 8 Dimension and it has been designed due to the models of the knowledge management bases and the ranking of the components with AHP. Finally, there has been provided some strategies to improve the current status.

Keywords: Knowledge, Knowledge Management, Information Technology

INTRODUCTION
In recent years, the knowledge management is considered as a vital and important issue in the commercial texts. Scientific and business communities have believed that the organizations can strongly lead their long- term superiorities, with knowledge power, in the competitive fields. The maintenance and the classification of the organization knowledge, especially in today world, have been considered a vital issue because the majority of the centered- service workforce are composed of knowledge powers. To compete successfully in the current economy, the organizations must deal to knowledge, as other strategic and irreplaceable assets, in order to help their central superiorities. Knowledge management has interdisciplinary concept and its emphasis is on the knowledge distinguished from the other management approaches. Without it, the management knowledge is purely a repetitive issue in the management and the knowledge management concept may be far away from its purpose if there not be a clear explanation. Knowledge is a fluid and very complex issue that cannot turn into the science and run in a loss form (Rabiee et al., 2012).

In traditional organizations, the management control and focus on the tangible assets such as cashes buildings, machineries and etc. The most important and the most valuable asset of an organization- institutional knowledge and the methods of its production, acquirement and maintenance- have been abandoned without management in an organization. Nowadays, in management and economics literature, we observe frequently some focus on knowledge as a vital source to maintain the competitiveness and the profitability. Knowledge is an important issue in business organizations so that the researchers and the performers have stated the management knowledge with different views. Such increasing emphasis on the knowledge has helped the companies to gain profitable opportunities. The current organizations have shown more emphasis to changes and they have realized the adaptability necessity to their environment,
structure improvement, optimal decision and competitive advantage; therefore, the need for the establishment of knowledge management strongly felt in the organizations. What is important for the global competition is the reduction of the costs, the expansion of the market and increasing the efficiency of the processes. Thus, the organizations have turned to new strategic policies such as knowledge management in order to control intellectual capitals of the staffs such as several fields of knowledge about the customers, processes, products and the all value creation chains in the organizations in different levels and then make them available in suitable methods (Mansouri, 2012).

**Literature Review**

Organizational knowledge is what the persons know in the organization about the processes, products, customers, services, markets and the competitors of the organization (Sivi, 2000). According to the definition of (Dovenport and Prusak, 1998), knowledge is a fluid mix of the experiences, values, contextual information and proficiency that has been provided a unified framework in order to evaluate and gain new information and experiences. Such knowledge comes from the minds of people and used by them. In an organization, this knowledge not only has a place in the documents and databases but also in all activities, processes and affairs in the organization continually. As this definition, Long (2001) has offered a definition. He, in the description of the organizational knowledge, has described the persons as the most basic element in the creation of knowledge. It has been created informally by the flow and transmission of knowledge among persons gathered with the common interest and then it remains in the organization. In such concept of knowledge, both the production of knowledge and its application is the result of common activities of the persons in the cohesive groups (Lang, 2001).

In a general classification, knowledge is involved the individual knowledge and the organizational knowledge. The individual knowledge is a kind of knowledge that has been hold in the minds of persons. The organizational knowledge has been formed by interactions between technology, techniques and persons (Bhatt, 2001). Organizational knowledge is included implicit and explicit knowledge. The organizational explicit knowledge is an organized knowledge with the steady content that can be coded, complicated and reported by using of technology information. Databases and the manual booklets in the organizations are some examples of the explicit knowledge. The implicit knowledge is opposite of the explicit knowledge. This knowledge is text- dependent with personal and recognition nature placed in minds of the persons (Duffy, 2000). The values, opinions, insights and intuitions of persons are some cases of this knowledge in the organizations. Such definitions of the organizational knowledge have shown the importance of human factor and the relations between persons in the organization in the creation and using the organizational knowledge (Dovenport and Prusak, 1998).

