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# Knowledge management and employee empowerment

## A study of higher education institutions

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## Abstract

**Purpose** – The purpose of this paper is to investigate the relationship between knowledge management (KM) and employee empowerment in institutions of higher education.

**Design/methodology/approach** – The research method in this study was the descriptive-correlative type, and was based on the goal of the method applied. Subjects in this research included the staff members of higher educational institutions in Iran. Descriptive and inferential statistics were used. To analyse research data, descriptive statistics, and for inferential statistics, the Pearson correlation, the Friedman ranking test and stepwise regression, were used. For data analysis, SPSS software was used.

**Findings** – The results from the study show that all alternative hypotheses were confirmed and there was a significant relationship between KM and employee empowerment. In addition, KM predicted the aspects of employee empowerment in institutions of higher education.

**Originality/value** – Through this study, the positive role of KM in employee empowerment in institutions of higher education has been described, and the importance of considering such studies has been specified for researchers.

**Keywords** Empowerment, Knowledge management, Higher education institutions, Employee

**Paper type** Research paper

## Introduction

Nowadays, knowledge management (KM) is the topic of a great deal of literature in management, discussions, planning and some actions (Nonaka and Takeuchi, 1995; Wiig, 1999). There are many ways to check KM. Knowledge can be defined as information that is full of abilities, opinions, and insights and values (Empson, 1999). Knowledge is recognized as a diffuse resource for organizational success. In addition, it has been well confirmed that organizations can develop many processes to use knowledge to improve their performance (Lee, 2001). In other words, it has to make an effort to successfully assess contributions of knowledge (Davenport and Prusak, 2000). KM in related literature can be a critical management task (Collins and Hitt, 2006), and a key link between the related literatures (Simonin, 2004). KM relates to the creation and development of knowledge in organizations, with a view to go beyond the goals. This requires systems for the creation and maintenance of knowledge resources, training and organizational learning (Plessis, 2007). In this respect, successful organizations should apply knowledge as an asset and for development of values (Liebowitz and Suen, 2000). Massa and Testa (2009) believe that knowledge is one of the most important sources for organizations and companies to achieve competitive advantages and a dynamic that requires careful management (Massa and Testa, 2009).

KM is a process that enables organizations to formulate ways in the effort to recognize and reserve knowledge assets in the organization obtained from the staff of different sectors or colleges. Institutions of higher education create knowledge in the academic and managerial activities (Laal, 2011). There is extraordinary value for higher education institutions that extend a measure to share knowledge for commercial purposes (Kidwell *et al.*, 2000). KM has become a significant activity in higher educational institutions that are based on the abilities to gather and analyse information, transform knowledge, and apply novelties (Sedziuviene and Vveinhardt, 2009). Creating the system of KM in higher education institutions is a difficult task. Therefore, to make sure that the management system improves all the time and performs effectively, the main module must observe students' knowledge and skills. If it only really meets the needs of graduates of institutions of higher education in the marketplace, it can prove the influence of the functioning of KM systems (Strauf and Scherer, 2008). The purposeful activities of knowledge in organizations, such as institutions of higher education, lead to the development and continuation of critical knowledge at all levels, use available knowledge in all fields, combine knowledge to work together, continuously acquire relevant knowledge and develop new knowledge through lifelong learning created by internal experience and explicit knowledge (Lai and Lee, 2007). Nevertheless, the most significant element of survival of the organization and institutions of higher education is the tone of human resource empowerment. In other words, the importance of human resources is more important than the new technologies and financial and material resources.

Human resource empowerment, as a new approach to increasing internal motivation, means releasing the internal forces of employees and providing platforms and creating opportunities for the talents, abilities and competencies of people (Honold, 1997). Human resources are viewed as the most significant, the most expensive and the most valuable capital of an organization. Empowerment is a new option for senior managers to use workers in leading organizations in the competitive world (Gortani, 2009). Empowered workforces create empowered organizations. An empowered organization is an environment that empowers employees in the different groups and in carrying out their activities while working together (Spreitzer and Quinn, 1992). In accordance with the effect of higher educational institutions on training an efficient, creative, innovative and enthusiastic generation, empowering employees in higher educational institutions should be considered the influencing factor on the community of human capital (Maktabi *et al.*, 2014). KM and empowerment have often been considered an efficient tool for empowering staff members excluded from structural programmes. Therefore, the case of empowerment is one of the details in the organization and management theories. Empowerment is the creation of conditions within which people will do their work, primarily with internal motivation, and within the second part, they are able to reach the objectives with success (Dowling, 1999). Empowerment in higher educational institutions is an important event and due to the needs of Iranian higher education institutions to raise the experience and skills of employees, the necessity for creative participation of staff members and empowering people to generate new ideas and betterment of the education level is very necessary. Institutions of higher education, with the evolution of new projects and programmes, can offer – by empowering their staff – a proper context for the scientific activity of scholars in several domains of scientific discipline; hence, empowerment without any knowledge within higher educational institutions seem far-fetched.

