

## **Effect of Knowledge Management Practices and Leadership Styles of Heads of Departments on University Teachers' Performance**

Tazeen Ather\* and Riffat-un-Nisa Awan\*\*

---

### **Abstract**

In competitive organizations, knowledge management is fundamentally considered support towards performance. Therefore, in the 21<sup>st</sup> century, leaders broadly implement knowledge into organizational settings to earn a competitive advantage. This paper mainly explore the effect of knowledge management practices and leadership styles (transformational & transactional) on university teachers' performance. A quantitative descriptive research design was used with 260 teaching faculty members selected conveniently, presently working in Sargodha University, University of Lahore, NUST, and HITEC University. Three five-point Likert type instruments were used to collect data from a conveniently selected sample. The findings reflected that knowledge sharing was practiced by both transformational and transactional leaders. The regression analysis showed a significant effect of leadership styles (transformational & transactional) on university teacher performance. The finding also reflected the significant effect of knowledge management practices on university teacher performance. Moreover, the results of multiple regression showed that transformational leadership and knowledge management practices were more effective on university teacher performance while transactional leadership remained insignificant. The current study provides insights that which leadership style is preferable for improving the performance of university teachers through knowledge practices.

**Keywords:** Knowledge management practices, Transactional leadership, Transformational leadership, University teachers' performance

---

\* PhD Scholar, Department of Education, University of Sargodha

\*\* Associate Professor, Department of Education, University of Sargodha. Email: riffarukh@gmail.com

## **Introduction**

With the time when the world has become a global village many organizations, profit or non-profit, educational or business, are concerned with their organizational knowledge and its management within the organization to maximize efficiency and their ongoing operations. Organizational competitive advantage is enhanced through the utilization of activities linked with management of knowledge. Consistent with the demand of a fast-changing environment, dynamic activities are supported by the use of knowledge assets within an organization (Sandhawalia & Dalcher, 2011). Knowledge management is a technique or tool to collect, assimilate and distribute knowledge in organizations and institutions (Gold, Malhotra, Segars, & 2001). The significant goal of knowledge management has been identified to recognize, and connect the knowledge of an organization through practices of creating, organizing, storing, distributing and applying that knowledge for the future long-run benefit of the organization (Bollinger & Smith, 2001).

Knowledge management is considered to be the key variable for maintaining supremacy in high information concentrated organizations. Knowledge management is fundamentally considered a vital weapon for supporting competitive advantage for resulting in high performance in an organization (Zaied, Hussein, & Hassan, 2012). Moreover, according to DeLong and Fahey (2000) leaders are vital drivers of knowledge management practices who build a domain of knowledge sharing by joining their particular knowledge in the organizational knowledge pool. The leader is one who owns multi-dimensional characteristics and plays a vital part in creating and retaining values of learning in an organization with a specific end goal. According to Crawford (2005), transformational leadership is a strong predictor of knowledge management practices whereas, scope of transactional leadership is limited in respect to knowledge management practices when compared with transformational leadership.

According to Analoui, Doloriert, and Sambrook (2013), when managers assume transformational leadership style in an organization, it results in a substantial increase in knowledge management practices. Yet both leadership styles influence knowledge management practices. Therefore, the findings of Nguyen, (2009) indicated that knowledge management practices are linked positively with transformational & transactional leadership. Tombul (2011) also supports the relationship of knowledge sharing and leadership styles (transformational & transactional) of supervisors. Moreover, performance of the worker is considered to be an important outcome variable as a result of strong leadership in an organization. The leadership styles are suggested to influence the ability of an employee to impart knowledge (Huang, Davison, Liu, & Gu, 2010). It was suggested by Howell and Merenda (1999) that in increasing employee's performance, leadership plays imperative role in the organizational settings. Employee's performance is enhanced by giving them empowerment (Ozaralli, 2002). Therefore, leader's personality is most significant thing that influences employee performance positively (Lian et al, 2012).

In the present scenario leaders broadly reinforce knowledge into hierarchical settings of the organization to earn a competitive advantage by maximizing employee performance. Now the knowledge-based civilization has prevailed its roots and only those organizations can survive in the global information technological settings that recognize knowledge, and give worth to knowledge resources (Rowley, 1999). Therefore, in the present study, we are concerned with learning institutions that cannot earn goodwill until their leaders adequately enjoy the knowledge management framework in their learning procedures. According to Rowley (1999), effective management of knowledge brings significant changes and innovates focal or core competencies that must be grasped for the success of organizations.

The main concern is to effectively use leadership style to improve the university teacher performance and incorporating knowledge practices to make university teacher performance persistent and earn justifiable competitiveness in this rapidly evolving environment. The relationship of leadership with performance and knowledge management with performance are investigated in most of the recent studies (Babatunde & Emem, 2015; Lee & Sukoco, 2012; Mohammed et al., 2014; Rodrigues & Pai, 2005; Wiig, 1999; Zaied et al., 2012;). Probably, it is considered that limited research has been done to determine three variables altogether in a single study, especially to determine the performance of teachers at the university level in relation to knowledge practices.

#### *Objectives*

The objectives of the study were to:

1. Identify transformational and transactional leadership styles, knowledge management practices of the department heads, and university teacher performance.
2. Explore the effect of transformational leadership on university teacher performance.
3. Explore the effect of transactional leadership on university teacher performance.
4. Examine the effect of knowledge management practices on university teacher performance.