Since knowledge management has been studied with different approaches, several definitions are delivered about it. As Éronson and Torin (2001) have stated, there is no agreement on the definition of knowledge management. Therefore, each below definition can be considered as a technological, human and inclusive approach:

- Malhotra (1998) has believed that knowledge management is to identify the organizational processes seeking the effective combination of the capacity in the technology information in data processing, on the one hand, and the innovative and creativity capacities among persons, on the other hand.
- Bukowitz William (1999) has considered knowledge management as a process in which the organization can gain wealth through intellectual properties or its knowledge-based properties.
- Tsai Chih hung (2006) has believed that knowledge management is: \( \text{KM} = (P+L+H) \) that \( P \) is the persons, \( L \) is learning, \( H \) is conducting and \( S \) is participation.
- Holsapple & Joshi (2004) have considered knowledge management as a kind systematic and expected effort to develop, promote and use the knowledge and increase the values in gaining positive results and doing the aims.
- Grey (1996) has considered knowledge management as a collaborative and integrated approach to create access, organize and use the intellectual properties of the organization.
Bounfour (2003) has stated that knowledge management is a set of procedures, tools, infrastructures and managerial and technical tools in order to create, collaborate and use information and knowledge in and out the organizations (Amin et al., 2001).

Knowledge management is the combination of the acquisition and storage of the explicit knowledge along with the management of intellectual capitals. There have been investigated more than published hundred definitions about knowledge management and these definitions are summarized in three outlooks based on Table 1.

Table 1: Available Approach about knowledge management (Khamseh et al., 2014)

<table>
<thead>
<tr>
<th>Approach</th>
<th>Traits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Approach</td>
<td>Knowledge management is a kind of business activity with two Dimensions. The attention to knowledge factor in business activities that have been reflected in the strategies, policies and procedures of all levels of the organization and making the direct relationship between intellectual capitals and positive results of business activities. Therefore, due to this outlook, knowledge management is an integrated approach to create, capture, organize, access and use of the intellectual capitals in the organization.</td>
</tr>
<tr>
<td>Cognitive science Approach</td>
<td>Knowledge, insights, perceptions and practical/technical knowledge are main sources that can help us to act cleverly. Over time, knowledge may be transmitted into other forms in the organizations, wholly in the society, such as books, information technology, and traditions. Such changes can be caused to accumulate the experiences and use them correctly. The increase of effectiveness is another Dimension. Knowledge is one of the main factors caused to form personal, organizational and sociological behaviors cleverly.</td>
</tr>
<tr>
<td>Process Approach / information technology</td>
<td>Knowledge management has some concept transmitted into practical knowledge due to information. It will be gained by persons whom can use it.</td>
</tr>
</tbody>
</table>

The Advantages of Knowledge Management

Knowledge management has equipped the organization to below advantages:

1- Accurate recognition to need knowledge management
2- Reengineering the structure, macro strategic views and business processes by using of new knowledge–based approaches
3- Access to architectural and appropriate standards for systems such as Business Processes Integration (BPI), Business Intelligence (BI) and Enterprise Content Management (ECM)
4- Becoming a smart organization that it uses from the successes and failures in the enterprise for future performance
5- Access to organizational integration, strategic performance and implementation of the supply chain
6- Increase of the market analysis power and the competitive power and the achievement to appropriate knowledge by members of the organization.
7- Improvement of decision- making power at organizational different levels
8- Reduction of projects, organizational changes in production, development of new products, market processes and etc.
9- Reduction of the costs of designs and developments, different organizational changes, employees training and etc
10- Minimization of reworks and errors in the organization
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11- Evolution and improvement of the organization figure in the entire of supply chain especially in international markets
12- More clearness of potentials, strengths and weaknesses in the organization
13- Increase of the employee motivation through their participation in promoting the competitiveness of the staffs.
14- Achievement the suitable competitive advantage (Ghahfarokhi and Jahanian, 2005)

MATERIALS AND METHODS
Methodology and Research Model

According to figure 1, there have been used the model of management building bases as the research model. This model has been named knowledge management building bases by Probst, Rob and Romhart (2000). It is one of the most complete models in the field of the functional model. The designers of this model have been considered knowledge management as a dynamic cycle in the permanent rotation. Its steps are included 8 parts constituted 2 cycles: inner cycle and outer cycle (Probst et al., 2000).

Inner cycle: It has been made by building blocks of identification, acquirement, development, distribution, application and maintenance of knowledge.

Outer cycle: It has been included the blocks of knowledge objectives and knowledge evaluation that they have specified the knowledge management cycle. These two cycles are completed by the feedback cycle.

There have been shown the components of this model in figure 1.