Agreeing to what was mentioned, and understanding this fact that knowledge, abilities and skills of staff members are the most important and renewable resources that organizations can use them in their management, KM is more significant than ever. According to the opinions of experts, the use of KM can help enhance empowerment in organizations, such as institutions of higher education. So, this study will investigate if there is a relationship between KM and employee empowerment in higher educational institutions. As a result, the following research questions were formulated:

*RQ1.* Is there a significant relationship between knowledge creation and employee empowerment?

*RQ2.* Is there a significant relationship between knowledge acquisition and employee empowerment?

*RQ3.* Is there a significant relationship between knowledge storage and employee empowerment?

*RQ4.* Is there a significant relationship between knowledge sharing and employee empowerment?

*RQ5.* Is there a significant relationship between knowledge application and employee empowerment?

*RQ6.* Are there significant differences between the rankings of KM dimensions?

*RQ7.* Are there significant differences between the rankings of employee empowerment dimensions?

*RQ8.* Does KM predict the aspect of employee empowerment?

## The theoretical framework
### KM and institutions of higher education
Today, the word "knowledge" has extensive usage, and there are many definitions with diverse backgrounds, and everyone has different understandings in the field of KM (Jafari *et al.*, 2007). These varying definitions of the word "knowledge" lead to different perspectives on organizational knowledge and diversity in innovation concepts (Uit Beijerse, 1999). KM can be defined as follows: KM relates to the operation and expansion of the knowledge assets of an organization in accordance with expansion in the organization's goals. The managed knowledge contains explicit, tacit as well as subjective knowledge. Other researchers have attempted to work through a process instead; a project-based viewpoint provides a definition of KM. Liebowitz and Suen (2000) provided a nine-stage approach to KM: convert data into knowledge, identify, and evaluate the knowledge, capture and preserve knowledge, organize knowledge, use knowledge, combine knowledge, create knowledge, learn about knowledge, distribute and sell knowledge. Christensen (2003) defines KM as a practice that provides a series of instructions or management strategies on how knowledge should be handled. For Redman and Wilkinson (2009), KM is the attempt by an organization to explicitly manage and control knowledge. Mathew (2010) believes that KM is the integrated management and sharing of knowledge, enabling the organization to achieve its objectives. Applying KM in higher education, especially distance learning, will develop the process and help the institutions of higher education to reach beyond boundaries through the distance education mode and create advantages. "Higher educational

institutions have significant opportunities to apply knowledge practices to support every part of their mission" (Kidwell *et al.*, 2000). Higher educational institutions generally play two important roles: creating knowledge and diffusing knowledge. It has been shown that the most important vehicle for creating knowledge and training has been the most important vehicle for the diffusion of knowledge (Metaxiotis and Psarras, 2003). KM is a key concept in modern management that considers and values people in organizations as valuable human resources, resulting from the rapidly globally changing social environment. According to the study by Nilsook and Sriwongkol (2009), KM in higher education has three objectives: first, developing tasks for better quality and effectiveness; second, developing human resources in all operating levels; and third, developing knowledge bases of organizations or sectors towards the enhanced knowledge investment or wisdom investment of the organizations. According to the studies of Mathew (2010), KM provides some of the solutions to the problems that are relevant for sustainable higher education teaching-learning processes. They believe that the use of KM provides: collaborative solutions and higher learning, technological issues, learning, knowledge, competition, teacher training, resolution of student problems, assistance to business and industry, adoption of projects at more extended levels, movement of resources for enhancing development, and achievement of sustainability. Furthermore, they showed that increasing the use of KM leads to enhancements in innovation and development. Drucker (1993) illustrated that one of the most significant challenges facing institutions in our society is to create systematic methods for managing knowledge. KM represented, in the methodological process, orienting the knowledge processes and ensuring their effectiveness. It is a gate to add or provide benefits, through the integration of composites among its processes, to find the cognitive synthesis, better than what they are, such as data or information, by launching the intellectual capacities and cognitive abilities of the workers of the institutions of higher education and scientific research, at all levels. That is, to build and develop the requisite abilities to trade with the variables and raise recognition of the change problems, and anticipate them at an early stage, which enables the higher educational institutions to be ready to face them and avail the opportunity to increase and develop the best (Laudon and Lauden, 2007).

