Discussion Relation between Knowledge Management and Personnel Empowerment of Iranian Dam Construction Enterprise

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Abstract

This research is to discuss relation of knowledge management to personnel empowerment of Iranian dam Construction Enterprise which was performed by descriptive –correlative method. The statistical society consists of all personnel of Iranian Dam Construction Enterprise which are 220 people based on the last statistics of year 2015. 140 people have been selected as for simple random sampling. Knowledge management and empowerment questionnaires have been used in order to collect data and their validity was 0/87 and 0/84 in terms of alpha Cronbach coefficient. Pearson correlation test, independent T-test, and ANOVA were performed in order to analyse data. Results of independent sample t-test showed that empowerment and knowledge management has not suitable status. Results of Pearson correlation test showed that knowledge management has positive and significant relation to personnel empowerment of Iranian Dam Construction Company. Also, all indices of knowledge management including knowledge creation, sharing knowledge, knowledge application and knowledge saving have positive and significant relation to personnel empowerment of Iranian Dam Construction Enterprise which this relation has meaningful at level alpha 0/01. As for the positive correlation coefficient, it can be said that increment of knowledge is resulted in the restoration of personnel empowerment.

Keywords: Knowledge Management, Knowledge Creation, Knowledge Sharing, Knowledge Application, Knowledge Saving, Personnel Empowerment

Introduction

When the personnel can cope with their tasks as well that they have necessary skill, knowledge and ability and motivation and recognize organizational aims good. The tool which is used in this field is named as enabling. The world was concluded after year’s experiences that if organization wants to be pioneer in its business and economy and does not lag in competition field, it shall be enjoyed from expert, creative and stimulated human source.

In order to comprehend and know knowledge management as fully, it is necessary to recognize knowledge and its types. At present, knowledge has special superiority because of its basic role in economic growth and development. Knowledge is regarded as emblem from new economy. In fact, knowledge itself is considered as more complicated existence and its importance is related to knowledge which was managed by organization and applied. The analysts estimated that more than 80% of information which is performed by personnel is unseen without knowledge management and as if they are hidden and useless sources from manager’s point of view and in deed la, they shall be named as wasted informational resorces.

Knowledge management has important for creating new knowledge, obtain competitive advantages and increase staff yield. From reasons for importance knowledge management is to reduce costs, restore performance, restore in offering services to customers, reduce development time of new products, and reduce of delay time in delivering commodity to customers and at last, reduce costs pertain to find valuable knowledge in organization. This research is discussed relation
between empowerment to knowledge management in Iranian Dam Construction Company. The results of this research are submitted to managers and experts of Iranian Dam Construction Company.

**Knowledge, Definitions and Concepts**

Knowledge is resource for survival and condition for organization success in order to reach in knowledge and deep comprehension in all levels. The analysts estimated that more than 80% of information which is performed by personnel is unseen without knowledge management and as if they are hidden and useless sources from manager’s point of view and in deed la, they shall be named as wasted informational resources.

Knowledge is sum of recognitions and necessary skills in order to solve a problem and if the information can solve the problem, it can be said that there is knowledge. The knowledge can convert to executive instruction and performance.

**Define knowledge Management**

Wong (2005) believed that knowledge management means creation necessary procedures in order to identify and attract data, information and required knowledge of organization from internal and external environment and their transformation into organizations decisions and actions.

**Type and Methodology**

Aim of selecting methodology is that the researcher recognizes that what method is used so that helps him/her in order to obtain answer. This research is applied from aim point of view and descriptive and correlative from its type. This research is descriptive because its aim is to describe subjectively, real and regular facts of events and different subjects. The descriptive research is method which its aim is to describe situations and events. Also, its method is correlative because discusses relation between research variables. Thus, it can be claimed that this research is correlative analytic since the researcher considers relation between knowledge management and personnel empowerment of Iranian Dam Construction Company. Similarly, this research is applied because the results will be used by experts of Iranian Dam Construction Company.

**Statistical Society of Research**

The statistical society is regarded all people or things which have one of more shared specifications and it is group of people or things which have shared in property of properties of research and have pertain to aim and subject of research. The statistical society consists of all personnel of Iranian Dam Construction Enterprise which are 220 people in terms of the last enumeration at year 2015.