Figure 1: The model of building bases of knowledge management (Probst et al., 2000)

The basic function of this model is as follows:

1- To Determine Knowledge Objectives: the objectives of knowledge management should be originated from the main objectives of the organization and determined in two strategic and operational levels.
   - **Strategic Level:** transformation and maintenance of the organization have been performed due to knowledge management and the appropriate culture and policy.
   - **Operational Level:** at this level, there should be investigated the ways of identification, application, distribution and maintenance of knowledge due our aim and appropriate programs should be designed and performed at specific time.

2- To Identify Knowledge: we should start the discovery phase- the duty of knowledge management- by asking this question: “Do you know what you know”? Many organizations that have been unfamiliar to their knowledge are in trouble in decision makings and setting aims. Nevertheless, the identification of knowledge sources, inside and outside of the organization, has been performed alongside each other.

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3- To Acquire Knowledge: at this level, knowledge- such as knowledge related to customers, colleagues, competitors and …- should be identified from domestic and foreign markets, gaining at discovery phase by identified sources and specifying what abilities can be purchased and used from outside.

4- To Develop Knowledge: due to available bases, knowledge of the organization should be developed. This includes the development of capabilities, products, new ideas and etc.

5- To Distribute Knowledge: some issues such as sharing knowledge, transmitting knowledge to suitable place, the way of transmitting knowledge in order to be available in the organization and the way of transmitting knowledge from individual level to collective level and then organizational level are items that will be considered on the agenda of this part of knowledge management.

6- To Apply Knowledge: the trust to the effective use of knowledge is the subject of this part. Of course, there have been some barriers to use new knowledge effectively that should be identified and eliminated so that we can provide services and products of knowledge practically.

7- To Maintain Knowledge: storage, maintenance and updating knowledge are the subjects of this part. It prevents knowledge to destroy and makes it to use. However, there should be created appropriate mechanisms to update the system.

8- To Evaluate Knowledge: the ways of achieving specific purposes and using the results as feedbacks to set or modify the purposes are the subjects of this part. It will be evaluated by looking at the quantitative results and costs in this field (Probst et al., 2000).

Table 2 lists the tools used at various phases of this model.

Table 2: The tools used in the process of knowledge (Probst et al., 2000)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge objectives</td>
<td>Strategies of knowledge, purposes of knowledge, management based on knowledge purposes</td>
</tr>
<tr>
<td>Knowledge determination</td>
<td>Knowledge programs, intermediates of knowledge transition, internal detection of knowledge in the organization</td>
</tr>
<tr>
<td>Knowledge acquisition</td>
<td>Salesmen, founders of knowledge supply, buying advices, copying strategy</td>
</tr>
<tr>
<td>Knowledge development</td>
<td>Connectors of knowledge, scenario, orientation to competence centers</td>
</tr>
<tr>
<td>Knowledge distribution</td>
<td>Problem-solving collective techniques, space management</td>
</tr>
<tr>
<td>Knowledge application</td>
<td>Engineering and functional layout of documents, training in practice, data management</td>
</tr>
<tr>
<td>Knowledge maintenance</td>
<td>Learning events, electronic memories</td>
</tr>
<tr>
<td>Knowledge evaluation</td>
<td>Intangible asset balance sheet, evaluation and determination of multidimensional knowledge</td>
</tr>
</tbody>
</table>

According to the information provided about knowledge management, there have been identified various Dimension of this topic. Now, knowledge management can be followed by this knowledge from the purpose phase to the evaluation phase. The results of this survey have been usable in Pars Khodro Company so this survey has the practical aim. Due to the presence of this survey in the organization and gaining information from the organization by using of questionnaires to gather information from the experts, its methodology is the field survey method. Also, with regard to the results of this research in Pars Khodro Company, this research is the case study.

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The Purposes and Question of the Research

This research has intended to evaluate the state of knowledge management in Pars Khodro Company and identify the present gap and then provide solutions to compensate the gap. Due to the purposes of the research, the survey questions are:

1 – What is the level of each constituent component of knowledge management in Pars Khodro Company and what is the gap amount of each component to desired level?
2 – What is the success level of each component of knowledge management in Pars Khodro Company and how much is the gap in each Dimension toward the suitable level?
3 – What is the method of the component ranking of knowledge management in Pars Khodro Company?
4 – What are the solutions to compensate and improve the gaps in each component of knowledge management in Pars Khodro Company?

