



# Studying Effect of Communication Skills and Leadership Styles of Manager on Knowledge Management of Zahedan University of Medical Sciences, Iran

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## ABSTRACT

**Objective:** Knowledge management is one of the emerging variables in organizations which has considerable effect on progress of organizations. The present research studies effect of communication skills and leadership styles of managers on establishment of knowledge management in Zahedan University of Medical Sciences in 2013. **Methodology:** The research population includes all managers of University of Medical Sciences in all levels and statistical sample of this research includes 180 managers who have been selected with Convenience sampling. Instrument of this research includes knowledge management, communication skills and leadership styles questionnaires and their validities are 0.87, 0.78 and 0.86, respectively, which are confirmed by sociology and training sciences professors. For data analysis in this test, mean and standard deviation have been used in descriptive statistics and correlation test and Kruskal–Wallis test have been used in inferential test. **Results:** Findings of this research showed that Relationship oriented leadership style is found in low ranking managers and task oriented leadership style is manifested more in medium ranking managers. Communication skills in high ranking managers are higher than those in managers of other levels. Low level managers play more roles in establishment of knowledge management. One of the other findings of this research is significant correlation between knowledge management and relationship oriented leadership style and also communication skills. **Conclusion:** Therefore, communication skills and leadership styles play effective role in knowledge management and its establishment considering the obtained results.

## 1. Introduction

One of the main specifications of the smart organizations in century 21 is emphasis on knowledge and information. Knowledge is a powerful tool which can make changes in the world and make innovations possible. Knowledge and organizational capabilities are forms of the strategic assets which promote long-term goals of organization competitively and in terms of environmental circumstances and have strategic application in dynamic environments.

Knowledge management refers to the efforts which are made to find, organize, make intangible assets accessible, and strengthen continual learning culture and share knowledge in organization. Many organizations seek to achieve knowledge management benefits by emphasizing knowledge management and making broad investment in information technology. Based on the mentioned attitudes and considering importance of educational organizations in century 21, necessity for attention to knowledge management has been undeniable. They include tendency of managers to use management information systems in educational centers to expand and apply these systems to create an effective environment. These tendencies can promise new period in the field of educational management in the world. Although there is little literature on use of information management to strengthen educational learning, conscious tendency of educational organizations to information management and particularly knowledge management will provide opportunity for releasing them from traditional bureaucratic structures and resorting to new management systems in the world (Erickson & Kothberg, 2000).

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Today, knowledge is known as a valuable asset and a strategic source and capital in organization and it is almost difficult and impossible to provide high-quality and economic services without using and managing this valuable source. Knowledge management is applied with activities such as listing of useful knowledge, knowledge storage with suitable method and finding knowledge in the available knowledge base to manage their knowledge more effectively.

Natural, physical and human capitals are converted into wealth when they are mixed with knowledge. This saying that “knowledge is result of wisdom and wisdom is capability has been applied more than ever. While knowledge power has been regarded as an important factor, natural persons and legal entities use knowledge with different methods. Although the present problem is not to find information and knowledge, the problem is to manage it. If an organization doesn’t know or cannot use its stored knowledge, it will have low survival chance. Knowledge management is related to creation, sharing and penetration of knowledge in mind and imagination of organization and requires all activities which are related to identification, share and creation of knowledge. This requires policies for creation and maintenance of knowledge resources, culturing and facilitating organizational learning. In this regard, successful organizations regard knowledge as an asset and organizational values and norms which support people and try to collect and manage the scattered knowledge in pole of organization to lead to creation of new knowledge. Knowledge management has many benefits for organizations. Knowledge management benefits in an organization are found in an organization in personal and organizational levels. In personal level, knowledge management allows personnel to promote their skills and experiences through cooperation with others and sharing their knowledge and learning to achieve professional growth. In organizational level, knowledge management has four major benefits for an organization. Promotion of organization’s performance is achieved through efficiency, productivity, quality and innovation; therefore, organizations regard knowledge management as a competitive strategy and advantage.

The factors which can be effective on implementation of knowledge management are communication skills of managers. Managers with better communication skills can have better effect on establishment of knowledge management. In this regard, Hoy et al. (2006) believes that enjoyment of human skills is an integral part of educational managers’ characteristics (Becerra, 2000).

In their paper entitled “studying effects of communication skills education “confirm importance of these skills and believe that managerial experiences are more important. On this basis, the more general and special skills and abilities the managers have the better role they will play in implementation of knowledge management.