Higher educational institutions in Iran are different in size, shape, mission, morality, background, values and location. Iranian higher educational institutions have undergone major changes over the last 18 years. These changes and developments have affected the quantity and method of the general budgets of the system; this has placed emphasis on research selectivity and injected market ingredients into the budget and management of the system. One of the basic steps to attain this goal is to increase the level of academic performance by applying the implementation of an excellent KM system.

*Empowerment and institutions of higher education*
In most organizations, managers are not able to tap the potential of employees. Therefore, by using efficient tools and maximizing knowledge and people's talents to solve this problem, empowerment was introduced as a new topic; this has quickly became the most important area of human resource management (Conger and Kanungo, 1988; Spreitzer, 1995; Thomas and Velthouse, 1990). Though notions of empowerment are not explicit in the research on participatory management (Plunkett and Fournier, 1991), power (Bachrach and Botwinick, 1993), and job enrichment (Hackman and Oldham, 1976), empowerment has solely recently been specifically outlined and assessed (Spreitzer, 1996). Following Conger and Kanugo's (1988) line of

analysis, Thomas and Velthouse (1990) represented empowerment as an intrinsic task reason, consisting of four dimensions: perceptions of meaning, competence, self-determination and impact. In addition, scientific conceptualization and formation of empowerment structures are expressed in the rest of the definitions and theories of scholars such as Zimmerman (1990), Lee (2001), Hil and Huq (2004), Williams and Labonte (2007), and Whitley *et al.* (2011), and under the original meaning of the legal powers delegated, authority delegation, mission and power. Management literature defines empowerment as a lot of managerial techniques, with no attention to its nature or the procedures underlying the construct (Spreitzer, 1995). Employees may lack psychological experiences with empowerment, and emphasizing the cognitive operation of sharing authority may result in an inadequate apprehension of the notion of empowerment and its theoretical rationale for related practices. Researchers have offered these definitions to include job redesign (Kanter, 1983), self-efficacy by reducing powerlessness (Conger and Kanungo, 1988) and intrinsic task motivation (Thomas and Velthouse, 1990). Combining organizational and psychological areas, employee empowerment may be regarded as a cognitive state, a psychologically empowered experience with power-sharing, competence and value internalization in organizations. High-performance employees are made in an empowered organization, and they increase the organization's efficiency and productivity (Hammuda and Dulaimi, 1997). Previous surveys indicated that employee empowerment was more efficient than in contracting work done, and contribute to organizational productivity goals (Laschinger and Wong, 1999; Sigler and Pearson, 2000); moreover, better performance was demonstrated in nursing practice (Manojlovich, 2005). All employees of the organization and managers have realized the importance of this strategic resource. Owing to the determining impact of managers in the growth of the organization, top priority has been given to increasing knowledge, motivation and skills development. Considering this strategy, talented, creative, competent, committed, efficient staff positions, identified with the preparation and implementation of empowerment programmes – while increasing their capabilities and competencies – provide grounds for improving their efficiency and effectiveness. In another study, Spreitzer and Mishra in 1999 studied that "Trust" refers to the addition of five main dimensions of empowerment, as follows:

(1) Meaningfulness: it means that the intrinsic worth of a person's career goals and interest in the job. The concept of fit between job requirements with the opinions, values and behaviour is noted.

(2) Competence: the extent to which a person can perform job duties with skill points and low self-efficacy leads individuals to avoid situations that require appropriate skills.

(3) Autonomy: it is an individual opinion about the choice to lead the set of actions, indicating the onset of independence and continuity of practices and processes.

(4) Effectiveness: it is the extent to which the individual can influence the final result of strategic, administrative and functional employment. People who feel they are being effective, rather than trying to process environmentally reactive behaviour, maintain a grip on what they see.

(5) Trust: this means that a person is confident enough that operators or owners of the power centres will not harm or lose him/her and that he/she is treated impartially.

Other researchers have also identified other factors that enhance the empowerment levels of people in organizations. A dynamic organizational structure, suited to collegiate or team activities, also enhance empowerment (Fawcett *et al.*, 1995; Kanter, 1983; Matthews *et al.*, 2003; Sweetland and Hoy, 2000). When employees trust their managers and leaders, their sense of empowerment tends to be higher (Owens, 2001; Wilkinson, 1998). In addition, rewards and motivations tend to make organizational members feel empowered (McMillan *et al.*, 1995). According to Blase and Blasé (1997), facilitating school leaders make significant contributions to the sense of empowerment among the teachers in shared governance schools.

