

The Role of Transformational Leadership and its knowledge management processes

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ABSTRACT

Introduction: Knowledge is a critical resource for organizations working in dynamically competitive environments. In any organization, leaders who have the power to incite and influence knowledge management processes. Nevertheless, there is lack of empirical evidence from previous studies on examining this relationship. In view of this, the current study examined the relationship between transformational and transactional leadership with knowledge management in university.

Method: The research method was descriptive-correlative. The statistical population consisted of 484 university employees, from whom 214 were selected randomly using Morgan table. Data were collected through Multifactor Leadership Questionnaire and Knowledge Management Questionnaire. To examine the reliability of the questionnaires, Cronbach alpha coefficient was used, and to determine the validity, content validity method was applied. All descriptive statistics, correlation and regression were performed in SPSS 19.

Results: The results showed that the correlations between transformational leadership ($R=0.55$) and transactional leadership ($R=0.44$) with knowledge management were significant ($P<0.001$). Other results showed that the correlations between transformational leadership and knowledge management components - creating knowledge ($R=0.59$), sharing knowledge ($R=0.24$), storing knowledge ($R=0.56$), applying knowledge ($R=0.41$) - were significant ($p<0.001$). Results showed that the correlations between transactional leadership and knowledge management components - creating knowledge ($R=0.45$), sharing knowledge ($R=0.27$), storing knowledge ($R=0.33$), applying knowledge ($R=0.41$) - were significant ($p<0.001$). Also, it was revealed that there was no significance relationship between Laissez-faire style and dimensions of knowledge management. Finally, the results of multiple regression analysis showed that among transformational leadership components, inspirational motivation ($\beta=0.460$) and idealized influence ($\beta=0.194$) could predict knowledge management processes.

Conclusion: Managing knowledge requires a conscious effort on the part of leaders at all levels of the organization to manage four key knowledge processes: creating, sharing, storing, and applying knowledge. Transformational leadership theory and transactional leadership theory provide a foundation for understanding how leaders impact on knowledge management processes.

Keywords: Transformational leadership, Transactional leadership, knowledge management processes

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Introduction

Organizations have various resources and possessions for realization of their goals. Some of these resources and possessions are very valuable and unique and have a key role in obtaining competitive advantage (1). Knowledge is considered the most important and valuable resource for organizations working in dynamically-competitive environments (2-6). In a high-competition environment, an organization's ability to assimilate the members' knowledge, construct new knowledge and manage their knowledge more effectively than their competitors will be able to achieve competitive advantages (5). In this

regard, Drucker convincingly argued that land, labor, and capital are the classical factors of production and had been largely replaced by knowledge (4). Also Rhambasi (2010) has argued that knowledge is the mainstay of the 21st century organization that has a knack for innovative breakthroughs in all functional areas of organization (7). Knowledge is also considered a valuable measure to help the organization reach success (8).

Organizational knowledge includes all the tacit and explicit knowledge that individuals possess about products, systems and processes and the explicit knowledge codified in manuals, databases and information systems. Organizational knowledge also includes the

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tacit knowledge that is shared collectively in the firm in the form of routines, culture and know-how embedded in social processes (3, 9).

The quest for knowledge by organizations especially in developed nations has attained an insatiable magnitude; therefore, it has stimulated the discourse on knowledge management (2). If knowledge is a key organizational resource capable of creating a sustainable competitive advantage, then it is important to examine how firms manage knowledge (9). It entails how knowledge is acquired, processed, stored and shared amongst all constituent parts of the organization (10, 11). Knowledge management involves the processes of creating, modifying, using, storing, sharing, transferring, translating, accessing and disposing the knowledge in the organizations (9, 12-15). KM has received much attention in the recent years although its existence can be traced back in the history (16). Knowledge exists in multiple forms including human, consumer and structural capital—broadly labeled as intellectual capital of an organization (12). KM contributes to excellent utilization of these organizational resources (17). KM can be regarded as the factor influencing and hence shaping and covering an organization's workforce. It has been proved that KM is an advantageous factor in creating a useful and efficient environment in today's business (18). The objective of KM is to create an environment for individuals enabling to communicate and exchange knowledge more efficiently (19). According to Yang, the term KM can be defined as "the process of identifying/creating, assimilating and applying organizational knowledge to exploit new opportunities and enhance organizational performance"(14). KM includes the managerial efforts to enhance the performance of the companies and also to create, store, share, and develop knowledge by individuals and groups (12, 15). KM is a complex process whose implementation takes a long time. Implementation and effective use of KM requires precise and clear understanding of factors that affect the process of KM. These factors as a whole are considered as infrastructure (enablers) of KM. Infrastructure of knowledge management includes the components and factors whose existence is essential for improving knowledge management activities in the organization (13). Critical Success Factors of KM implementation can be defined as the managerial and organizational factors that need to be effectively addressed in order to increase the probabilities of successful KM implementation (20). According to Wong (2005), organizations that seek to implement KM successfully must consider the development and understanding of Critical Factors. This means that without due consideration of Critical Factors, expected performance is not likely to be delivered (21). In this regard, previous studies have identified a broad range of factors that could have an effect on the success of KM implementation (22). Leadership styles, as one of the major factors influencing KM implementation, were identified in previous studies (2, 4, 9, 16, 18, 22-31). Leaders play a central role in the process of managing organizational knowledge (9). Leaders