#### **Literature Review**

Leadership is how others are influenced by leaders to perceive what should be done and the way in improving individuals' abilities to achieve goals (Yukl, 2013). On the other hand, Thill and Bovee, (2015) describes the leader as an individual who persuades, guides, and helps workers for the achievement of goals within organizational settings. According to Hackman and Johnson, (2013), Leadership is collaborating procedure of developing an efficient approach in the employees to attain shared objectives. DuBrin, (2013) has characterized leadership as a collective procedure in which all the colleagues approach together to improve their networks and aggregate objectives, a method in which individuals achieve shared goals by influencing a group of individuals. There are many leadership styles but the main angle that remains steady throughout all definitions of leadership is an obvious arrangement of aptitudes and capabilities that a leader possesses (Kouzes, 2003). Furthermore, leadership is a method of persuading or motivating individuals towards the accomplishment of goals (Vardiman et al., 2006; Yukl, 2006).

The most influenced leadership style is observed to be transformational leadership, more constructive and developmental for an individual as well as for the organization. Many research studies in literature reflect that transformational leadership is considered to be more persuasive on the performance of organization and satisfaction of employees (Humphreys & Einstein, 2003). According to Soski, Potosky, and Jung, (2002), to do more than required by the employees is supported by transformational leadership. Transformational leadership enhances or alters the familiarity with issues and encourages new understandings. Therefore, transformational leadership achieves shared objectives by empowering motivation and enthusiasm. Transformational leadership style is regarded as a change agent, therefore, it can have a significant impact on the employees by a fostering higher level of intrinsic motivation, depicting a new vision of the future (Kinicki & Kreitner, 2006). Bass (1985) presented a formal transformational theory through conducting an extensive study. The considerable effect has been notified on the subordinates and their respective outcomes through transformational leadership (Tickle et al., 2005) so it is regarded as an effective leadership style (Leithwood et al., 1999).

In respect to Bass (1985) theory a multifactor leadership tool was developed, to identify leadership styles. The questionnaires were to be filled by the employees about their leader describing particular leadership behavior as suggested by the conclusions of the study presented by Bass. This MLQ – 5X was considered to be an effective tool to determine leadership style. Transformational leaders were identified to have four characteristics to transform organizations which are as follows; *Idealized Influence*-Employees in the organizations are linked to their employees and imitate their leaders while leaders are determined and accompany strong will-power. Leaders with idealized influence take risks and display uniformity rather than thoughtlessness. Higher levels of ethics and morality are displayed by transformational leaders to do the right things (Bass & Riggio, 2006). *Inspirational Motivation* - Transformational leaders inspire their subordinate behaviors. Leaders welcome subordinates to be more imaginative. Followers of transformational leaders show commitment to their work and collective vision (Bass & Riggio, 2006). *Intellectual Stimulation* - Transformational leadership boost groups and individuals in their work to be revolutionary as well as imaginative through inquiring ideas, rebuilding issues, and managing old issues in modern ways. Such leaders support inventiveness. *Individualized Consideration* - In the transformational leadership style, leaders behave as mentors to stretch sole consideration to the person's need for accomplishment and advancement. Group capabilities are enhanced and elevated to higher degrees. Through the supportive environment, new learning prospects are provided to the individuals. The acknowledgment of specific characteristics of employees regarding esteem and desire is met. From the behavior of leaders, the acceptance of individual differences is shown. Transformational leaders demonstrate mutual communication and performance management within the organization. The leaders personalize interactions with their subordinates, through the past discussions, focusing on specific needs and observing the

followers on the whole rather than considering just a subordinate. Transformational leaders listen efficiently and assign tasks in such a way that results in developing followers. The leaders assist if and when required so that the tasks are carried out smoothly. Ideally, the leaders exhibit action in such a way that followers do not perceive to be observed or monitored (Avoilo & Bass, 2002).

The scientist McGregor (1978), considered pioneer for presenting transactional leadership in the literature. Burn's (1978) theory of leadership was given an extension by Bass (1985). Transactional leadership is defined in a way that it completely explains the ways in the accomplishment of the needs of followers as the result of their performance (Jung, 2001). The exchange between the subordinate and leader is termed transactional leadership. Job performance is linked to rewards. Subordinates complete their tasks and assignments for earning rewards (Daft & Lane, 2002). Transactional leadership style comprises of following major facets; *Contingent Reward* - The superior quality achievements and top performances have resulted as the practical productive exchange between transactional leaders and their followers. Transactional leadership is less effective than transformational leadership whereas it is more successful than laissez-faire leadership. A conditional reward is based on the joint understating and commitment between a transactional leader and the subordinate as the result earns a reward as promised. Mostly this type of exchange is transactional but if the reward is spiritual like praise, the reward is regarded to be transformational (Antonakis, Avolio, & Sivasubramanian, 2003). *Management by Exception – Active*. The remedial exchange is comparatively least productive than contingent reward. Transactional leaders keep in view the standards of the organization so that they can suggest corrective actions to the employees before the mistake or error results in a problematic issue. In the safety and health-related issues, leaders should exhibit management by exception - active (Bass & Riggio, 2006). *Management by Exception – Passive*. The responsive zone of transactional leadership is management by exception – passive, where the leader is regarded to be passive, in a way that first an issue is raised rather than taking any remedial measure beforehand. When there is a large number of employees reporting to the transactional leaders regarding assigned tasks management by exception- passive is more appropriate (Bass & Riggio, 2006).

It is hypothesized that knowledge changes flow from socialization to combination, internalization, and externalization, basically knowledge transitions are a form of raw experience that flow towards understanding, creation of personal mental representations, and classification (Nonaka & Takeuchi, 1995). Nonaka & Takeuchi characterized knowledge management into four forms, i.e. socializing, externalizing combining and internalizing which generates organizational knowledge through the exchange of explicit and tacit knowledge. *Socialization* - Tacit knowledge is gained through sharing of meetings experiences during the time spent in socialization.