## KM and empowerment

In this part, we will survey the previous surveys and relevant applications of KM and empowerment in the various sectors. The research findings of Melhem (2004) show that trust, communication, knowledge and skills of customer-contact employees may have a direct and strong impact on the empowerment of service employees. Feliciano (2007) conducted a study, the results of which showed that there are many empowerment factors that make KM more effective, and encourage the knowledge workers towards greater interaction with the knowledge base, such as the criteria for transparency, adaptation and reliability. The findings of Ma *et al.* (2008) indicate that in the Chinese context, explicit knowledge promotes knowledge sharing, while tacit knowledge creates barriers to knowledge sharing in project teams. Moreover, they find that trust positively relates to knowledge sharing, but justice, leadership style and empowerment do not influence whether employees will share knowledge among themselves in project teams. Ozbebek and Kilicarslan (2011), in a survey, concluded that empowerment positively correlates with employees' sharing of knowledge behaviour, and it found that empowered employees are more interested in sharing their knowledge. Xue *et al.* (2011), in a work titled "Team climate, empowering leadership, and knowledge sharing", showed that teamwork and empowering leadership significantly influenced individuals' knowledge-sharing behaviour as they regard their position as being a part of knowledge. These two constructs also have substantial direct effects on the knowledge-sharing behaviour. Grinsven and Visser (2011), in their work titled "Empowerment, knowledge conversion and dimensions of organizational learning", found that empowerment affects second-order learning in a positive sense, but first-order learning in a negative sense. Knowledge conversion is positively about first-order learning, but negatively related to second-order learning. Furthermore, another result showed that efforts to improve organizational learning on one dimension may have (unintended) effects on the other, unmeasured dimension. Dunham and Burt (2011), in their research titled "Organizational memory and empowerment", concluded that there are significant relationships between organizational memories and requests to share knowledge, empowerment and organization-based self-esteem. In accession, their findings show that a positive stereotype may exist regarding older workers and the frequency with which they are requested to share knowledge, and that a halo-like effect may operate, where knowledge of an organization's history is generalized to other knowledge domains. Fotovat *et al.* (2012), in a study titled "A study of empowerment and KM impact on value creation in industrial markets", concluded that KM and empowerment were effective in creating value in industrial markets. Ahmadi *et al.* (2012), in a work titled "Structural equations modelling of relationship between psychological empowerment and KM practices" (A Case Study: Social Security Organization Staffs of Ardabil

Province, Iran), concluded that there was a relationship between employee empowerment and KM practices in the Social Security Organization. The structural equation modelling was developed in their work. They also came to the conclusion that theoretical models, in Spirtzer's view, could not be approved. Badah (2012), in a survey, showed that there is a statistically significant relationship between the KM process and the employees' degree of empowerment. Boroujerdi and Hasani (2013), in their work titled "Relationship between KM and employee empowerment in the sport and youth organization of Iran", showed that there are important relationships among all KM aspects and dimensions of employee empowerment. Moreover, KM predicts the aspects of employee empowerment. Haghighi *et al.* (2014), in their study, illustrated that there is a positive relationship between processes of KM and human resource empowerment. In addition, they showed that there is a relationship between knowledge acquisition and empowerment of human resources. There is also a relationship between knowledge sharing and empowerment of human resources and between application of knowledge and empowerment of human resources.

## Proposed model of the research

The proposed model of the research was based on the hypothetical relationships between a number of factors that was foreseen within the study. In this research, KM – with dimensions of knowledge creation, knowledge attainment, knowledge storage, knowledge sharing and knowledge application – and employee empowerment (with dimensions of meaningfulness, competence, autonomy, effectiveness and trust) were used in accordance with the research title, and supported the hypothetical basics by surveying the research literature. This proposed model represents the relationship between the KM model proposed by Sallis (2002), Chen and Huang (2007), Massa and Testa (2009), and the employee empowerment model proposed by Spreitzer and Mishra (1999). Thus, the general structure of Figure 1 about the relationship between measure and review are as follows.

According to Figure 1, the proposed research model was derived from the KM model proposed by Sallis (2002), Chen and Huang (2007), Massa and Testa (2009), and the employee empowerment model derived from Spreitzer and Mishra (1999).