Another factor which can play effective role in knowledge management is leadership style. Organizational goals will be achieved more successfully by emphasizing on a suitable leadership style and creating motivation. Some management researchers believe there is main difference between successful and unsuccessful organizations and its leadership style. Some factors such as culture, time, experience, readiness for leadership, understanding and evaluating priorities and expectations are effective on leadership style (Havens & Knapp, 1999).

Leader or manager first should identify ability of their personnel and colleagues properly before deciding to direct followers because each one of the followers has his special characteristics and he expects leader to fulfill his needs. Therefore, leadership style and ability of managers can play important role in management of an organization to establish knowledge management; therefore, considering the mentioned facts, the present research studies effect of communication skills and leadership styles of managers on establishment of knowledge management in Zahedan University of Medical Sciences (Bhatt, 2001).

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## 2. Materials and methods

In Information communication and information era, knowledge is regarded as main factor and vital source of organizations in the field of competition for achieving sustainable competitive advantage. Based on shift from industry-based economy to knowledge –based economy, organizations are encouraged to increase their competitive power by emphasizing on knowledge and information and using it in business process. If knowledge management processes such as knowledge creation, knowledge acquisition, and publication of knowledge, application and storage of knowledge are applied in organizations with systematic and planned method, its considerable effects on creation of competitive advantage can be found in different sections of the organization. In order to mention necessity of attention to execution of knowledge management projects in organizations, we should identify results of using these projects in different sections of organization. Most of the researches on knowledge management have focused on evaluation of effect of knowledge management on a factor such as innovation or customer relationship management from functional viewpoint and having considered this subject comprehensively. Zahedan University of Medical Sciences is important as one of the educational and research centers and also a governmental organization with different managerial and organizational ranks. Considering involvement of this university in health, treatment and education, many of the people in society communicate with it. For this reason, the writer believes that this organization gives extensive and diverse statistical population to the researcher for conducting research. Considering importance of the above cases in the organizations, we intended to study and evaluate significance and position of knowledge management in different sections of Zahedan University of Medical Sciences with comprehensive approach.

Research questions

- Is there relationship between communication skills of the managers and knowledge management?
- Is there relationship between leadership styles of the managers and knowledge management?
- Are relationship-oriented leadership styles effective on establishment of knowledge management?
- Are task-oriented leadership styles effective on establishment of knowledge management?
- What is attitude of managers of different levels in Zahedan University of Medical Sciences toward leadership styles?
- What is attitude of managers of different levels in Zahedan University of Medical Sciences toward communication skills?

### 2.1. Research model

This research is descriptive –analytical and is of correlative type which is conducted in Zahedan University of Medical Sciences.

Population of this research includes 339 managers of Zahedan University of Medical Sciences in different levels who are working in 2013 and 180 of them have been selected according to the Morgan Table. In this study, line and staff managers in different levels who provide health and therapeutic services of Zahedan University of Medical Sciences, hospitals covered by this university and health and therapeutic networks of countries will participate in this research.

These managers include:

- University managers: health deputies, therapeutic deputy, therapeutic manager, support deputy, support manager, budget authority, organizations authority, therapeutic economy authority, clinical governance authority and quality improvement and feasibility study authority.
- Health and Therapeutic network managers: head, deputy, physician in charge of disease control, physician in charge of health and family planning, expert in charge of network expansion, pharmacist in charge of pharmaceutical affairs, financial affairs authority, budget expert.
- Hospitals managers: head, administrative affairs authority, financial affairs authority, therapeutic economy authority, clinical governance authority, quality improvement office authority, nursing services manager, drugstore authority, radiology authority, nutrition authority, laboratory authority, physiotherapy section authority, hospitalization section (internal, pediatrics, gynecology and surgery).

Sample of this research includes 180 managers of different levels in University of Medical Sciences, which is obtained with clustering random sampling.

Tests have necessary validity and reliability for conducting this research and the research is conducted individually. Population including managers of University of Medical Sciences was first selected and then managerial levels were specified and questionnaires were distributed among different levels of managers.

Measurement instrument in this research is questionnaire. These questionnaires include leadership style, communication skills and knowledge management which are discussed briefly.