Hierarchical workers ought to learn ongoing ability through training as mentors get familiar with the experts' aptitudes by perception, impersonation, and practice. *Externalization* –It is a procedure in which tacit knowledge is changed over into explicit knowledge through utilizing models, analogies, thoughts, and illustrations. It is, for the most part, observed during the period of idea formation of the advancement of the new item and it is the basic action of knowledge creation. Externalization is actuated by the consolidated reflection or discourse. *Combination* - It is the procedure in which explicit knowledge is made from various sources. Consequently, individuals use phones, discussions, meetings, and reminders to consolidate explicit knowledge. *Internalization* - It is the method or procedure in which the tacit knowledge is converted into explicit knowledge. It is facilitated when knowledge is detained in papers or communicated in narrative form. Seng, Zannes, and Pace (2002) developed five different steps of knowledge management processing, storing, transferring, sharing, capturing of knowledge activities. According to Zack (1999), knowledge management consists of five stages; gaining, filtering, storing, and retrieval, distribution, and demonstration.

*Knowledge Management Practices Model.* Zaim et al., (2007), created a scheme of knowledge management practices that encompassed four key practices; knowledge creation or generation, knowledge storage, knowledge transfer/sharing, and knowledge application or usage. However, to achieve the objective of the current study some changes were made while a single entity was used to name each stage whereas knowledge sharing and transfer are divided into separate groups. Therefore, resulting in the five stages of knowledge management comprised in the current study were knowledge creation, knowledge transfer, knowledge sharing, knowledge storage, and knowledge application.

*Knowledge Creation.* It is associated with collecting and generating new knowledge. Acquire, identify and create are synonymously used (Kaweevisultrakul, & Chan, 2007; Khalil, et al., 2006; Egbu, et al., 2005; Hussain, et al.,2004). Knowledge creation of the novelty can have a positive effect on the processes of an organization through effective use of knowledge (Marques & Simon, 2006). Hence, knowledge creation is learning for employees and the firm (Egbu, Hari & Renukappa, 2005).

*Knowledge Sharing and Transfer.* Exchange of knowledge is suggested to be sharing of knowledge activities. Disseminate is used synonymously with knowledge sharing (Egbu, et al., 2005; Hussain, et al., 2004). Taylor (2006), explained that efforts of the people in the distribution of knowledge contribute to the knowledge sharing process while sharing information in some place open forums, talk rooms, knowledge fairs have significant value because a lot of knowledge transfer takes place through private discussion. As in an organization, it is a discouraging job in the management of knowledge, the flaws to the organizational culture (Davenport & Prusak, 1998).

*Knowledge Storage.* The codification of knowledge practices is done regarded as knowledge storage, organize, store, documentation is used by researchers for knowledge storage (Kaweevisultrakul et al., 2007; Hussain, et al., 2004; Khalil, et al., 2006). Knowledge comprises thorough findings of crucial hidden knowledge that resides in the mind of people, these findings result in the formation and planning of knowledge in hierarchical settings (Baskerville & Dulipovice, 2006). This specific learning must be communicated in a structure so that it is captivated by others in the association that could utilize the information (Baskerville & Dulipovice, 2006).

*Knowledge Application.* Knowledge application is linked with using of stored knowledge in the future. The terms used for knowledge utilization are implementation, reuse (Egbu, et al., 2005; Kaweevisultrakul, & Chan, 2007; Khalil, et al., 2006). For different purposes, the knowledge is utilized by the people in the organization. According to Jamaliah (2008), to reduce gaps that exist between knowledge and decision making and bring about solutions to problems knowledge application evolves around using of knowledge. Organizational processes should support knowledge application to enhance firms' outcomes (Mills & Smith, 2011).

Ogbonna and Harris (2000), claimed that subordinates' performance and leadership are directly associated. Furthermore, Shafie et al., (2013) surveyed the significant positive association that existed between transformational leadership style and subordinate's performance, while a negative relationship of laissez-faire leadership style with subordinate's performance. With the development of knowledge management practices, the organization enters into new directions to develop competencies of employees and as the result organizational capabilities. According to Lee and Sukoco (2007) suggested performance be a combined effect of knowledge resources. To perform organizational tasks knowledge possessed by employees is a key variable (Chien & Tsai, 2012; Zaied, 2012). Furthermore, Vargas (2015) contended that the learning environment is promoted through knowledge management in organizations. Many pieces of research are carried out to form a bridge between knowledge management and performance (Chien & Tsai, 2012; Zaied et al., 2012). Significantly, literature also highlights that process of knowledge management might be correlated with representatives who are an integral part of firms in accomplishing objectives and attaining advantage (Davenport et al., 1998; Goh, 2002). Research studies linked to leadership, particularly, transformation leadership and transactional, knowledge management, and performance are limited. The role of leadership and performance through mediating knowledge management practices like acquisition, formation, dissemination, and knowledge exploitation is investigated in limited numbers (Politis, 2001). To fill the research gaps between the literatures and to offer understandings regarding knowledge management activities of leaders and performance of employees, the current study intends to explore the relationship and mediating effect of knowledge management practices of leaders on teacher performance in an educational scenario.

### Research Model

The following Figure presents the basic research model of this study.

