The relationship between enhancement of human resource productivity and knowledge management in Iranian libraries: A correlation analysis

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Knowledge and human resources are levers of competitive advantage in the present complex, dynamic and global environment. Individuals and knowledge are two indiscrete concepts; human beings are creators and final carriers of knowledge. The objective of the present survey is to study the relationship between effective factors on enhancement of human resource productivity (empowerment, quality of work life, individual factors, motivational factors, organizational culture) and knowledge management in libraries of Isfahan province. This survey was conducted using the descriptive-field method. Statistical population consisted of employees of Isfahan municipality central library and Mirdamad library in Isfahan province. We took a sample 45 employees from them and collected data through questionnaire. Data was collected for a certain period of time during August to September 2010. Data analysis was performed through descriptive and inferential (spearman correlation) statistics methods. According to results, there was a significant correlation between all effective factors on enhancement of human resource productivity and knowledge management.

Key words: Human resource productivity, knowledge management, library, knowledge creation, knowledge distribution, knowledge storage.

INTRODUCTION

Both scientific and business societies believe that organizations with knowledge power can maintain their long term superiorities in competitive scopes and because of this, knowledge management has been converted into an important and vital issue in organizations during the recent years (Bhatt, 2001). Individuals in organizations are considered as the most basic element in knowledge management (Gooijer, 2001; Soliman et al., 2000) and today, effective performance and efficiency of these knowledge assets in organizations is very important (Choi, 2000). Therefore, capability of the organization in optimal utilization of talent and proficiencies of the human resource or in other words "enhancement of human resource productivity" is necessary for knowledge management success.

LITERATURE REVIEW

Human resource productivity

Human resource productivity is one of the priorities of improvement and development in each organization. Productivity is the feeling of effectiveness, efficiency and empowerment of the individual in the organization. In other words, productivity could be defined as enjoyment and optimal utilization of labor force, ability, talents and proficiencies of the human resource (Soltani, 2008).

Several factors could lead to enhancement of human
resource productivity. For example, it has been proved that empowered employees are faced with lower conflict and role ambiguity and as a result, they will have more job satisfaction (Greasley et al., 2005). Moreover, paying attention to employees’ life quality provides more human and healthy working situations (Travis, 1995). Consequently, increasing of productivity, decreasing of absence and organizational effectiveness will be obtained (Carllus and Considine, 2001; Kristen, 2008). Quality of work life affects employees’ loyalty and satisfaction towards the organization too (Ballou et al., 2007). Accordingly, empowerment and quality of work life are considered as effective factors on enhancement of human resource productivity in this survey.

Similarly, motivation affects enhancement of human resource productivity. Positive relation between sufficiency of monthly salary with job satisfaction and productivity has been proved (Wexley and Yuki, 2002) and lack of motivation has been stated as one of the major factors in turnover decision (Ruth et al., 2009). In addition, it is emphasized that strong culture is accompanied by better performance in the organization (Gordon et al., 1992) and there is a strong correlation relation between organizational culture and relational performance (Sheikhpour, 2001; Sheridan, 1992). Thus, organizational culture, proportional to condition of the environment that develops desirable behavioral model, is effective on increasing of productivity (Zareei, 1996). Because of these, the mentioned two factors are considered as effective factors on enhancement of human resource productivity in this survey too.

Other researchers have stressed that existence of proportion between individual interests and job, existence of proportion between individual proficiencies and job and also having work experience, affect enhancement of human resource productivity considerably (Tavari et al., 2009). Person-job fit is considered in the present survey among individual factors effective on productivity.

**Knowledge management**

Knowledge management could be defined as deliberate strategy to gain appropriate knowledge from appropriate individuals in appropriate time and help individuals share and apply information with regard to organizational performance improvement (Hutchinson and Huberman, 1993). Importance of knowledge management lies in the fact that it could be resulted in empowerment of individuals and the organization itself to accomplish activities effectively through organizing of knowledge (Jantz, 2001).

Various models have been represented for evaluation of knowledge management by the experts. These models include two to eight phases and most of them are similar in terms of content. Creation, storage and distribution processes have been mentioned as major processes of knowledge management in several models. For instance, these processes constitute major elements of models of Despres and Chauvel (1999), Wiig (1997), Alavi and Leinder (2001), Jashapara (2004) and Rao (2005).

Knowledge creation or development contains a group of fast and creative, programmed and organized activities that are intended to extend scientific recognition borders and human’s knowledge treasury (Saeedi, 2006). Knowledge distribution means sharing of the existing knowledge, accessibility and the manner of its distribution from individual level to group level and at last organizational knowledge. Knowledge storage is maintaining and up-to-dating of knowledge in order to prevent its destruction and provide possibility of its utilization (Afraze, 2006).