**Research Sample**

It is not necessary to discuss all aspects of society in order to study subject, but often, it is sufficient to observe part of it. In other word, in much researches, the sampling doesn’t help the researcher obtains aim. Usually, the sample consists of all people of society which is part of it. In this research, simple randomly sampling method has been used as for availability of people at last, from said statistical society; a sample with volume 140 people has been selected by Kokran formula:

\[
n = \frac{N z^2 s^2}{Nd^2 + z^2 s^2} = \frac{220 \times 0.3 \times 0.05}{220 \times 0.01 + 3 \times 0.05} = 140
\]

N=220 volume of society
Z=1.96 confidence level 95%
D=0.05 authorized mistake or confidence interval
S2= 0/5

Openly accessible at [http://www.european-science.com](http://www.european-science.com)
**Research Territory**

Research territory consists of three subsets like subjectivism, time and spatial territory.

Subjectivism Territory: subjectivism territory is covered in the fields of subjects of organizational behaviour management and human resources management.

Time territory:
Time territory is since 01 Feb. 2015 till June 2015.

Spatial territory:
The present research is performed in Iranian Dam Construction Company.

**Methods for data collection**

In this research, librarian studies have been used in order to collect data and as for conceptual framework of knowledge management and empowerment and literature of research, the questionnaire has been selected. In order to collect information, as for studies and introductory discussion of resources by books, articles and other researches, the subjective literature was discussed and standard knowledge management questionnaire (derived from Newman) and empowerment (Spritzer) have been used.

The tool used in this research is Spritzer standard questionnaire 1995 in order to estimate psychological empowerment. This questionnaire has four indices like: meaningful, competency, self-determination and effect which have been marked from 1= disagree fully t agree fully in terms of Lickert scale. Vakar Ekyat (2008) reported validity coefficient of the questionnaire based on Cronbach alpha for meaningful between 0/73 to 0/85, for competency between 0/79 and 0/81 for self-determination between 0/82, for effect as 0/88 and for total validity of questionnaire as 0/84.

Another tool used in this research is Newman standard knowledge management questionnaire 1999. This questionnaire has four dimensions like knowledge creation, knowledge saving, knowledge sharing and knowledge application which have 7, 6, 5 and 7 indices respectively which has been answered by questionnaire with 25 questions and one open question and has been compiled based on literature and shall be discussed by Likert five scales.

**Reliability and Validity of Research Estimation Tools**

**Validity of Questionnaire**

The validity of questionnaire has been certified as for its standardization. The validity of questionnaire of empowerment has confirmed in research of Allahyari and validity of knowledge management of Zare Khalili 2011. But since this questionnaire was performed in different society, thus its validity was confirmed again. In order to determine validity, different methods are used. N this research, conceptual validity has been used in order to determine is validity. The questionnaire has been given to 10 f experts and authorities of the domain and they shall be asked their view about the questions. The results showed that some of questions have suitability of validity, thus this questionnaire has been used for this research.

**Reliability of the Questionnaire**

Reliability of a tool is its stability degree in measuring. In this research, Cronbach Alpha coefficient was used in order to discuss its validity.

\[ r_a = \frac{J}{J-1} \left(1 - \frac{\sum S_j^2}{S^2}\right) \]

Formula (2-3)

Ra= Reliability coefficient

J= number of subsets of questionnaire questions or test

S2j= variance of subtests of jth
S² = total variance of test

In this research, reliability coefficient of the questionnaire was discussed again, thus, a first sample consists of 30 pre tested questions were provided and then by using data and by using SPSS software, the reliability coefficient was reached for each variable. The reliability of questionnaire for empowerment is (0/84) and knowledge management (0/87) which shows appropriate reliability. Table 1 shows the reliability of the study.

**Table 1: Reliability of knowledge management and its variables**

<table>
<thead>
<tr>
<th>Knowledge Creation</th>
<th>0/84</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Saving</td>
<td>0/86</td>
</tr>
<tr>
<td>Knowledge Sharing</td>
<td>0/88</td>
</tr>
<tr>
<td>Knowledge Application</td>
<td>0/80</td>
</tr>
<tr>
<td>Knowledge Management</td>
<td>0/87</td>
</tr>
</tbody>
</table>

**Table 2: Reliability of questionnaire for empowerment and its variables**

<table>
<thead>
<tr>
<th>Effect</th>
<th>0/88</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meaningful</td>
<td>0/79</td>
</tr>
<tr>
<td>Self-Determination</td>
<td>0/77</td>
</tr>
<tr>
<td>Competency</td>
<td>0/81</td>
</tr>
<tr>
<td>Empowerment</td>
<td>0/84</td>
</tr>
</tbody>
</table>

**Data analysis**

In present research, descriptive and illative method will be used. As if, after extraction data, firstly, descriptive methods are used in order to discuss population about the variables and then illative method was used in order to answer the research’s questions.