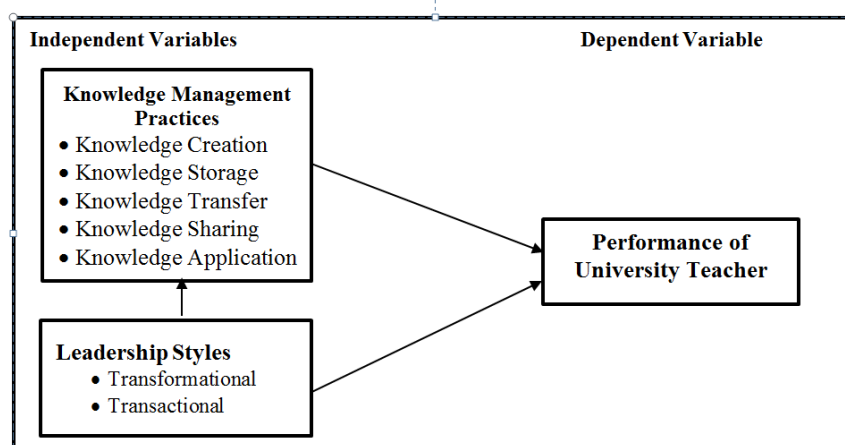


Figure 1. *Basic Research Model of the Study*

### Population and Sample

From the four universities i.e. Sargodha University, University of Lahore, NUST, and HITEC University all teaching faculties were considered to be the population of the study while 260 teachers were conveniently selected. Faculty members that were present at the university and gave their consent to be a part of the study were included in the sample of the study. The distribution of sample with respect to gender from universities was, 84 teachers (34 males, 50 females) from the University of Lahore; 117 (71 males, 46 females) from the University of Sargodha; (35 males, 5 females) 40 from HITEC University and 19 (13 males, 6 females) from NUST.

### Validation and Reliability of Tools

Multifactor Leadership Questionnaire (Bass, & Avolio, 1997), Knowledge Management Practices scale (Debowksi, 2006; Downes, 2014; Lawson, 2003; Singh & Kant, 2008) and University Teacher Performance questionnaire adapted from Amin et al., (2013), with five-point Likert scale were used for collection of data. The validation of questionnaires was done through expert opinion from university teachers comprising of one associate professor, two assistant professors, and two lecturers from Department of Education and Psychology, University of Sargodha. Eighty teachers were included in the pilot study from Sargodha University which was excluded from the sample of the study. Internal consistency was analyzed using Cronbach alpha value for all three questionnaires. The reliability coefficient for MLQ, knowledge management practices scale, and university teacher performance questionnaire were 0.81, 0.95, and 0.93 respectively. Furthermore, Cronbach alpha values are also given in table 1. The results indicated that the internal consistency of the three questionnaires was highly acceptable as it ranged from 0.7 to 0.9 which is the recommended range of alpha coefficient (Field, 2009; Marczyk et al., 2005).



### Data Analysis

The effect of leadership styles (transformational & transactional) and knowledge management practices on university teacher performance were analyzed through regression analysis using IBM SPSS 23.

Table 1  
*Mean and Standard Deviation of Variables*

SN	Variables	<i>M</i>	<i>SD</i>	<i>α</i>
1	Transformational Leadership	3.66	.714	0.86
2	Transactional Leadership	3.26	.628	0.73
3	Knowledge Management Practices	3.58	.846	0.95
	Knowledge Creation	3.63	.875	0.83
	Knowledge Storage	3.47	.858	0.82
	Knowledge Transfer	3.58	.973	0.86
	Knowledge Sharing	3.71	.909	0.77
	Knowledge Application	3.70	.914	0.76
4	University Teacher Performance	3.95	.678	0.93

Table 1 shows descriptive statistics of variables. Results indicated that transformational leadership scored high mean and standard deviation ( $M = 3.66$ ,  $SD = .714$ ) than transactional leadership ( $M = 3.26$ ,  $SD = .628$ ) on multifactor leadership questionnaire while mean scores with its corresponding standard deviation of the knowledge management practices scale was ( $M = 3.58$ ,  $SD = .846$ ), knowledge sharing scored high ( $M = 3.71$ ,  $SD = .909$ ) followed by knowledge application ( $M = 3.70$ ,  $SD = .914$ ), knowledge creation ( $M = 3.63$ ,  $SD = .875$ ), knowledge transfer ( $M = 3.58$ ,  $SD = .973$ ) and knowledge storage ( $M = 3.47$ ,  $SD = .858$ ) on knowledge management practices scale respectively and mean scores with its corresponding standard deviation of university teacher performance questionnaire was ( $M = 3.95$ ,  $SD = .678$ ). Cronbach alpha ( $\alpha$ ) ranged from 0.73 to 0.95 indicating that tools were highly reliable.

Table 2  
*Knowledge Management Practices of Transactional and Transformational Leaders*

Knowledge Management Practices	Highly Transformational	Highly Transactional
Knowledge Creation	77.1%	73.3%
Knowledge Storage	69.2%	65.3%
Knowledge Transfer	68.8%	72.9%
Knowledge Sharing	76.1%	78.2%
Knowledge Application	75.2%	78.2%

Table 2 shows the result of knowledge management practices adopted by transformational and transactional leaders. The results reflected that highly transformational heads were involved more in knowledge creation (77.1%) and

knowledge storage practices (69.2%) as compared to transactional heads while highly transactional heads were indulged in knowledge transfer (72.9%), knowledge sharing (78.2%), and knowledge application (78.2%) practices more than transformational heads.

*Regression Analysis.* Before the regression analysis was conducted several diagnostic tests were carried out to draw conclusions.

*Diagnostic Tests.* For regression analysis, testing of assumptions is considered to be the main requirement. The outcome of violation of assumptions is termed as biasness of estimates of precisions, relationship estimates and unreliable confidence level and significance tests (Cohen et al., 2003). Linearity, and normality, sampling adequacy, multicollinearity, and homogeneity were carried out for this study.

*Linearity and Normality.* A linear relationship is required between the leadership styles (transformational and transactional), knowledge management practices, and university teacher performance, represented by scatter plots depicting an almost linear relationship while normality was depicted through the histogram indicating a bell shape and mostly data laid between +2 and -2 representing normality.

*Test of Sampling Adequacy.* Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity tests were conducted to determine the sampling adequacy of research data. KMO value was between 0 and 1 and the threshold value was 0.5. KMO value 0.5 is acceptable for sampling adequacy (Williams, et al., 2012).