#### **A. Knowledge management questionnaire**

Knowledge management measurement instrument in this research was made and normalized by the Hemati's questionnaire (2010) and its Cronbach's alpha has been announced 87%. The specialized questions include 25 closed questions which have been prepared in Likert scale. They are included in subset of four main components. In the following Table, number and also items relating to the desired components have been included. Each one of these subscales and the score from which the subject obtains subscale indicate effect of the subject and his role in each subscale.

**Table 1. Knowledge management questionnaire**

	Components	Items	Sum of items
Knowledge management	Knowledge creation	1 to 7	7
	Knowledge sharing	8 to 13	6
	Knowledge application	14 to 18	5
	Knowledge storage	19 to 25	7

#### **B. Leadership styles questionnaire**

Luthans leadership styles questionnaire which contains 35 questions has been measured based on Likert five-point scale, has standard form and specifies behavior of manager in two relationship-oriented and task-oriented styles and number of questions relating to each style is given in the following Table.

**Table2. Leadership styles questionnaire**

Leadership style questions grouping	Questions number
Relationship oriented	3•5•8•10•15•18•19•22•24•26•28•30•32•34
Task-oriented	1•2•4•6•7•9•11•12•13•14•16•17•20•21•23•25•27•29•31•33•35

Scoring method: in this method, if respondent gives answerer “seldom” or “never” to questions 8, 12, 17, 18, 19, 30 and 35, he will be given one score. In case other questions are given answer “always” or “almost”, he will be given one score. Then, the scores which have been given for 14 questions of relationship-oriented subscales are added and the resulting number also shows attention to human as result of relationship-oriented style. Total scores of the remaining questions also show attention to tasks and organization (task-oriented style). The managers who gain higher scores in each one of the subscales have the related style. Based on studies by, validity and reliability of this test have been announced 86% with Cronbach's alpha method.

#### **C. Communication skills questionnaire**

To measure communication skills, communication skills test which has been innovated by Queen Dom is used and contains 34 terms and describes communicative skills. Respondent should specify his adaptation to any item on a five-point scale from

1(never) to 5(always). Communication sub skills which were studied in this scale included five skills of listening, ability to receive and send message, understanding the message, controlling and managing emotions and decisiveness. Score of each question ranged between 1 and 5 variables so that answer “never” is given score 1, “seldom” is given score 2, “sometimes” is given score 3, “almost” is given score 4 and “always” is given score 5. The probable score ranged between 34 and 170. In this test, the managers who obtain score below 100 have low communication skill and the managers who obtain score above 100 have better communication skill. The managers who obtain higher scores in this test have better communication skills. Some terms were scored reversely due to their nature and content. It means that if selection of choice or answer “always” is the highest score for other items, Cronbach's alpha of this test was announced 78% in the research which was conducted by. Data analysis instrument in this research is spss software and the tests used in the descriptive statistics are mean, standard deviation and percent rank and the test used in inferential statistics includes correlation test which is used for showing relationship between variables and Kruskal–Wallis test and single variable regression test are used for ranking managers considering its effect on variables.

### 3. Discussion and results

**Table 3. number of samples based on gender, education and management level**

	Education levels			Management levels			Gender	
	PhD	Master's degree	Associate and bachelor's degree	Low	Medium	High	Female	Male
Number	35 persons	60 persons	85 persons	95 persons	75 persons	10 persons	55 persons	125 persons
Percent	19.4%	33.3%	47.3%	52.7%	41.7%	5.6%	30.6%	69.4%
Total sum	180 persons			180 persons			180 persons	

Table 3 shows that the number of samples based on gender and there are 125 men (69.4%) and 55 women (30.6%). Education of the statistical samples is such that 35 persons (19.4%) hold PhD degree, 60 persons (33.3%) hold master's degree and 85 persons (47.3%) hold associate and bachelor's degree. Based on management level, 10 persons (5.6%) have high level management, 75 persons (41.7%) have medium level management and 95 persons (52.7%) have low level management.

#### 3.1. Testing questions

##### H1. Is there relationship between communication skills of the managers and knowledge management?

**Table 4. Relationship between communication skills and knowledge management**

knowledge management			
Variable	Correlation coefficient	Significance level	Number
Communication skills	0.503**	.05	180

Based on Table 4, there is significant correlation between scores of knowledge management and communication skills and the obtained scores are as follows. Total correlation between knowledge management and communication skills ( $r=0.503$ ) is significant in level of 95%.