According to Figure 2, the study measurement model shows the methods of study hypotheses and provides a basis for the analytical tests. Thus, in relation to the goal and projected model of the study, the main hypothesis of the study and the sub-hypotheses are as follows.

## Main hypothesis

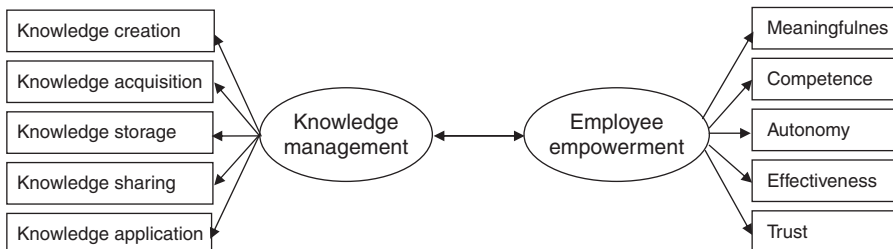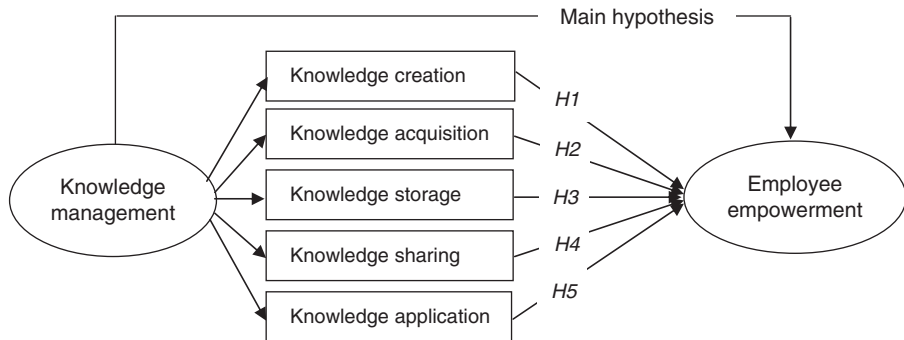There is a significant relationship between KM and employee empowerment.



Figure 1.
The proposed model
of the research

Figure 2.
Research
measurement
model (RMM)



## Sub-hypotheses

*H1.* There is a significant relationship between knowledge creation and employee empowerment.

*H2.* There is a significant relationship between knowledge acquisition and employee empowerment.

*H3.* There is a significant relationship between knowledge storage and employee empowerment.

*H4.* There is a significant relationship between knowledge sharing and employee empowerment.

*H5.* There is a significant relationship between knowledge application and employee empowerment.

*H6.* There are significant differences between the rankings of KM dimensions.

*H7.* There are significant differences between the rankings of employee empowerment dimensions.

*H8.* KM predicts aspects of employee empowerment.

## Research methodology

*The research method*

The aim of this study was to investigate the relationship between KM and employee empowerment in institutions of higher education in Iran. The research method was of the descriptive-correlative type and was an applied method under goals. The statistical population of research included all the staff members of higher educational institutions in the provinces of Kurdistan, Kermanshah and Hamadan, which totalled 3,000 at the time of research. The statistical sample includes 341 people who were selected by using Morgan's table (Krejcie and Morgan, 1970). This study used a random sampling method to select the sample; also, research independent variables consisted of KM dimensions that include knowledge creation, knowledge acquisition, knowledge storage, knowledge sharing and knowledge application. The dependent variables included dimensions of employee empowerment, including meaningfulness, competence, autonomy, effectiveness and trust.

*Measurement instruments*
To measure the study variables, two questionnaires were used, which included:

(1) KM questionnaire adapted from Sallis (2002), Chen and Huang (2007), Massa and Testa (2009) standard questionnaire, which included 25 questions.

(2) Employee empowerment questionnaire, adapted from Spreitzer and Mishra's (1999) standard questionnaire, which included 18 questions. Both questionnaires had five-choice scales (very low, low, medium, high and very high).

*Validity and reliability of questionnaires*
A number of experts and masters (40 individuals) confirmed the validity of the questions used as well as the validity and accuracy of the questionnaire. The standardization of the questionnaires and their normalization in other studies also provided further validation of the test. To calculate the reliability of the test questions, Cronbach's $\alpha$ test was used, and the $\alpha$'s that were obtained for the KM and employee empowerment were 0.855 and 0.78, respectively, which were confirmed.