Table 3

*Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity*

KMO Measure of Sampling Adequacy	Bartlett's Test of Sphericity		
	Approx. Chi Square	df	Sig.
.793	489.605	6	.000

Table 3 shows that KMO measures of sampling adequacy valued .793 and Bartlett's test of Sphericity was significant ( $p < .001$ ) therefore, the research sample was adequate and further statistical analysis could be performed as recommended by Williams et al., (2012).

*Test of Multicollinearity.* Variance inflation factors and tolerance were used to test multicollinearity of the sample. VIF determined the seriousness of multicollinearity in an ordinary least square regression analysis. If the value of VIF would be greater than 10 it would indicate a sign of multicollinearity.

*Test of Homogeneity.* Homoscedasticity was tested with the help of Levene's test of homogeneity of variances. This measured variances whether between dependent and independent variables were the same or not. If  $p$ - value  $> .05$ , test is insignificant and the two variances are not significantly different thus equal (Gastwirth, et al., 2009).

Table 4  
*Collinearity Statistics and Levene's Statistics*

	Tolerance	VIF	Multicollinearity	Levene's Statistics	Sig.
Transformational Leadership	.271	3.70	No	.382	.537
Transactional Leadership	.361	2.78	No	3.30	.071
Knowledge Management Practices	.315	3.17	No	.174	.677
University Teacher Performance	---	---	---	.081	.776

Table 4 shows that all the variables had tolerance and variance inflation factor greater than 0.1 and less than 10 respectively. Tolerance of at most 0.1 and VIFs of at least 10 shows the presence of multicollinearity (Landau & Everitt, 2004). The values of VIF indicated that there was no multicollinearity between the independent variables that were included in the regression model.

*Levene's Statistics.* Levene's Statistics in table 4 shows that all the variables were insignificant ( $p > .05$ ), which indicates that the variances were not significantly different thus approximately equal as recommended by Gastwirth et al., (2009). So, there was an existence of homogeneity satisfying the data set for regression analysis.

Table 5  
*Regression Analysis for the effect of Transformational Leadership on University Teacher Performance*

	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>P</i>
Constant	27.3	3.24		8.42	.000
Transformational Leadership	.792	.064	.613	12.5	.000
<i>R</i>	.613	$R^2$	.376		
<i>F</i>	155.5	Adjusted $R^2$	.374		
$\Delta F$	.000				

Table 5 shows the linear regression analysis that was computed to determine the effect of transformational leadership on university teacher performance. Results showed a significant  $R = .613$ , implied that the linear correlation coefficient of transformational leadership and university teacher performance was 61.3%, while  $R^2 = .376$  implied that transformational leadership in the study was able to explain 37.6% of the variance of university teacher performance.  $R^2$  was considered to have a moderate effect on university teacher performance. Significant regression equation,  $F(1, 258) = 155.5$ ,  $p < .001$  and results showed that there was significant effect of transformational leadership ( $\beta = .613$ ,  $t(258) = 12.5$ ,  $p < .001$ ) on university teacher performance and explained that as transformational leadership increases by 1 standard deviation, university teacher performance increases by 61.3%

Table 6

*Regression Analysis for the effect of Transactional Leadership on University Teacher Performance*

	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>P</i>
Constant	33.8	3.5		9.70	.000
Transactional Leadership	1.11	.115	.517	9.71	.000
<i>R</i>	.517	<i>R</i> <sup>2</sup>	.268		
<i>F</i>	94.3(1, 258)	Adjusted <i>R</i> <sup>2</sup>	.265		
$\Delta F$	.000				

Table 6 shows the linear regression analysis that was computed to determine the effect of transactional leadership on university teacher performance. The results showed a significant  $R = .517$ , which implied that the linear correlation coefficient of transactional leadership and university teacher performance was 51.7%, while  $R^2 = .268$  implied that transactional leadership in the study was able to explain 26.8% of the variance of university teacher performance.  $R^2$  was considered to have weak effect on university teacher performance. Significant regression equation,  $F(1, 258) = 94.3, p < .001$  and results showed that there was the significant effect of transactional leadership ( $\beta = .517, t(258) = 9.71, p < .001$ ) on university teacher performance and explained that as transformational leadership increases by 1 standard deviation, university teacher performance increases by 51.7%

Table 7

*Regression Analysis for the effect of Knowledge Management Practices on University Teacher Performance*

	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>P</i>
Constant	36.2	2.62		13.8	.000
Knowledge Management Practices	.437	.036	.601	12.1	.000
<i>R</i>	.601	<i>R</i> <sup>2</sup>	.361		
<i>F</i>	94.3(1, 258)	Adjusted <i>R</i> <sup>2</sup>	.265		
$\Delta F$	.000				

Table 7 shows the linear regression that was computed to analyze the effect of knowledge management practices on university teacher performance. The results showed that a significant  $R = .601$  implied that the linear correlation coefficient of knowledge management practices and university teacher performance was 60.1%, while  $R^2 = .361$  implied that knowledge management practices were able to explain 36.1% of the variance of university teacher performance.  $R^2$  was considered to have a moderate effect on university teacher performance. Significant regression equation,  $F(1, 258) = 94.3, p < .001$  and results showed that there was a significant effect of knowledge management practices ( $\beta = .601, t(258) = 12.1, p < .001$ ) on university teacher performance and explained that as knowledge management practices increase by 1 standard deviation, university teacher performance increases by 60.1%.