##### H2. Is there relationship between leadership styles of the managers and knowledge management?

**Table 5. Relationship between leadership styles and knowledge management**

knowledge management			
Variable	Correlation coefficient	Significance level	Number
Task oriented	0.423**	.006	180
Relationship oriented	0.452**	.007	180

\*\* $P<0.01$  and \* $P<0.05$

Based on Table 5, there is significant correlation between scores of knowledge management and leadership styles and the obtained scores are as follows. Total correlation between knowledge management and leadership styles ( $r=0.452$ ) is significant in level of 99%.

##### H3. Are relationship-oriented leadership styles effective on establishment of knowledge management?

**Table 6. Results of stepwise regression for effect of relationship-oriented leadership styles effective on establishment of knowledge management**

Predicting variable	Criterion variable	B	T	P	R Square	R	Sum Squares Of
relationshiporiented leadership style	knowledge management	0.041	0.140	0.009	0.000	0.011	7.468

As observed above, considering significance of value t which is larger than the critical value of Table in level of 95%, this hypothesis is confirmed. It means that leadership style is effective on knowledge management process.

#### H4. Are task-oriented leadership styles effective on establishment of knowledge management?

**Table 7. Results of stepwise regression for effect of task-oriented leadership styles effective on establishment of knowledge management**

Predicting Variable	Criterion Variable	B	T	P	R Square	R	SUM SQUARES OF
taskoriented leadership style	knowledge management	0.002	2.011	0.049	0.03	0.001	0.048

As observed above, firstly, considering significance of value t which is larger than the critical value of Table in level of 95 % (2.011), the fifth hypothesis is confirmed in confidence level of 95%, secondly, coefficient of determination of the Relation or  $R^2$  is equal to 0.345. It means that 3% of the knowledge management changes can be explained with taskoriented leadership style.

#### H5. What is attitude of managers of different levels in Zahedan University of Medical Sciences toward leadership styles?

**Table 8. Attitude of authorities considering management levels**

Variable	management levels	Number	Mean	Chi square value	Degree of freedom	sig
Relationshiporiented leadership style	High	10	6.27	14.22	2	0.00
	Medium	75	13.34			
	Low	95	16.70			

Results of data analysis relating to Kruskal–Wallis test indicate that difference of different levels in relationship-oriented leadership styles is significant. Ranking of different levels shows that low level managers have the highest score in relationship-oriented leadership style. This difference is significant with calculated Chi square of 16.70 with degree of freedom of 2 in level of 99%.

#### H5.1. What is attitude of managers of different levels in Zahedan University of Medical Sciences toward task-oriented leadership style?

**Table 9. Attitude of authorities to task-oriented leadership styles considering management levels**

Variable	management levels	Number	Mean	Chi square value	Degree of freedom	sig
task-oriented leadership style	High	10	4.25	20.23	2	0.00
	Medium	75	20.33			
	Low	95	18.67			

Results of data analysis relating to Kruskal–Wallis test indicate that difference of different levels in task-oriented leadership styles is significant. Ranking of different levels shows that medium level managers have the highest score in task-oriented leadership style. This difference is significant with calculated Chi square of 20.33 with degree of freedom of 2 in level of 99%.

#### H6. What is attitude of managers of different levels in Zahedan University of Medical Sciences toward communication skills?

**Table 10. Attitude of authorities to communication skills considering management levels**

sig	Degree of freedom	Chi square value	Mean	Number	management levels	Variable
0.00	2	15.552	123.0	10	High	Communication skill
			75.0	75	Medium	
			99.32	95	Low	

Results of data analysis relating to Kruskal–Wallis test indicate that difference of different levels in communication skills is significant. Ranking of different levels shows that high level managers have the highest score in communication skills. This difference is significant with calculated Chi square of 123.0 with degree of freedom of 2 in level of 99%.

#### 4. Conclusion

The first question of this research has studied relationship between communication skills of managers and knowledge management. The research results showed that there was significant correlation between communication skills of managers and knowledge management. Therefore, the first research hypothesis is confirmed. Results of this research are in line with Bliss et al. (2008) who studied relationship between teamwork and leadership (dimensions of knowledge management) among 144 representatives and supervisors (N=34) and concluded that there is extravert relationship between leadership and teamwork meaning that the more the pressures on the team (group), the more powerful the leadership and the more effect there will be on teamwork (dimensions of knowledge management). Epitropaki & Martin (2005) studied effective role of individual differences in communication between knowledge of transformational and transactional leaders and organizational culture (dimensions of knowledge management). Results showed that there was significant relationship between communication skills of managers and knowledge management.