*Methods of statistical analysis*
In this survey, descriptive and inferential statistics were applied. Descriptive statistics for describing data used and – for inferential statistics – the Pearson correlation, the Friedman ranking test and stepwise regression were used. Significance level during this study has considered (0.05) and SPSS software was used for analysing the data.

## Results
*Sample descriptive data*
Respondents' descriptive information on the study, for gender, age and education, are explained in Table I.

Table I shows that most of the respondents to the questionnaire were male employees, based on the gender. Based on the age, results show that most respondents were between 30 and 50 years, and based on the educational level, 13.94 per cent of respondents had high school degrees, 37.58 per cent had bachelor's degrees, 30.10 per cent had master's degrees and 18.38 per cent held doctoral degrees, which indicate the degree of educational attainment of the samples. Consequently, it can be concluded that knowledgeable individuals filled out the questionnaires.

| Gender | | Age | | Education | |
|---|---|---|---|---|---|
| Level | % | Level | % | Level | % |
| | | Under 30 years | 15.7 | Diploma | 0 |
| Male | 65.3 | 30-40 | 37.3 | High school | 13.94 |
| | | 40-50 | 32.3 | Bachelor's degree | 37.58 |
| Female | 34.7 | Up 50 years | 14.7 | MA | 30.10 |
| | | | | PhD | 18.38 |
| Total | 100 | | 100 | | 100 |
| The total of samples: 341 | | | | | |

Table I.
Descriptive statistics

*Results obtained by testing the hypotheses*

*Results of inferential analysis*. Main hypothesis test: there is a significant relationship between KM and employee empowerment. The outcomes indicate a correlation between KM and employee empowerment in Table IV.

To analyse the relationship between KM and employee empowerment, the Pearson $r$ significance test was applied. The results obtained from the analysis indicate that there are significant relationships among dimensions of KM and employee empowerment, and it can be analysed that the intensity of correlation between two variables is 0.54, which is strong, and the type of correlation between two variables is direct (positive). Thus, the main hypothesis for the study confirmed that there was meaningful and positive correlation among all dimensions of KM with employee empowerment. In addition, based on sub-hypotheses of the research, which include *H1*, *H2*, *H3*, *H4* and *H5*, there are significant relationships between dimensions of KM, including knowledge creation, knowledge acquisition, knowledge storage, knowledge sharing, and knowledge application, and employee empowerment. Results of Pearson correlation test for examining the relationship between KM and the employee empowerment in Table II show that there are significant relationships between dimensions of KM – including knowledge creation, knowledge acquisition, knowledge storage, knowledge sharing and knowledge application – and employee empowerment. Hence, the sub-hypotheses of the research were confirmed:

*H6*. There are significant differences between the rankings of KM dimensions.

The results for *H6* are shown in Tables III and IV.

According to Table IV, there are significant differences among ranking dimensions of KM. The ranking results in Table III show that the dimension of "Knowledge application",

| Independent variable KM | Number of hypotheses | Intensity correlated | Dependent variable Employee empowerment Significant level (sig.) | Test result | Hypothesis result |
|---|---|---|---|---|---|
| KM | Main | 0.54 | 0.000 | *H0*: rejected | Confirmed |
| Knowledge creation | *H1* | 0.19 | 0.000 | *H0*: rejected | Confirmed |
| Knowledge acquisition | *H2* | 0.42 | 0.000 | *H0*: rejected | Confirmed |
| Knowledge storage | *H3* | 0.39 | 0.000 | *H0*: rejected | Confirmed |
| Knowledge sharing | *H4* | 0.54 | 0.000 | *H0*: rejected | Confirmed |
| Knowledge application | *H5* | 0.44 | 0.000 | *H0*: rejected | Confirmed |

**Table II.**
The correlation between the dimensions of KM and employee empowerment

| Dimensions of KM | The mean rankings |
|---|---|
| Knowledge application | 3.5 |
| Knowledge creation | 3.3 |
| Knowledge acquisition | 2.8 |
| Knowledge storage | 2.8 |
| Knowledge sharing | 2.5 |

**Table III.**
Results of rankings of KM dimensions between employees

with the rank of 3.5, has the highest priority, and the dimension of "Knowledge sharing", with the rank of 2.5, has the least priority among the KM dimensions:

*H7.* There are significant differences between the rankings of employee empowerment dimensions.

The results of *H7* are shown in Tables V and VI.

According to Table VI, there are significant differences among ranking dimensions of employee empowerment. The ranking results in Table V show that the dimension of "Autonomy", with the rank of 3.4, has the highest priority, while the dimension of "Competence", with the rank of 2.5, has the least priority among the employee empowerment dimensions:

*H8.* KM predicts aspects of employee empowerment.