Table 8

*Multiple Regression Analysis for the effect of Transformational Leadership, Transactional Leadership, Knowledge Management Practices on University Teacher Performance*

	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>P</i>
Constant	27.3	3.37		8.12	.000
Transformational Leadership	.460	.119	.356	3.85	.000
Transactional Leadership	.046	.172	.021	.265	.791
Knowledge Management Practices	.215	.062	.296	3.46	.001
<i>R</i>	.639	<i>R</i> <sup>2</sup>	.408		
<i>F</i>	58.7(1, 258)	Adjusted <i>R</i> <sup>2</sup>	.401		
$\Delta F$	.000				

Table 8 shows the multiple linear regression that was computed to determine the joint effect of transformational leadership, transactional leadership, and knowledge management practices on university teacher performance. The results showed a significant  $R = .639$ , implied that multiple correlation coefficient of leadership styles (transformational & transactional), knowledge management practices, and university teacher performance were 63.9%, while  $R^2 = .408$  implied that leadership styles (transformational & transactional) and knowledge management practices in the study were able to explain 40.8% of the variance of university teacher performance, while 59.2% of variance remained unexplained in the study which might be explained by other variables.  $R^2$  was considered to have a moderate effect on university teacher performance. Significant regression equation was,  $F(3, 256) = 58.7, p < .001$ . The results showed that there was significant joint effect of transformational leadership ( $\beta = .356, t(256) = 3.85, p < .001$ ), knowledge management practices ( $\beta = .296, t(256) = 3.46, p < .001$ ) on university teacher performance while transactional leadership had no significant effect ( $\beta = .021, t(256) = .265, p = .791$ ) on university teacher performance in multiple regression. It also explained that as transformational leadership increases by 1 standard deviation university teacher performance increases by 35.6% while as knowledge management practices increase by 1 standard deviation university teacher performance increases by 29.5% overall almost accounting for 65% approximately.

Overall the results of regression analysis indicated that transformational leadership explained 37.6%, transactional leadership explained 26.8% while knowledge management explained 36.1% variances of university teacher performance separately. In the joint effect, the whole model of regression explained 40.8% variances of university teacher performance.

### Result Summary

Mean results of leadership styles indicated that heads were rated higher on transformational leadership while lower on transactional leaders on the multifactor leadership questionnaire. This signified importance of transformational leadership as compared to transactional leadership, although the difference between the two leadership

styles was small. Furthermore, results of the knowledge management practices scale showed that knowledge sharing was practiced more than other practices (creation, storage, transfer, application) by the heads of the departments. While standard deviation of all the variables signified that most of the data were spread near the mean values resulting in no outliers in the data set. The results of the study also reflected that heads of departments who were highly transformational adopted knowledge creation and knowledge sharing practices more than other practices (storage, transfer, and application). While heads of the departments who were highly transactional leaders adopted knowledge sharing and application practices more than other knowledge practices (creation, storage, and transfer). Results of linear regression analysis reflected that both transformational leadership and knowledge management practices moderately explained variances of university teacher performance while transactional leadership weakly explained the variances of teacher performance at the university level. Whereas, results of multiple regression analysis indicated that transformational leadership and knowledge management practices were more effective than transactional leadership.

### **Discussion and Conclusion**

The main focus of the study was on leadership styles (transformational and transactional) in higher educational institutions enforcing knowledge management practices for enhanced university teacher performance and findings supported transformational and transactional leadership appear to have a significant relationship with knowledge management practices and university teacher performance. These findings were consistent with the study conducted by Nguyen (2009) and Analoui, et al. (2013) reflecting that two leadership styles reinforce the use of knowledge practices significantly. In literature, the study by Rasool et al., (2015) also supported findings of the current study, analyzing the impact of transformational leadership and transactional leadership on employee performance in Pakistan's health department, concluding that transformational leadership performed better and focused on competitive advantage while the influence of transactional leadership was not much stronger as compared to transformational leadership on performance. This is for the reason that with time as the world is changing, transformational leadership is getting popular in organizational settings, resulting in a higher level of performance.

The current study provides insights to the head of departments for successful implementation of knowledge management practices within their departments to enhance university teacher performance. Furthermore, heads of departments found which leadership style promotes more knowledge creation, sharing, and its application. Altogether, the current study provides insights regarding the role of leadership styles (transformational and transactional) in knowledge management practices so through the

findings of this study heads of departments will be able to implement knowledge activities in an educational setting by using one of these leadership styles. Literature reflected that Pakistan is a bureaucratic state where there is existence of rule and command of one man only (Ahmed, 1996). This reflects that employees are habitual of transactional leadership for the implementation of certain activities within the organizational settings by following rules and regulations rather than transformational leadership that gives a free hand to them. This study will guide the heads for adopting leadership style to implement knowledge practices for enhanced teacher performance. In this study, the findings and deductions are limited to university level with target area Federal and Punjab only so generalizability is limited. Therefore, this study might be conducted with a large sample in the future.

The self-reported questionnaire to collect data on university teacher performance was used which depends upon the honesty and accuracy of the participants. Future research might conduct to limit the influence of self-reported measures through objective measures of data collection. Future researchers might concentrate on authenticating the findings of the study through replicative research studies introducing mediation or moderation effects like job satisfaction, organization culture, etc. In the nutshell, this research study is significant as management of knowledge is considered to be an important factor in educational institutions for sake of earning a competitive advantage. And for this purpose management might train their heads to adopt a leadership style that has a significant impact on the performance of teachers through knowledge practices.

## References

- Ahmed, F. (1996). Ethnicity, class and state in Pakistan. *Economic and Political Weekly*, 31(47), 3050-3053.
- Analoui, B. D., Doloriert, C. H. & Sambrook, S., (2013). Leadership and knowledge management in UK ICT organizations. *Journal of Management Development*, 32(1), 4-17.
- Antonakis, J., Avolio, B. J., & Sivasubramaniam, N. (2003). Context and leadership: an examination of the nine-factor full-range leadership theory using the Multifactor Leadership Questionnaire. *The Leadership Quarterly*, 14(3), 261 – 295.
- Babatunde, O., & Emem, I. (2015). The impact of leadership style on employee's performance in an organization. *Public Policy and Administration Research*, 5(1), 193-206.
- Baskerville, R. & A. Dulipovici, (2006). The theoretical foundation of knowledge management. Knowledge management research and practice. *Knowledge Management*, 7(5), 41-54.