provide vision, motivation, systems and structures at all levels of the organization that facilitate the conversion of knowledge into competitive advantages. Managing knowledge requires a conscious effort on the part of leaders at all levels of the organization to manage four key knowledge processes: creating, sharing, storing and applying knowledge. Transformational leadership theory and transactional leadership theory provide a foundation for understanding how leaders impact imparting of knowledge (9). Transformation leaders act as role models for employees, motivate them, and stimulate their intelligence (26). Researchers define transformational leadership in terms of idealized influence, inspirational motivation, intellectual stimulation, and individual consideration (32-34). Research studies carried out in firms to link leadership, particularly, transformation leadership, KM, and human capital benefits are limited. A few studies explored the role of transformational leadership styles on individual employees, performance and organizational performance through knowledge acquisition, knowledge creation, knowledge sharing, and knowledge exploitation (31). Gowen et al. (2009) states that transformational leaders make improvements in overall KM management processes in health care institutions (27). Crawford (2005) discovered that transformational leadership contributed to 19.5% variance in KM (25). While investigating the role of leadership styles in KM, Politis (2001) found that leaders having behavioral and interpersonal skills were more effective in KM process (31). These skills are an integral part of transformational and transactional leadership (35). Nguyen and Mohamed (2011) strongly suggest that leaders are highly influential in KM practices (30). Nowadays, transformational leadership can play such a significant role in enhancing the organizations' environment and helping to apply knowledge in an efficient way by managing the knowledge in a way required for improvement of organizational learning (18).

In spite of the fact that many studies have been done on many aspects of knowledge management, not much attention has been paid to the relationship between styles of leadership (Transformational and Transactional) and KM components (180). Lakshman (2007) in his studies done on the unsuccessful efforts on KM remarks that "the growing literature on KM has stressed the lack of leadership support for the failure of many KM projects" and actually considers styles of leadership as a significant factor influencing KM activities. However, not so many studies have been done to demonstrate which kinds of leadership (Transformational & Transactional) are more influential in the activities on KM (18, 25). For this reason, the main objective of this study is to analyze the relationship between leadership styles (transformational and transactional) and KM.

Methods

The research method was descriptive-correlative. We collected data from university employees. Target population consisted of Kharazmi university employees

that amount to 484. Of this number, 214 people were randomly (using simple random sampling) selected by the Krejcie and Morgan (1978) sample size determination table.

The measurement scale applied was the Multifactor Leadership Questionnaire (MLQ) designed by Avolio and Bass (1994) consisting of 36 items. This scale consists of four subscales of transformational leadership acts (Idealized influence, individual consideration, intellectual stimulation, and inspiration motivation), two subscales of transactional leadership acts (contingent reward and management by exception), and one scale measuring laissez-faire leadership (36). Also, it has been extensively used in contemporary behavioral leadership studies and has shown a high reliability level. (Cronbach α value of 0.88) (18, 22).

The second measurement scale applied was the knowledge management questionnaire created by Hemati (2010), consisting of 25 items (37). This scale consists of four subscales of knowledge management processes (creating, storing, sharing and applying knowledge). In addition, in our research a pilot study was conducted to measure the internal consistency; Cronbach's alpha was 0.78 for (MLQ) and 0.81 for (KM). Though we have adapted the measurement scales from a valid scale in this study, we equally tried to measure the content validity and this was through peer review exercise in which we administered the survey instrument on experts in leadership and knowledge management consultants. All descriptive statistics, correlation and regression were performed with SPSS 19. To analyze the data, relationships between variables were examined, using Pearson correlation. Also, multiple regression was performed to investigate the prediction of knowledge management processes through transformational and Transactional Leadership.

Results

Descriptive findings: Almost 66 % of the participants were men and 34% women.