The results of *H8* are shown in Tables VII and VIII.

| | | |
|---|---|---|
| $n$ | | 341 |
| $\chi^2$ | | 94.38 |
| Sig. | | 0.000 |

**Table IV.**
Results of
Friedman test

| Dimensions of employee empowerment | The mean rankings |
|---|---|
| Autonomy | 3.4 |
| Trust | 3.2 |
| Effectiveness | 3 |
| Meaningfulness | 2.7 |
| Competence | 2.5 |

**Table V.**
Results of rankings
for employee
empowerment
dimensions between
employees

| | |
|---|---|
| $n$ | 341 |
| $\chi^2$ | 77.94 |
| Sig. | 0.000 |

**Table VI.**
Results of
Friedman test

| $r$ | $r^2$ | Adjusted $r^2$ | SE of the estimate | $F$ | Sig. |
|---|---|---|---|---|---|
| 0.54 | 0.292 | 0.29 | 0.52 | 14 | 0.000 |

**Table VII.**
Regression model
summary

| Model | | Unstandardized coefficients | | Standardized coefficients | | |
|---|---|---|---|---|---|---|
| | | $B$ | SE | $\beta$ | $t$ | Sig. |
| 1 | (Constant) | 1.09 | 0.18 | – | 6 | 0.000 |
| | KM | 0.63 | 0.054 | 0.54 | 11.8 | 0.000 |

**Table VIII.**
Regression
coefficient table

In Table VII, results of the regression model show that KM has a significant relationship with employee empowerment ($r = 0.54$, $p$ 0.01). According to Table VIII, the level of significance for constant value was less than 1 per cent; so the constant value on the dependent variable is effective. Furthermore, significance level of the $t$-test for the variable KM was less than 1 per cent; so, the dependent variable is effective:

$$Y = a + (b_1 x_1)$$

Considering the tables provided above, it can be said that with a change of one unit in KM variable to an amount of 0.63 unit, employee empowerment is increased. In other words, through KM and its amount in higher educational institutions, we can predict employee empowerment; hence, KM has indeed been able to predict employee empowerment.

## Discussion and conclusion

Human resource management practices can also significantly determine the ability and readiness of staff, which is necessary for active participation (Hislop, 2003). One of the most effective human resource management practices in the area that can authorize employees to create and foster positive attitudes is the behaviour that aids KM practices. Considering the literature presented in the study, KM was the independent variable, and employee empowerment was the dependent variable. The aim of this study was to investigate the relationship between KM and employee empowerment in higher educational institutions in Iran. Findings of descriptive statistics of the study showed that according to the frequency of "gender", 65.45 per cent of the respondents were men, while considering the frequency of "age", most respondents were between 30 and 40, and 40 and 50 years, and most respondents to the questionnaire had bachelor's degrees and master's degrees. Findings of inferential statistics regarding the main hypothesis of the research showed that there was a significant relationship between KM and employee empowerment. KM had the correlation of employee empowerment, with a rate of 0.541. The results of the main hypotheses were in line with the conclusion of Feliciano (2007), Fotovat *et al.* (2012), Boroujerdi and Hasani (2013) and Haghighi *et al.* (2014). Feliciano (2007) showed there are many empowerment factors that make KM more effective, and encourage the knowledge workers to go in for greater interaction with the knowledge base, such as the criteria for transparency, adaptation and reliability. Fotovat *et al.* (2012), in their survey, showed that KM and empowerment were effective in creating value in industrial markets. Badah (2012) showed that there is a significant relationship between the KM process and the degree of employees' empowerment. Boroujerdi and Hasani (2013), in their survey, showed that there are significant relationships between all aspects of KM, including knowledge creation, knowledge acquisition, knowledge storage, knowledge sharing, and knowledge application, and dimensions of employee empowerment. Concerning this hypothesis, we recommend the managers of higher educational institutions to make their knowledge available to employees to put up as a model. It becomes a culture and employees, too, share their knowledge with each other to facilitate exchanges. It is also recommended to carry out a periodic displacement of people in different parts of substations and transmission of knowledge; this facilitates employee empowerment. Regarding the findings of the sub-hypotheses, including *H1, H2, H3, H4* and *H5*, there are significant relationships between dimensions of KM, including knowledge creation, knowledge acquisition, knowledge storage, knowledge sharing, and knowledge