Statistical Population

Pars Khodro Company, as the first automotive manufacturer, has initiated its activities since 1976 and it has manufactured and assembled various kinds of cars until now. To focus on development and improvement of the automotive industry in Iran and to prioritize producing quality cars and to use updated technical knowledge and expertise and efficient personnel, this company seeks to achieve its organizational objectives.

Due to limited experts, the research has been conducted wholly and the statistical population of this research are included some middle and senior managers, the experts of the company with master and bachelor degrees and more than 10 years experiences. The characteristics of the statistical population have been offered in table 3.

Table 3: the education characteristics and carrier experiences of the statistical population

<table>
<thead>
<tr>
<th>Education</th>
<th>numbers</th>
<th>% of total</th>
<th>Average experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor degree</td>
<td>11</td>
<td>55</td>
<td>12.3</td>
</tr>
<tr>
<td>Master degree</td>
<td>9</td>
<td>45</td>
<td>16.4</td>
</tr>
<tr>
<td>total</td>
<td>20</td>
<td>100</td>
<td>14.3</td>
</tr>
</tbody>
</table>

Diagram 1: The prevalence of the statistical population based on educations and carrier experiences
To Summarize the Findings

First Question of the Research: each constituent component of knowledge management, in Pars Khodro Company, is at what level?

According to collected data by the questionnaires and their results, the status of knowledge management in this company at any component has been determined as table 4. Furthermore, the optimal level has been considered due to the maximum score of the questionnaires (i.e. score 10) in percent.

Table 4: Status of knowledge management in Pars Khodro Company in each index

<table>
<thead>
<tr>
<th>Dimension</th>
<th>index</th>
<th>Average index (%)</th>
<th>Gap (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge objectives</td>
<td>To what extent the prospects and future needs of the organization are determined in the company?</td>
<td>57.00</td>
<td>43.00</td>
</tr>
<tr>
<td></td>
<td>To what extent the company has prioritized organizational knowledge management in the strategy of the organization?</td>
<td>38.50</td>
<td>61.50</td>
</tr>
<tr>
<td></td>
<td>How much is the company aware about its knowledge weakness in the professional fields?</td>
<td>39.50</td>
<td>60.50</td>
</tr>
<tr>
<td></td>
<td>How much has been identified data banks and the documentations in the company?</td>
<td>58.50</td>
<td>41.50</td>
</tr>
<tr>
<td></td>
<td>How much has been identified knowledge and professions of the staffs in the company?</td>
<td>41.00</td>
<td>59.00</td>
</tr>
<tr>
<td>Knowledge identification</td>
<td>How much has been identified data banks and the documentations outside the company?</td>
<td>39.50</td>
<td>60.50</td>
</tr>
<tr>
<td></td>
<td>How much has been identified knowledge and professions of the staffs outside the company?</td>
<td>38.50</td>
<td>61.50</td>
</tr>
<tr>
<td>Knowledge acquirement</td>
<td>How much has been used the knowledge of experts and national and foreign consolers in the company?</td>
<td>55.00</td>
<td>45.00</td>
</tr>
<tr>
<td></td>
<td>How much are collective research designs with other organization and research center in the company?</td>
<td>24.00</td>
<td>76.00</td>
</tr>
<tr>
<td></td>
<td>How often does the company share hold off national conferences?</td>
<td>29.00</td>
<td>71.00</td>
</tr>
<tr>
<td></td>
<td>How often does the company share hold off international conferences?</td>
<td>16.00</td>
<td>84.00</td>
</tr>
<tr>
<td></td>
<td>How much is the company active to hold off training courses</td>
<td>66.50</td>
<td>33.50</td>
</tr>
<tr>
<td>Dimension</td>
<td>Knowledge development</td>
<td>Knowledge distribution</td>
<td>Knowledge maintenance</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------</td>
<td>-------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Knowledge</td>
<td>How can knowledge help the company to change purposes, procedures and practical processes?</td>
<td>25.00</td>
<td>48.00</td>
</tr>
<tr>
<td>indexes (%)</td>
<td>How can the company act in order to attract knowledgeable persons?</td>
<td>25.50</td>
<td>74.50</td>
</tr>
<tr>
<td>Average</td>
<td>How many are the faculty members active when holding off scientific meetings to share knowledge in the company?</td>
<td>27.00</td>
<td>73.00</td>
</tr>
<tr>
<td>indexes (%)</td>
<td>How much does the company pay attention to internet forums?</td>
<td>10.00</td>
<td>90.00</td>
</tr>
<tr>
<td>Gap (%)</td>
<td>How much are appropriate shift staffing in the company?</td>
<td>44.50</td>
<td>55.50</td>
</tr>
<tr>
<td></td>
<td>How much do the activities do in groups in the company?</td>
<td>47.00</td>
<td>53.00</td>
</tr>
</tbody>
</table>