- Bass, B. M. & Avolio, B. J. (1997), *Full range leadership development: Manual for the multifactor leadership questionnaire*, Redwood City, CA: Mind Garden
- Bass, B. M. (1985). *Leadership and performance beyond expectations*, New York. The Free Press.
- Bass, B. M., & Avolio, B. J. (2003). *Multifactor Leadership Questionnaire feedback report*. Redwood City, CA: Mind Garden.
- Bass, B. M., Riggio, R. E. (2006). *Transformational leadership*, Lawrence Erlbaum Associates, New Jersey.
- Bock, G. W. & Kim, Y. G. (2002), Breaking the Myths of Rewards: An Exploratory Study of Attitudes about Knowledge Sharing. *Information Resources Management Journal*, 15(2), 14
- Bollinger, A. S., & Smith, R. D. (2001). Managing organizational knowledge as a strategic asset. *Journal of knowledge management*.
- Burns, J. M. (1978), *Leadership*. New York, Harper & Row.
- Chien, S. Y. & Tsai, C.H. (2012). Dynamic capability, knowledge, learning, and firm performance, *Journal of Organizational Change Management*, 25(3), 434-444.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Lawrence Erlbaum Associates: Mahwah, NJ.
- Crawford, C. B. (2005), Effects of transformational leadership and organizational position on knowledge management, *Journal of Knowledge Management*, 9, 6-16.
- Daft, R. L. & Lane, P. (2002). *The leadership experience* (2nd ed.). New York: Thomson Learning.
- Davenport, T. H., De Long, D. W. & Beers, M. C. (1998). Successful knowledge management projects, *MIT Sloan Management Review*, 39(2), 43-57.
- Davenport, T. H. & Prusak, L. (1998), *Working Knowledge: How Organizations Manage What They Know*, Harvard Business School Press, Boston, MA.
- DuBrin, A. (2013). *Leadership: Research Findings, Practice, and Skills*. (7th ed.). Mason, OH: South-Western, Cengage Learning.
- Egbu, C. O., S. Hari and S. H. Renukappa, (2005). Knowledge management for sustainable competitiveness in small and medium surveying practices. *Structural Survey*, 23(1), 7-21.



- Gastwirth, J. L., Gel, Y. R. & Miao, W. (2009). The impact of Levene's test of equality of variances on statistical theory and practice. *Journal of Statistical Science*, 24, 343-360.
- Goh, S. C., (2002). Managing effective knowledge transfer: An integrative framework and some practice implications, *Journal of Knowledge Management*, 6(1), 23-30
- Gold, A. H., A. Malhotra & A. H. Segars (2001), Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems*, 18 (1), 185-214.
- Hackman, M., & Johnson, C. (2013). *Leadership: A communication perspective* (6th ed.). Long Grove, IL: Waveland Press.
- Howell, J. M., & Hall-Merenda, K. E. (1999). The ties that bind: The impact of leader-member exchange, transformational and transactional leadership, and distance on predicting follower performance. *Journal of Applied Psychology*, 84(5), 680-694.
- Huang, Q., Davison, R. M., Liu, H. & Gu, J. (2010). *The impact of leadership style on knowledge sharing intentions in China*. Technologies Advancement in Developed and Developing Countries. China: Discoveries in Global Information Management, 174-200.
- Hussain, F., C. Lucas & M. A. Ali, (2004). Managing Knowledge Effectively. *Journal of Knowledge Management Practice*.
- Jamaliah A. H., (2008). Knowledge strategies of school administrators and teachers. *International Journal of Education Management*, 22(3): 259-268.
- Jung, D. I. (2001). Transformational and transactional leadership and their effects on creativity in groups. *Creativity Research Journal*, 13(2), 185-195.
- Jung, D., Wu, A., & Chow, C. (2008). Towards understanding the direct and indirect effects of CEOs' transformational leadership on firm innovation. *The Leadership Quarterly*, 19: 582-594.
- Kawevisultrakul, C. and P. Chan, (2007). Impact of cultural barriers on knowledge management implementation: Evidence from Thailand. *Journal of American Academy of Business*, 11(1), 303
- Khalil, O., Claudio, A., & Seliem, A. (2006). Knowledge management: The case of the Acushnet Company. S.A.M. *Advanced Management Journal*, 71(3), 34.

- Kinicki, A. & Kreitner, R. (2006). *Organizational behaviour: Concepts, skills and practices* (2nd ed.) New Dehli: McGraw-Hills.
- Kouzes, J. M. (2003). *Becoming a leader: Business leadership, A Jossey-Bass reader*. San Francisco: Jossey-Bass
- Landau, S. & Everitt, S. B. (2004). *A Handbook of Statistical Analyses Using SPSS*. Chapman & Hall/CRC, Boca Raton.
- Lee, L. T. S. & Sukoco, B. M. (2007). The effects of entrepreneurial orientation and knowledge management capability on organizational effectiveness in Taiwan: The moderating role of social capital. *International Journal of Management*, 24(3), 549-572.
- Lee, S., Gon Kim, B. and Kim, H. (2012). An integrated view of knowledge management for performance. *Journal of Knowledge Management*, 16 (2), 183-203.
- Lian, H., Ferris, D. L., & Brown, D. J. (2012). Does taking the good with the bad make things worse? How abusive supervision and leader-member exchange interact to impact need satisfaction and organizational deviance. *Organizational Behavior and Human Decision Processes*, 117(1), 41-52.
- Marques, D. P. & Simon, F. J. G. (2006), The effect of knowledge management practices on firm performance. *Journal of Knowledge Management*, 10 (3), 143-156.
- Mills, A. M. & T. A. Smith, (2011). Knowledge management and organizational performance: A decomposed view. *Journal of Knowledge Management*, 15(1): 156-171.
- Mohammed, U. D., Yusuf, M. O., Sanni, I. M., Ifeyinwa, T. N., Bature, N. U., & Kazeem, A. O. (2014). The relationship between leadership styles and employees' performance in organizations (a study of selected business organizations in Federal Capital Territory, Abuja Nigeria). *Leadership*, 6(22).
- Nguyen, H. N., (2009). *The impact of leadership behaviours and organizational culture on knowledge management practices in small & medium enterprises*, s.1: Grifith University.
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How japanese companies create the dynamics of innovation*. New York: Oxford University Press.
- Ogbonna, E., & Harris, L. C. (2000). Leadership style, organizational culture and performance: empirical evidence from UK companies. *International Journal of Human Resource Management*, 11(4), 766-788
- Ozaralli, N. (2015). Linking empowering leader to creativity: the moderating role of psychological (felt) empowerment. *Procedia-Social and Behavioral Sciences*, 181, 366-376.