Also, in terms of age, 30.4% were about 20-30 years old, 40.7% between 31-40, 25.7% between 41-50 years, and 3.3% above 50 years.

In terms of the years of experience, 25.2% of the employees had a job experience of 1 to 10 years, 39.3 % from 11 to 20 years and 35.5% from 21 to 30 years. In terms of the level of education, 13% of the employees had associate degree, 66.4% bachelor's degree, and 20.6% of them had a master's degree.

To determine the relationship between transformational, transactional, and laissez-faire factors, several correlations were computed. They are depicted in Table 1.

The results of the correlation coefficient analysis indicated a positive relationship between the components of transformational leadership (Idealized influence, Individual consideration, intellectual stimulation, Inspiration motivation) and knowledge management. Also, the results of the correlation showed a positive relationship between transactional leadership and knowledge management. Finally, there was no significant relationship between Laissez-faire style and knowledge management.

According to Table 2, the following results were reached:

There was a positive and significant relationship between transformational and transactional leadership and dimensions of knowledge management (Knowledge creation, Knowledge sharing, Knowledge storing, knowledge application). There was a positive and significant relationship between idealized influence and dimensions of knowledge management (Knowledge creation, Knowledge storing, Knowledge application). Also, the results showed that there was a positive relationship between dimensions of idealized influence, intellectual stimulation and individualized consideration with dimensions of knowledge management (Knowledge creation, Knowledge storing, Knowledge application). Nevertheless, there was no significant relationship between Laissez-faire style and dimensions of knowledge management.

Table 1. Relationship between leadership styles and knowledge management

Variable correlated with knowledge management	R Coefficient	P value
Transformational	0.55**	<0.001
Transformational - Idealized influence	0.35**	<0.001
Transformational - Individual consideration	0.29**	<0.001
Transformational - Intellectual stimulation	0.33**	<0.001
Transformational - Inspiration motivation	0.49**	<0.001
Transactional	0.44**	<0.001
Laissez-faire	0.02	0.210

Table 2. Relationship between leadership styles and dimensions of knowledge management

Variable correlated with knowledge management	Knowledge creation	Knowledge sharing	Knowledge storing	Knowledge application
Transformational	0.59** <0.001	0.24** <0.001	0.56** <0.001	0.41** <0.001
Transformational - Idealized Influence	0.32** <0.001	0.10 0.130	0.45** <0.001	0.25** <0.001
Transformational – Individual consideration	0.38** <0.001	0.048 0.488	0.41** <0.001	0.192** <0.001
Transformational - Intellectual stimulation	0.42** <0.001	0.025 0.723	0.39** <0.001	0.21** <0.001
Transformational - Inspiration Motivation	0.48** <0.001	0.49** <0.001	0.23** <0.001	0.43** <0.001
Transactional	0.45** <0.001	0.27** <0.001	0.33** <0.001	0.41** <0.001
Laissez-faire	-0.10 0.136	0.08 0.234	0.03 0.644	0.06 0.330

Based on the highly significant correlations and in order to determine the contribution of each independent variable in the dependent variable, a multiple regression analysis was performed. The result of regression showed that among the transformational leadership dimensions, inspiration motivation, idealized influence and transactional dimensions could predict knowledge management processes.

Discussion

Knowledge has been mentioned as a strategic organizational resource that must be managed for all time usage; therefore, it is imperative to find out what organizational dynamics are likely to encourage its availability and usage by all work members (2).

Past research is evident that both transformational and transactional styles of leadership are positively associated with knowledge management processes (Crawford, 2005; Bryant, 2003). But many of the researchers that have theorized about the relationship lacked empirical data on which to base their ideas; this study clearly details the link. Researchers like Bryant (2003), Johnson (2002), and Politis (2001) provided the theoretical basis, but without empirical support the relationship was assumed, but unproven. For this purpose, to investigate the relationship between transformational leadership and knowledge management, the methods of “Spearman Solidarity and multiple regression” were applied. The findings demonstrated a positive relationship between transactional and transformational leadership with knowledge management that were meaningful in alpha level of 0.01.