**Relation between human resource productivity and knowledge management**

Individuals are in the center of knowledge management, so knowledge management is individuals’ management and individuals’ management is knowledge management (Davenport and Volpel, 2001). Thus paying attention to human resource productivity and effective factors on enhancement of it could be regarded as activities related to knowledge management. For example, Schauhofer and Peschl (2005) consider empowerment processes as a kind of knowledge processes. Horak (2001) also emphasizes that developing of employees’ proficiencies in communications, networking, learning, team formation, cooperation and creative thinking are necessary for knowledge management success. Moreover, positive impact of employees’ quality of work life on their learning and health (Robson et al., 2005) as well as organizational commitment has been confirmed (Lees and Kearns, 2005). This is why employees with higher organizational commitment have more tendencies to share their knowledge in the organization (Storey and Quintas, 2001).

In fact, human resources managers can facilitate knowledge management in the organization through work design structures (for example, job diversity, independence, mutual dependence), encouraging structures (for example, salary, performance appraisal, employment security) and developing of employees’ proficiencies (for example, education) (Gupta and Singhal, 1993; Nonaka and Takuchi, 1995; Kang, 2007). Furthermore, accurate selection of employees will have a significant impact on knowledge management success, because knowledge and organizational competencies are determined through this way (Wong, 2005). Selection has been introduced as the most important activity of human resources in knowledge-oriented organizations in researches of Thite (2004), Smith and Rupp (2004), and Oltra (2005). In addition to these mentioned cases, organizational culture has been regarded as an effective factor on knowledge management success in many researches (Davenport...
et al., 1998; Martensson, 2000; Pan and Scarbrough, 1998; Carrion et al., 2004; Oltra, 2005). According to the previous descriptions, the significant point is that effective factors on enhancement of human resource productivity could be considered as important factors for knowledge management success too. Hence, the researcher intends to study relation of such factors with knowledge management. So, the main hypothesis of this research, existence of significant relation between effective factors on human resource productivity and knowledge management is considered. Secondary hypotheses include existence of relation among empowerment, quality of work life, motivational factors, individual factors and organizational culture with knowledge management. Research methodology, findings, conclusion and recommendations are further presented.

RESEARCH METHODOLOGY

This survey was conducted using the descriptive-analytical method. Statistical population consisted of employees of Isfahan municipality central library and Mirdamad library in Isfahan province and the research sample included 45 employees who were selected randomly. Researcher self made questionnaire was the tool of data collection including three sections of demographic information, effective factors on enhancement of human resource productivity and knowledge management. Age, gender, experience and education were studied in demographic information section. Effective factors on enhancement of human resource productivity and knowledge management were studied with 24 and 15 questions respectively. Likert five point scale was used to score choices of the questionnaire (from 1= very low to 5= very high). Data was collected for a certain period of time during August to September 2010. Professors and experts in management scope confirmed content validity of the questionnaire and Cronbach alpha coefficient was used to determine reliability. Cronbach alpha was calculated equal to 0.92 for questions related to productivity and 0.95 for questions of knowledge management which showed strong reliability of the questionnaire. Data analysis was performed by means of descriptive and inferential (correlation) statistics and SPSS 15 software. Spearman correlation test was applied because the studying variables were qualitative.

FINDINGS

Age average of participants in this survey was 34 to 45 years old and 73.3% were women. With regard to education, 24.4% had associates, 64.4% had B.A and 4.4% had M.A. Work experience average was 9.91 years in participants.

Descriptive statistics related to indexes of productivity enhancement and knowledge management components are illustrated in Tables 1 and 2. According to Table 1, average scores of all indexes of human resource productivity enhancement have been estimated lower than the average level which shows weakness of effective factors on enhancement of human resource productivity. According to the represented results in Table 2, mean of all components of knowledge management have been estimated lower than the average level which shows weakness of effective factors on enhancement of human resource productivity. According to the represented results in Table 2, mean of all components of knowledge management have been estimated lower than the average level. Thus, condition of knowledge management in the proposed libraries is assessed as weak.

In studying the relation between effective factors on human resource productivity and knowledge management, results reveal that there exists a strong significant relation between total factors and knowledge management with correlation coefficient of 0.918 on error level 0.01. So, main hypothesis of research is confirmed. Correlation coefficient with positive sign shows existence of direct relation between these two variables and its
Table 3. Results of correlation coefficients among indexes related to enhancement of human resource productivity and knowledge management components.

<table>
<thead>
<tr>
<th>Indexes of human resource productivity enhancement</th>
<th>Knowledge creation</th>
<th>Knowledge distribution</th>
<th>Knowledge storage</th>
<th>Knowledge management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empowerment</td>
<td>0.734**</td>
<td>0.709**</td>
<td>0.644**</td>
<td>0.776**</td>
</tr>
<tr>
<td>Quality of work life</td>
<td>0.645**</td>
<td>0.723**</td>
<td>0.547**</td>
<td>0.707**</td>
</tr>
<tr>
<td>Individual factors</td>
<td>0.498**</td>
<td>0.427**</td>
<td>0.379*</td>
<td>0.480**</td>
</tr>
<tr>
<td>Motivation</td>
<td>0.761**</td>
<td>0.658**</td>
<td>0.589**</td>
<td>0.716**</td>
</tr>
<tr>
<td>Culture</td>
<td>0.829**</td>
<td>0.776**</td>
<td>0.637**</td>
<td>0.816**</td>
</tr>
<tr>
<td>Total</td>
<td>0.903**</td>
<td>0.877**</td>
<td>0.727**</td>
<td>0.918**</td>
</tr>
</tbody>
</table>

** P<0.01, * P<0.05.

Closeness to number 1 demonstrates strong relation among them.