**Table 3: Hypothesis testing results**

<table>
<thead>
<tr>
<th>Row</th>
<th>Hypothesis</th>
<th>Correlation</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main</td>
<td>There is meaningful relation between knowledge management and empowerment of Iranian Dam Construction Enterprise</td>
<td>0/762</td>
<td>Confirmed</td>
</tr>
<tr>
<td>1</td>
<td>Existing status of knowledge management of Iranian Dam Construction Enterprise has suitable.</td>
<td>2/71</td>
<td>Rejected</td>
</tr>
<tr>
<td>2</td>
<td>Empowerment of Iranian Dam Construction has suitable status</td>
<td>2/67</td>
<td>Rejected</td>
</tr>
<tr>
<td>3</td>
<td>There is meaningful relation between knowledge creation to empowerment of personnel of Iranian Dam Construction Company</td>
<td>0/556</td>
<td>Confirmed</td>
</tr>
<tr>
<td>4</td>
<td>There is significant relation between knowledge saving to empowerment of personnel of Iranian Dam Construction Company</td>
<td>0/604</td>
<td>Confirmed</td>
</tr>
<tr>
<td>5</td>
<td>There is significant relation between knowledge sharing to empowerment of personnel of Iranian Dam Construction Company</td>
<td>0/655</td>
<td>Confirmed</td>
</tr>
<tr>
<td>6</td>
<td>There is meaningful relation between knowledge application to empowerment of Iranian Dam Construction Company</td>
<td>0/647</td>
<td>Confirmed</td>
</tr>
<tr>
<td>7</td>
<td>There is difference between knowledge management and empowerment in terms of population variables</td>
<td>0/01</td>
<td>Confirmed</td>
</tr>
<tr>
<td></td>
<td>There is difference between knowledge management and empowerment in terms of population variables (age, graduation and background)</td>
<td></td>
<td>Rejected</td>
</tr>
<tr>
<td>8</td>
<td>Each knowledge indices can predicate empowerment of Iranian Dam Construction Company</td>
<td></td>
<td>Confirmed</td>
</tr>
</tbody>
</table>
Before using parametric test, the normality of data shall be proved. According to Kolmogorov-Smirnov test, if normality of data is confirmed, we can use parametric- Pearson correlative, independent T, variance analysis and step by step regression test. The results show that the data are normal thus parametric test has been used. At last, results of hypothesizes are offered in the form of table 3.

Results and Discussion

Main Hypothesis: There is a meaningful relation between knowledge management and empowerment of Iranian Dam Construction Company.

The findings show that there is positive and meaningful relation between knowledge management and empowerment of personnel of Iranian Dam Construction Enterprise that this relation is meaningful at the level of 0/01. As for positive correlation coefficient, it can be said that increment of knowledge management is resulted in the restoration of empowerment of personnel. The results of research conform to previous results.

The findings of the research conform to findings of Hajianfard in which there is positive and meaningful relation between indices of knowledge management and empowerment. Also, the results are conform to findings of Ebrahmi et al in which knowledge management enables managers to reach in better performance, increase capability and efficiency and establish new and useful ideas. Knowledge management plays important role in establishing and develop empowerment of personnel at organization.

The following cases signify important role: knowledge management helps to establish tools, database and procedures for creation and sharing knowledge in implicit organization which play important role in empowerment. Knowledge management plays an important role in increasing empowerment by creation and establishing culture guidance- winner culture- in order to establish and knowledge sharing and cooperation.

In fact, it can be said that access to information which pertain to different aspects of work can increase psychological empowerment. When people can apply information, perform them actively and combine knowledge which derived from it, and they feel empowerment naturally.

First sub-hypothesis: existing status of knowledge management of Iranian Dam Construction Enterprise has suitable situation.