Table 3. Model Summary of multiple regression

Model	R	R Square	Adjusted R	Std. Error	F	P value
1	0.68	0.47	0.45	0.32	30.29	<0.001

Table 4. Results of multiple regression to predict the contribution of leadership styles to knowledge management processes

Model	Unstandardized Coefficients		Standardized Coefficients	t	P value
	B	Std. Error	Beta		
constant	0.662	0.224		2.95	0.004
Individuated consideration	0.118	0.072	0.155	1.64	0.101
Intellectual stimulation	-0.006	0.091	-0.007	-0.06	0.947
Inspiration motivation	0.227	0.031	0.460	8.93	<0.001
Idealized influence	0.175	0.055	0.194	3.17	0.002
Laissez-faire	-0.006	0.047	-0.006	-0.11	0.908
Transactional	0.560	0.10	0.305	5.54	<0.001

This result is in the same line with the findings of (2, 4, 9, 16, 18, 22-27, 29-31). In other words, it can be understood that the outcome of transformational and transactional leadership in any organization is an enhanced level of knowledge management and one of the most sufficient tools to implement knowledge management is the presence of transformational leadership to alleviate the process of knowledge management (38). According to the present research and other conducted studies, it is certain that transformational leadership smooth the process of knowledge management. Moreover, transformational leaders have the potential to get the personnel involved with the process of knowledge management, enabling them to take advantage from it (18). Transformational leadership can play such a significant role in enhancing the organizations' environment and helping to apply knowledge in an efficient way by managing the knowledge in a way required for improvement of organizational learning. It can also lead to improvement of absorptive capacity of an organization enabling the organization to transfer knowledge in a better way. One of the key features of transformational behaviors is an insistence on the application of knowledge in the organizational environment and hence smoothing the way for creating an innovative organization which can be done through offering some awards. Transformational leadership can also be effective in that it fosters and prepares the environment for making decision leading to implementation of knowledge. Transformational leaders have the potential to affect their employee's perception of human capital benefits.

Bryant (2003) studied the role of these two styles of leadership and discovered that leaders play a central role in expertly creating, sharing and exploring knowledge in the modern organizations. Effective leaders are principally committed and motivated in taking knowledge management initiatives in the organizations (9).

Transformational leaders stimulate transfer of explicit and tacit knowledge in individuals and in the organization. They are strategic in creating an atmosphere that stimulates the discipline of organizational learning and their interaction.

This style allows the organization to learn through experimentation, communication, dialogue personal mastery and organizational knowledge creation. It encourages the stimulation, individualized consideration and motivation essential to learning making a leader the catalyst, mentor, facilitator and trainer for organizational learning. They motivate the organization's members by encouraging employee empowerment and autonomy. They provide information, responsibilities, skills and competences to the organization's agents, who may then use it to acquire, implement, transform and use a new practice and improve internal communication by reducing barriers to sharing knowledge, thereby increasing the efficiency. It helps organizations to transfer knowledge better than the market and other firms, thus improving the organizational performance and motivating a common vision of the organization. It motivates the workers to create, store, apply and share knowledge.

The obtained results showed that there were a positive and meaningful relationship between transformational leadership and knowledge creation. This result is in the same line with the findings of some researchers (9, 18, 25, 31). It can be said that transformational leaders through strengthening tolerance of errors, effectively motivating the personnel to create knowledge in the organization and also idea management systems (such as Suggestion System and Think Tank) can increase suitable condition to create organizational knowledge.

Findings demonstrated a positive relationship between transformational leadership and knowledge sharing that was meaningful in alpha level of 0.01. This result is in the same line with the findings of some studies (2, 9, 18). It is possible for transformational leadership to enhance organizational innovation through creating a participative environment or culture and it can do so directly or indirectly by changing the organization's culture which encourages knowledge sharing and management in the organization. It is in the control of transformational leadership to promote such culture so the employees have autonomy to speak about their experiences and knowledge.

Another finding in this present investigation showed a positive relationship between transformational leadership and knowledge storing and knowledge applying. Transformational leaders develop an environment which helps create, maintain, share, and apply knowledge. Particularly, transformational leaders through using characteristics of the ideal, mental encouragement and developmental support motivate their employees to store and apply knowledge.

The regression analysis provided a strong evidence of the causal nature of the link between the two variables. The strong R squared value associated with the relationship suggests that a substantial amount of variance in knowledge management can be accounted by transformational leadership.

Transformational leaders play a role in performing the process of knowledge management in the organization and in this way improve the benefits of human capital. Generally, research results show that the behaviors of knowledge management can strikingly be predicted by transformational leaders and that transformational leaders play such an important role in applying and controlling knowledge management. Transformational leaders present the same prospect and create effective solutions to encourage the followers to get more involved in knowledge management activities. Transformational leaders provide low level individuals with information on duties, motivation, skills and competencies which help them create, share, store and apply knowledge .

Among the most specific findings in this research study is the strong relationship between transformational leadership and knowledge management behaviors. Without question, the results of this study provide ample support for the notion that knowledge management and leadership are strongly related to each other.

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