| Knowledge         | How much does the company pay attention toward acquirement of academic knowledge? | 28.00 | 72.00 | 28.00 | 72.00 |
| indexes (%)       | How much does the company pay attention to investigate documentations and reports? | 49.00 | 51.00 | 49.00 | 51.00 |
| Average           | How much does the company pay attention toward risk in innovative projects? | 52.00 | 48.00 | 52.00 | 48.00 |
| indexes (%)       | How much is the company active when saving and maintaining carrier methods? | 52.50 | 47.50 | 52.50 | 47.50 |
| Gap (%)           | How much is the company active when making knowledge banks such as libraries and web databases? | 46.00 | 54.00 | 46.00 | 54.00 |
|                   | How much is the company active toward maintaining up to date knowledge databases? | 39.00 | 61.00 | 39.00 | 61.00 |
|                   | How much does the staff of the company access to scientific and professional backgrounds of each other? | 19.00 | 81.00 | 19.00 | 81.00 |
|                   | How much does the company use feedback systems? | 63.00 | 37.00 | 63.00 | 37.00 |
| Knowledge         | To what extent is the quality of the company's knowledge preferred over quantity? | 32.50 | 67.50 | 32.50 | 67.50 |
| evaluation        | To what extent does the result of knowledge performance of the staff give feedbacks? | 33.00 | 67.00 | 33.00 | 67.00 |
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Second Question of the Research: the success amount of knowledge management in Pars Khodro Company is at what level?
The current state of knowledge management for all components and the gap has been shown in table 5 and Diagram 3.

Table 5: The comparison between the current level and the desired level in each Dimension of knowledge management

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Averages (%)</th>
<th>Gap (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge objectives</td>
<td>45.00</td>
<td>55.00</td>
</tr>
<tr>
<td>Knowledge identification</td>
<td>44.38</td>
<td>55.63</td>
</tr>
<tr>
<td>Knowledge acquisition</td>
<td>47.36</td>
<td>52.64</td>
</tr>
<tr>
<td>Knowledge development</td>
<td>39.67</td>
<td>60.33</td>
</tr>
<tr>
<td>Knowledge distribution</td>
<td>32.12</td>
<td>67.88</td>
</tr>
<tr>
<td>Knowledge application</td>
<td>43.00</td>
<td>57.00</td>
</tr>
<tr>
<td>Knowledge maintenance</td>
<td>39.13</td>
<td>60.88</td>
</tr>
<tr>
<td>Knowledge evaluation</td>
<td>42.83</td>
<td>57.17</td>
</tr>
<tr>
<td>Total</td>
<td>42.71</td>
<td>57.29</td>
</tr>
</tbody>
</table>

Diagram 3: The comparison between the current level in each Dimension of knowledge management and the alert level (average total)

Third Question of the Research: what are the rankings of knowledge management Dimension performed in Pars Khodro Company?
To answer third question, there has been used the paired comparison method and hierarchical analysis AHP model. In this method, there has been investigated the ratings of the Dimension by paired comparison between knowledge management Dimension together and Expert Choice software. To obtain the matrix of paired comparisons with the questionnaires AHP, the managers and experts have been surveyed. The data collected were analyzed by Expert Choice software and knowledge management Dimension were ranked due to Diagram 4.

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Diagram 4: Determination of the ranking of knowledge management Dimension by using AHP

As observed in figure 4, knowledge objectives can obtain the highest rank and knowledge maintenance can obtain the lowest rank among knowledge management components in Pars Khodro Company.

Fourth Question of the Research: what are the compensation and improvement strategies in each Dimension of knowledge management in Pars Khodro Company?