Research findings show that average point of situation of knowledge management is lower than medium level in Iranian Dam Construction Enterprise which is meaningful by statistics point of view. As a result, existing status of knowledge management has unsuitable. In fact, we can say that situation of knowledge management in Iranian Dam Construction Enterprise has not suitable status and has more distance to suitable level. Thus, the authorities of Iranian Dam Construction Enterprise shall provide necessary fields and situations.

Some of organizations and companies got this problem. Iranian Dam Construction Enterprise needs knowledge management for competition to other rivals. But in this company, mental capital and scientific resources were not considered so that there was not control on non-written knowledge (implicit knowledge) and existing knowledge and compiled information are collected without any consideration and managed in systematics framework. This managerial weakness caused some of valuable capitals were unknown forever and some of existing summaries were as past. Innovation and create new knowledge is from the most important functions of organizations. These resources not only consist of informational sources but also mental capital which applies in Iranian Dam Construction Enterprise by accurate management methods, identification and organized form.

Second sub-hypothesis: empowerment situation of personnel of Iranian Dam Construction Enterprise has suitable status.
Research findings show that average point of existing situation of personnel in Iranian Dam Construction Enterprise is lower than medium level which is significant by statistics point of view. As result, it can be said that exiting situation of empowerment has not suitable and has more distance to reaching suitable level. Thus, the authorities of Iranian Dam Construction Enterprises hall provide necessary terms and situations for restoration of empowerment.

Managers of Iranian Dam Construction Enterprise shall consider that empowerment needs spending time, energy and financial resources. The people shall have opportunity for recreation from work and think in existing fields and new capabilities. Also, they need new skills and systems which support thought and cooperation. Empowerment is vital case at future but it depends on current investment. At sum, it can be claimed that empowerment is necessary in order to remove problems and difficulties due to environmental changes and restore growth and development in organizations. Organizations are required to remove void traditions and customs in order to live at instable environment and restore empowerment so that the basic scale for organization’s success is to educate people with empowerment.

**Third sub-Hypothesis:** there is a meaningful relation between empowerment of personnel of Iranian Dam Construction and knowledge creation.

The research findings show that there is a positive and meaningful relation between knowledge creation and empowerment of personnel of Iranian Dam Construction Enterprise which is significant at level 0/01 alpha. As for positive correlation coefficient, it can be said that increment of knowledge creation can restore personnel empowerment. The results conform to previous findings.

Findings of research conform to findings of Hajianfard in which there is positive and significant relation between all indices of knowledge management and empowerment. In his research, knowledge creation was considered as one of the indices of knowledge management. Similarly, it can be said that when stimulated people are appointed in knowledge creation, they will share their knowledge and look for new cases actively at organization and it is possible to obtain more knowledge to satisfy their needs. In fact, when knowledge creation caused they feel more empowerment mode it caused more autonomy and their activities influence on success and performance of organization more.

**Fourth sub-Hypothesis:** there is a meaningful relation between knowledge saving to empowerment of personnel of Iranian Dam Construction Company.

The research findings show that there is a positive and meaningful relation between knowledge saving and empowerment of personnel of Iranian Dam Construction Enterprise which this relation is meaningful at the level of 0/01 alpha. As for positive correlation, it can be said that increment of knowledge saving restores empowerment of personnel. The results conform to previous results.

When the personnel can save organizational knowledge and organize it, they feel that what they have and obtain their information share to others and more enable.

**Fifth sub-Hypothesis:** there is a meaningful relation between knowledge sharing to empowerment of Iranian Dam Construction Company.

Research findings show that there is a positive and meaningful relation between knowledge sharing and empowerment of personnel of Iranian Dam Construction Enterprise which this relation has meaningful at level 0/01. As for positive correlation coefficient, it can be said that increment of knowledge sharing restores empowerment of personnel. The results conform to previous results.

Knowledge sharing is key factor in success of organization, so that can extend knowledge into sections of organization. Many organization concentrate on distribution hidden knowledge between people. Knowledge sharing needs people's toleration and groups in regard to reach to
mutual resources so that personnel and working groups have more shares from participation behaviors. The people, who can share their knowledge more and produce more knowledge, try to access more knowledge and this knowledge can feel autonomy and competency on their work more.