- Petrides, L. A., & Nodine, T. R. (2003). *Knowledge Management in Education: Defining the Landscape*. (Report). Half Moon Bay, CA.: Institute for the study of Knowledge Management in Education
- Politis, J. D. (2001). The relationship of various leadership styles to knowledge management, *Leadership and Organization Development Journal*, 22(8), 354-364.
- Politis, J. D. (2002), Transformational and transactional leadership enabling (disabling), knowledge acquisition of self-managed teams: the consequences for performance, *Leadership & Organization Development Journal*, 23, 186-97.
- Rasool, H. F. (2015). Leadership styles and its impact on employee's performance in health sector of Pakistan. *City University Research Journal*, 5(1).
- Rodrigues, L. L. R., & Pai, R. (2005). Preparation and validation of KM measurement instrument: an empirical study in educational and IT sectors. In S. Al Hawamdeh & M. International Conference on Knowledge (Eds.), *Knowledge management: nurturing culture, innovation and technology: proceedings of the 2005 International Conference on Knowledge Management*, North Carolina, USA, 27–28 October 2005 (pp. 582–593). Singapore; Hackensack, N.J.: World Scientific.
- Rowley, J. (1999). What is knowledge management? *Library Management*, 20(8), 416–419.
- Sandhawalia, B. S. and Dalcher, D. (2011). Developing knowledge management capabilities: A structured approach. *Journal of Knowledge Management*, 15, 313-328.
- Seng, C. V., Zannes, E., & Pace, R. W. (2002). The contributions of knowledge management to workplace learning. *Journal of Workplace Learning*, 14(4), 138 – 147.
- Shafie, B., Baghersalimi, S., & Barghi, V. (2013). The relationship between leadership style and employee performance. *Singaporean Journal of Business Economics and Management Studies*, 2, 21-29.
- Soski, J., Potosky, D., & Jung, D. I. (2002). Adaptive self-regulation: Meeting others' expectations for leadership and performance. *Journal of Social Psychology*, 142(2), 211 – 232.
- Taylor, E. Z., (2006). The effect of incentives on knowledge sharing in computer-mediated communication: An experimental investigation. *Journal of Information Systems*, 20(1): 103-116.
- Thill, J. V., & Bovee, C. V. (2015). *Excellence in business communication* (11th ed.). Upper Saddle River, N.J.: Pearson Prentice-Hall.

- Tickle, E. L., Brownlee, J., & Nailon, D. (2005). Personal epistemological beliefs and transformational leadership behaviours. *Journal of Management Development*, 24(8), 706-719.
- Tombul, F., (2011). *The impact of leadership styles and knowledge sharing on police officers' willingness to exert extra effort to provide better security: A study in the riot unit of the Turkish National Police, Turkey*: University of North Texas
- Vardiman, P., Houghston, J. and Jinkerson, D. (2006), Environmental leadership development. Toward a contextual model of leader selection and effectiveness, *Leadership & Organization Development Journal*, 27 (2), 93-105.
- Vargas, M. I. R. (2015). Determinant factors for small business to achieve innovation, high performance and competitiveness: organizational learning and leadership style, *Procedia-Social and Behavioral Sciences*, 169, 43-52.
- Vera, D. & Crossan, M. (2004), Strategic leadership and organizational learning, *Academy of Management Review*, (29), 222-240
- Wiig, K. M., (1999) Introducing KM into the enterprise, in J Liebowitz, *Knowledge Management Handbook*, CRC Press, Boca Raton, 3, 1-41.
- Williams, Brown, T. & Onsmann, A., (2012). Exploratory Factor Analysis: A five step guide for novices. *Australasian Journal of Paramedicine*, 8(3).
- Yukl, G. (2006). *Leadership in organizations*, (6th ed.). Prentice-Hall, Upper Saddle River, NJ
- Yukl, G. (2013). *Leadership in organizations* (8th ed.). Upper Saddle River, NJ: Prentice Hall.
- Zack, M. H. (1999), Managing codified knowledge (cover story), *MIT Sloan Management Review*, 40, 45-58.
- Zaied, A. N. H., Hussein, G. S. & Hassan, M. M., (2012). The role of knowledge management in enhancing organizational performance. *Journal of Information Engineering and Electronic Business*, 4(5), 27-35.
- Zaied, A. N. H. (2012). An integrated knowledge management capabilities framework for assessing organizational performance, *International Journal of Information Technology and Computer Science*, 4 (2), 1-10.
- Zaim, H., E. Tatoglu & S. Zaim, (2007). Performance of knowledge management practices: A causal analysis. *Journal of Knowledge Management*, 11(6), 54-67.