The Dimension of Knowledge Objectives:
To improve the status of knowledge management index with the gap 61.50%, it is suggested to pay attention to knowledge management in the organizational macro strategies, execute the strategic thinking based on knowledge management process and provide appropriate instructions in this regard.
To improve the status of index of knowledge weakness with the gap 60.50%, it is suggested that the organization investigates and identifies appropriate knowledge on each professional field and then, in this respect, should benchmark and model the best automotive industry in the country. After identifying the ideal situation, there has been investigated the gap between desired situation and the current situation and then it has been observed its relation to organizational parts. If the weakness of knowledge is related to the lack of suitable qualifies persons or the weak knowledge of employed persons due to studied fields, the company should put forward the training programs and knowledge improvement of its employees and, in this regard, should use the capitals of the organization.

The Dimension of Knowledge Identification
To improve the index status of the databases identification and the documentations inside of the company with the gap 41.50%, it is suggested to be activated saving systems and documentations of knowledge in the company and then divided information has been delivered to the staff of the organization systematically.
To improve the index status of the databases identification and the documentations outside of the company with the gap 60.50%, it is suggested, due to this gap has far distance from improvement, information related to the environment outside of the organization has been investigated by key staffs and identified by strategic factors. Also, it is suggested the organization joins to members of scientific clubs and centers outside and inside the company related to professional fields of the organization and accesses to their databases. It is recommended that the organization designs the processes and procedures in order to motivate its staff motivation in sharing personal databases.

The Dimension of Knowledge Acquirement
To improve the index status of knowledge acquirement by the help of the experts and internal and external consultants with the gap 45.00%, it is suggested that the organization describes the issue in accordance with professional fields and issue and gains knowledge by creating think tanks and methods such as the creative thinking, brainstorming, mind mapping and etc.
To improve the index status of collective research designs with other organizations and research centers with the gap 76.00%, it is suggested to establish the research and development center (R&D). This center
(R&D) can define some projects about the creation and acquirement of knowledge and expand its frontiers through performing the projects and benefit from the corporation with other organizations and research centers.

To improve the index status of holding national conferences with the gap 71.00%, it is recommended to act such activities through advertisings, cooperation between individuals and associations.

To improve the index status of holding international conferences with the gap 84.00%, it should be addressed that, due to the lack of interests and benefits in holding international conferences toward their costs for the automotive companies, it is not an economical issue for the organizations and it is a serious factor for the lack of investment and there cannot be presented a special offer to the organizations.

To improve the index status of holding training courses and workshops with the gap 33.55%, it is suggested that the education department of the organization should measure the staffs due to their professions and individual requirements at any level and should hold off educations courses and workshops based on individual needs and also all persons in the organization should benefit from training and consulting services.

To improve the index of the access to original sources, journals and research designs with the gap 74.50%, it is suggested that the research and development center (R&D) subscribes at known journals centers in order to accomplish the purposes and mission of the organization and access to original sources and articles.

To improve the index of the access to important foreign sites and databases with the gap 56.50%, it is suggested that the research and development center (R&D) subscribes at known journals centers in order to accomplish the purposes and mission of the organization and access to original sources and articles. It should be noted that this index with the identification index of the databanks and documentations outside the company has a direct and positive link and if a company improves this index, it will improve another index.

The Dimension of Knowledge Development

To improve the index status of the synchronization and updating knowledge in the company due to environmental changes with the gap 58.50%, it is suggested if this index has been paid attention parallel previous indices and if all organizational units have original information from national and international databases and they are obligated to apply them in their work processes, accordingly, knowledge of the company will be detected, updated and synchronized with regard to environmental changes.

To improve the index status of the changes in purposes, procedures and work processes with the gap 48.00%, it is suggested, due to the modeling and benchmarking of successful companies in the automotive industries, there should be reviewed all purposes and procedures and work processes and should be considered appropriate changes to improve knowledge status of the company and save documented information systematically.

To improve the index status of absorption rate of knowledgeable persons with the gap 74.50%, it is suggested that there will be increased the association between the organization and universities, research centers and scientific environments and there should be identified intellectual capitals correctly in the process of recruiting and hiring.

The Dimension of Knowledge Distribution

If the status of some indices such as identification and acquirement knowledge improve, the status of further indices will improve.