Results show that there is a positive significant relation among total factors and knowledge management processes that is knowledge creation, distribution and storage with correlation coefficients of 0.903, 0.877 and 0.727 on error level 0.01 respectively. According to this, we can state that all knowledge management processes are improved by improving the set of effective factors on enhancement of human resource productivity (empowerment, quality of work life, individual factors, motivational factors and organizational culture). This result is another confirmation with regard to the main hypothesis of the research.

Studying the relation between individual effective factors on enhancement of human resource productivity and knowledge management confirms existence of this relation. There is a significant relation between empowerment and knowledge management with correlation coefficient of 0.776. It means that effectiveness of knowledge management process requires developing of employees’ proficiencies in different grounds.

Other results demonstrate that quality of work life has a significant relation with knowledge management by correlation coefficient of 0.707. Therefore, enhancement of quality of work life in the organization could help facilitate knowledge management processes.

Individual factors also show significant relation with knowledge management by correlation coefficient equal to 0.480. Hence, existence of proportion among job necessities and characteristics of the individual could be leaded to facilitation of knowledge management. This result emphasizes the importance of paying attention to individual factors in selection process.

Studying the relation between motivational factors and knowledge management shows existence of a significant relation between these two variables with correlation coefficient of 0.716. To put it differently, paying attention to needs of employees, giving feedback to them and performance appraisal based on accurate standards could be effective on facilitation of knowledge management process.

Besides, results show that organizational culture has a significant relation with knowledge management by correlation coefficient of 0.816. This states that organizational culture plays an effective role in knowledge management effectiveness as the identity and foundation of the organization. Whenever organizational culture is stronger, knowledge management will be more successful.

Therefore, all secondary hypotheses are confirmed. The highest correlation coefficient (0.816) among effective factors on human resource productivity belongs to organizational culture and the lowest (0.480) belongs to individual factors (Table 3).

**DISCUSSION**

Given the importance of human resource in knowledge management success, this survey was performed to study the relation among effective factors on enhancement of human resource productivity and knowledge management.

Position of effective factors on enhancement of human resource productivity and knowledge management was estimated at a weak level based on results of the survey. Other results show existence of a positive significant relation between set of effective factors on human resource productivity and knowledge management. In other words, there is a positive significant relation among empowerment, quality of work life, individual factors, motivational factors and organizational culture with knowledge management. Generally, this result indicates that existence of an appropriate bed to enhance human resource productivity could facilitate knowledge management process. It should be noted that weakness of effective factors’ level on human resource productivity as well as knowledge management has no impact on the kind of relation between these two variables. Confirming the positive correlation between these two variables means harmonization of their changes. It means that increasing (decreasing) a variable will be lead to increasing (decreasing) of the other.

Results of this survey on the importance of
empowerment in knowledge management success are consistent with results of other researches (Smith and Rupp, 2004; Brelade and Harman, 2000; Stovel and Bontis, 2002; Bollinger and Smith, 2001; Anell and Wilson, 2002). Existence of the relation between motivational factors and knowledge management has been confirmed in other researches too. For example, results of Lambermont-Ford and Lam (2010) research showed that external motivational factors help knowledge sharing in organizations. Moreover, existence of correlation between organizational culture and knowledge management in this research is consistent with findings of Hosseini (2007), Asgari (2006), Tabibi et al. (2009), Paulen and Mason (2002), Rastogi (2000), and Nonaka (1991).

In all, we can say that success in knowledge management application requires deep changes in activities of human resources management according to conclusions of this survey. Hence, organization’s attention to quality of work life, empowerment and motivation as well as individual factors of employees could facilitate knowledge management application in the organization while enhancing their effectiveness and productivity.

Moreover, if a strong culture exists in the organization, employees will have more tendencies for innovation, create new ideas and share their knowledge with others. Through this, knowledge of individuals is disseminated and developed in the organization which will be used to solve problems of the organization and improve its services.

Conclusions of this survey include this applied recommendation that managers of the organizations pay attention to activities of human resources, and reinforcing them could lead to reinforcement of employees’ performance from two aspects: Enhancement of human resource productivity and knowledge management reinforcement. It is obvious that optimal enjoyment from competitive levers of knowledge and human resources will propel the organization to gain competitive advantage. In addition, this survey could be the starting point of a new research process in knowledge management literature by confirming the existence of a relation between effective factors on human resource productivity enhancement and knowledge management.

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