Sixth sub-Hypothesis: there is a meaningful relation between personnel empowerment of Iranian Dam Constriction Enterprise and knowledge application.

The research findings show that there is a positive and meaningful relation between knowledge application and empowerment of personnel of Iranian Dam Construction Enterprise which is significant at the level of 0/01 alpha. As for positive correlation coefficient, it can be said that increment of knowledge is resulted in the restoration of empowerment of personnel. The results conform to previous results.

It can be said that knowledge is so important as main source for empowerment and organizational utilization. The man aim of knowledge management is to establish and organize environment in which people develop their knowledge and transact each other and combine their knowledge with others and finally apply it. Knowledge application is resulted in the restoration of empowerment personnel, thus knowledge management is resulted in the restoration of empowerment itself, and thus, knowledge management is regarded as a resource for empowerment and its important implications.

Seventh Sub-Hypothesis: there is a significant difference between knowledge management and empowerment in terms of population variables such as age, gender, graduation and background.

The results show that there is a significant difference between people’s opinions about knowledge management and empowerment in terms of gender. In other words, by confidence level of 0/95%, it can be said that there is a significant difference between women and men personnel of Iranian Dam Construction Enterprise from knowledge management and empowerment point of view and men personnel have more average to women personnel.

Also, the results show that there is no difference between people’s opinions about knowledge management and empowerment in terms of gender. In other words, by confidence level of 0/95%, it can be claimed that there is no difference between background, different ages and graduation about knowledge management and empowerment.

Eighth Sub-hypothesis: each of knowledge management indices can predict empowerment of personnel of Iranian Dam Construction Company.

Research findings show that among knowledge management indicators, its two dimensions have entrance scale into final regression equation in order to explain empowerment changes of personnel on Iranian Dam construction Company.

The organizations amend products by applying knowledge in organization to satisfy customer’s needs and wants. Thus, organizations apply existing knowledge more in offering products, can discover ideas in which opportunity discover more. Also, knowledge sharing is regarded as distribution process of knowledge between personnel and customers. Conversion and sharing knowledge shows new combination of knowledge which is resulted to discover opportunity and restore personnel activity. In fact, the personnel feel that their co-workers will be honest with them and consider their success and ensure it. In these situations, cooperation is increased between staff. It caused itself participation in organization and feel autonomy and competency more.

Recommendations of the study

Research results show that there is a positive and meaningful relation between knowledge management and all its dimensions- knowledge sharing, knowledge saving and knowledge application to empowerment of personnel.
As for relation between knowledge sharing to empowerment of personnel of Iranian Dam Construction Company, it is suggested that:
- Awareness personnel specially managers about role and placement of organizational knowledge sharing in success of organization
- Establishing task groups in order to compile operational programs
- Encouraging and establishing protective environment in organization about knowledge sharing of organization
- Documentary experiences of experts and establish ease methods to them

As for relation between knowledge application to empowerment of personnel of Iranian Dam Construction Company, it is suggested that:
- Encouraging personnel to learn successful activities of other companies and organizations especially well-known organizations
- The personnel are encouraged to learn each other and transact suitable experiences.

As for relation between knowledge creation to empowerment of personnel of Iranian Dam Construction, it is suggested that:
- Supporting new and effective ideas of personnel in Iranian Dam Construction Enterprise and convert them to knowledge
- Supporting personnel in the field of extension of ability in organizations by managers
- Encouraging personnel to membership and participate in speciality societies, seminar and conferences

As for relation between knowledge saving to empowerment of personnel of Iranian Dam Construction Company, it is suggested that:
- Documentary experiences and to share successful and unsuccessful experiences of Iranian Dam construction Enterprise and other internal and abroad companies in order to use them.
- All personnel shall participate in decisions
- Suitable use of information technology based on web, documentary and database
- Knowledge saving based on subjective classification and conform to personnel’s needs

Suggestions for further research
- Performing this research in other organizations and companies and compare the results to resent research
- Discussing effective factors on knowledge management and empowerment of personnel of Iranian Dam Construction Company
- Discussing relation of knowledge management to other variables (like staff performance, organizational intelligent)
- Use of other methods like combined methods in order to discuss research variables. In this research, we discussed variables by quantitative methods, it is recommended that in future research, the variables should be discussed by qualitative methods and combined ones.

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