To improve the index status of the effective job rotation with the gap 55.50%, it is suggested that the human resources center in the organization should have appropriate and comprehensive programming toward job rotation and development of human powers in the organization so that the intellectual capital of the organization have been placed in some positions allowed to implement and document their implicit knowledge to explicit knowledge and work tyros.

The Dimension of Knowledge Application

To improve the index status of the knowledge application of academics with the gap 72.00%, it is suggested that the senior management of the organization applies qualifies advisors from decision-
and the research and development unit defines some projects in order to improve the affairs and processes of the organization and in this context it uses knowledge of academics and professors.

To improve the index status of the emphasis on risk in doing innovative designs with the gap 48.00%, it should be proposed that this index will apply in the knowledge base organizations. This index is especially low attractive in the organization that misuses produced knowledge.

**The Dimension of Knowledge Maintenance**

To improve the index status of being active in maintaining and saving work methods with the gap 47.5%, it is suggested that the company considers methods and systems of the documentation in order to save knowledge produced in the organization and there should be executed documentation procedures by the units such as the quality assurance, production and etc, with the support of senior managers in the organization. Also, all documents produced in the organization should be archived electronically.

To improve the index status of creating knowledge banks with the gap 54.00% and the index status of updating of knowledge banks with the gap 61.00%, it is suggested that saved knowledge should be integrated and classified by documentation systems and electronic achieves and then there should be designed and created knowledge banks fitted to classified knowledge and finally it should be shared to the human resources unit of the organization. Also, it should request all staffs in the organization by using of motivational processes to update knowledge sources and give them to organization.

To improve the index status of the staff access to scientific and professional experiences of each other with the gap 81.00%, it is suggested that the human resources provide a booklet in which write scientific and professional experiences of the staff in the organization and visit the public. In this way, the staff motivates to update this booklet and its subjects and then the recruitment information of the persons will be updated.

**The Dimension of Knowledge Evaluation**

To improve the index status of the usage of the suggestion system with the gap 37.00%, it is suggested that the organization executes such a system in the virtual form (internet) and non-virtual form (suggestion box) in the organization in order to the employees can announce their desired contents without including their names.

To improve the index status of the knowledge performance feedback of the staff with the gap 67.00%, it is suggested that there should be considered an item about knowledge performance measurement of the persons in the assessment procedures of the staff and the managers should be held accountable toward the results of knowledge performances of the staff.

**RESULTS AND DISCUSSION**

**The Results According the Results of the Table 4:**

About the Dimension of knowledge objectives, the most score is related to the index of prospects and future needs of the organization and the least score is related to organizational knowledge management index.

About the Dimension of knowledge identification, the most score is related to the index of the databanks and documentations in side of the company and the least score is related to the index of knowledge and professions of the users and the staff outside the company.

About the Dimension of knowledge acquirement, the most score is related to the index of the effective access to databases through internet and intranet and the least score is related to the index of holding international conferences.

About the Dimension of knowledge development, the most score is related to the index of the changes in objectives, procedures, work processes and updating of knowledge and the least score is related to the index of the absorption of knowledgeable persons.

About the Dimension of knowledge distribution, the most score is related to the index of the team working and the least score is related to the creation of forums and newsgroups.

About the Dimension of knowledge application, the most score is related to the index of risk factors in the creation of the innovative projects and the least score is related to leveraging knowledge of academics.
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About the Dimension of knowledge maintenance, the most score is related to the index of maintaining and saving of working methods and the least is the index of the access to the scientific and professional experiences of each other.

About the Dimension of knowledge evaluation, the most score is related to suggestion system or the feedback system and the least score is related to the index of the primacy of quality over quantity of knowledge.

The Results According to Table 5:

Among Dimension of knowledge management, “knowledge acquirement” is considered the most powerful Dimension with 47.36 percent and “knowledge distribution” is considered the weakest Dimension with 32.13 percent.

Among Dimension of knowledge management, “knowledge identification” has the least gap toward the optimal level based on the opinions of the experts with 52.64 percent and “knowledge acquirement” has the most gaps toward the optimal level based on the opinions of the experts with 67.88 percent.

REFERENCES


Duffy J (2000). Knowledge management: to be or not to be. Information Management Journal 34(1) 64-7.


Rezvan Ghahfarokhi and Jahanian Asghari (2005). The investigation and implementation of knowledge management in oil, gas and petrochemical industries in the world. Fifth Conference on Industrial and Mining Research and Development Centers.