The second question of this research studied relationship between leadership styles of managers and knowledge management. The research results showed that there was significant correlation between relationship-oriented leadership style and knowledge management. But there was no significant correlation between task-oriented leadership style and knowledge management. Results of this research are in line with research by Dorzhar which relates to effects of transformational and transactional leadership on security and prioritization to lower damages in workgroups with participation of 114 employees in 49 workgroups. Results analysis showed that transformational and transactional leadership styles as a complementary and perfect leadership model have positive effect on workgroup members (dimensions of knowledge management) and security among them. Results also showed that there was direct relationship between leadership and prediction of damages in organization and teamwork (dimensions of knowledge management). Mulligan, Deborah & Gray (2002) conducted a research entitled relationship between knowledge creation and leadership on 35 participants in knowledge creation section (dimensions of knowledge management) and concluded that these two variables were supported by organization and there was strong relationship between knowledge creation and leadership.

Results of data analysis showed that relationship-oriented leadership styles were effective on knowledge management process and this leadership style in managers can play effective role in progress of knowledge management.

Fourth question: Are task-oriented leadership styles effective on establishment of knowledge management? Results of data analysis showed that task-oriented leadership style was effective on knowledge management process and this leadership style accelerated knowledge management.

Results of data analysis showed that task-oriented leadership style in medium level managers was higher than that in other management levels and low and high level managers were in the next ranks. Results also showed that the low level had the highest rank in relationship-oriented leadership style among the managers and the medium and high level managers were in the next ranks. Keegan & Hartog (2004) in a research entitled “transformational leadership in high management of manpower: comparative study of leadership styles and management in organization (dimensions of knowledge management)” experimentally studied relationship between transformational leadership and management in organization. Research results showed that although top managers perceived less change, relationship between transformational leadership and the expected result for the top managers was weaker than that for the operating managers. Rowold & Heinritz (2007) in a research entitled “transformational and charismatic leadership: convergent and divergent estimation and validity Criterion studied similarities and differences between transformational, transactional and charismatic leadership. Particularly, Bass & Avolio (2000) Multi-factor Leadership Questionnaire was used to explore convergence and divergence and validity criterion of two instruments.

The research has shown that transformational and charismatic leadership has high convergence validity. In addition, this leadership style is divergent from transactional leadership style. Regarding the criterion validity, mental and non-objective perceptions (such as satisfaction) were as good as the real and objective perceptions (such as benefit) of evaluation indices. Firstly, results showed that transformational leadership and also charismatic leadership are more efficient than the transactional leadership in pressure on internal execution. In addition, transformational and charismatic leaderships play more role in unique variance of the internal execution than other leadership styles. Secondly, transformational leadership is more effective on benefit than transactional leadership. Such increase of effect should not hold true for charismatic leadership. In addition, transformational leadership puts higher pressure on benefit than transactional leadership and charismatic leadership. Mark Sivarela in a research entitled role of leadership in decisions of capitalism partnership and intellectual capital concluded that there was positive and mutual relationship between leadership and capitalism partnership and intellectual capital (dimensions of knowledge management). Both of them have equal effect on each other but capitalism partnership is not effective on leadership and intellectual capital. Therefore, there are many and also contradictory studies on relationship between leadership and managerial styles in the world which indicates the presence of different tastes in enforcement of laws of organization and progress of the organization’s goals (Asari, 2008).

Results of data analysis showed that high level managers had higher communication skills and low and medium rank managers are in the next rank. This research is in line with researches by Hunt et al. (2003) who studied effects of communication skills education on principals of London schools in their descriptive research. Results of this research showed that communication skills played important role in managerial experiences. Dorzhar conducted a research entitled effects of transformational and transactional leadership on security and prioritizations to lower damages in workgroups with participation of 114 employees in 49 workgroups. Results analysis showed that transformational and transactional leadership styles as a complementary and perfect leadership model have positive effect on workgroup members (dimensions of knowledge management) and security among them. Results also showed that there was direct relationship between leadership and prediction of damages in organization and teamwork (dimensions of knowledge management). Abbott & Moylett (1997) conducted a research entitled suitable relationship between leadership and teamwork (dimensions of knowledge management) among 144 representatives and supervisors (N=34) and concluded that there was extravert relationship between leadership and teamwork meaning that the

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