application, and employee empowerment. The highest correlation is related to the aspect of "knowledge sharing", with a correlation coefficient of 0.54, and the lowest correlation from the sub-hypotheses is related to "knowledge creation", with a correlation coefficient of 0.19. The outcomes of the sub-hypotheses were in line with the conclusion of Ozbebek and Kilicarslan (2011) and Xue *et al.* (2011). Ozbebek and Kilicarslan (2011) showed that empowerment positively correlates with employees' sharing of knowledge behaviour, and it found that empowered employees are more interested in sharing their knowledge. Xue *et al.* (2011), in their study, demonstrated that teamwork and empowering leadership significantly influenced individuals' knowledge-sharing behaviour by regarding their position as a part of knowledge. Furthermore, these two constructs also have substantial direct effects on the knowledge-sharing behaviour. In knowledge creation, especially through the community, there is a high degree of cooperation between individual needs; this collaboration is done through trust, if there is a group of the citizenry. More people have the capability and competence; capacity, knowledge creation, knowledge acquisition, knowledge storage, knowledge sharing and knowledge, applied to the organization, will develop it. Staff knowledge, skills, experience and expertise are more and better able to create and apply knowledge and valuable work experience, so that they can also enjoy sharing it with others, and increase the creation and application of knowledge to increase these. The capabilities and competencies of employees are more than what they can implement to facilitate KM in organizations. Knowledge is created in the minds of people; so, merits and abilities of people with more knowledge are rich and powerful, and they are better able to contribute to the creation of new knowledge. Regarding *H6*, the results show that there are significant differences between the rankings of KM dimensions. The ranking results show that the dimension of "Knowledge application", with a rank of 3.5, has the highest priority, while the dimension of "Knowledge sharing", with a rank of 2.5, has the least priority among the KM dimensions. In relation to *H7*, results show that there are significant differences between the rankings of employee empowerment dimensions. The ranking results show that the dimension of "Autonomy", with the rank of 3.4, has the highest priority and dimension of "Competence", with the rank of 2.5, has the least priority among employee empowerment dimensions. Finally, regarding *H8*, the results show that KM predicts aspects of employee empowerment. The results of the regression test, in relation to this hypothesis, show that KM, as the independent variable, could specify the model, with a rate of 0.63. In other words, it predicted the dependent variable (employee empowerment). According to the results obtained in this study, we can promote empowerment through knowledge and capacity in higher educational institutions, universities and other organizations. Our practical recommendations are as follows:

- Informal interactions and relationships in an organization increase delegation of powers and more autonomy is given to staff members on how to perform their tasks; the level of autonomy and decision-making power of employees to do their jobs increases the organization's ability to facilitate communication between different units, giving decision makers at all levels access to the best information, holding regular meetings to exchange information between managers and employees, and increasing employee access to information and documents required. Furthermore, senior managers can get people to believe that they have the capacity to work. These beliefs constitute the essence of feeling competent and developing a sense of autonomy.

- Knowledgeable workers have knowledge of professional expertise. These people have to be mastered with the internal management control tools. It was a close control, incompatible with high dominance; using these internal controls on knowledgeable workers could raise their professional commitment and strengthen their sense of self-sufficiency.

- Organizational managers should provide bases for employees, students and others to share their experiences and, at the same time, ensure that by doing so, they do not have to imperil their job security. In this regard, the following steps can be useful: encouraging employees to exchange knowledge and experiences with each other, constituting a group that comes together to change thoughts, creating a friendly atmosphere and trusted employee group discussions to settle certain cases, increasing interaction between staff and directors, offering easy access to data for employees near their employment, increasing interaction among employees whose work is linked that of to each other. Also, this includes doing activities that can heighten the feeling of influence and trust among employees.

Accordingly, as a general idea in organizational communities, it can be said that designing and developing patterns and strategic perspectives in human resource empowerment are a step towards becoming knowledge-based organizations. The two issues are: convergence and high necessity of performance. This field can also produce challenges and concerns for future investigators and researchers. These challenges mostly concern the issue that use of management tools, such as KM, in large organizations and communities, must result in dynamism and flexibility of staff and humans in the future, because paying unbalanced attention to these solutions as being targeted or as tools, could be harmful to human empowerment and ideas. Given the results of this study, it is suggested that future research should be in areas in which, in addition to measuring KM results and outputs, researchers should evaluate the consequences and outcomes in organizations and businesses. On the other hand, comparing the results of this study with those of organizations that have not been successful in KM projects can indicate other aspects of hidden matters and complex aspects of humans when they meet technology, and their interactions.

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