IMPACT OF REWARDS AND FULL RANGE LEADERSHIP STYLES ON KNOWLEDGE MANAGEMENT PRACTICES

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Abstract

This research is intended to investigate the influence of reward system and full range leadership style on knowledge creation, sharing and application in the education sector of Pakistan. By using cross sectional research design, questionnaires were distributed to collect data from teachers. Findings have been drawn by using AMOS, which indicated positive impact of intrinsic rewards and transformational leadership style on knowledge creation, sharing and application. However, no significant linkage of extrinsic rewards was found with knowledge creation, sharing and application. Additionally, contrary to expectations, transactional leadership found to have negative effect on knowledge creation and sharing, but it positively affects knowledge application. However, the model of this research can be used as a source to get competitive edge by creating new knowledge, sharing and applying it effectively.

Keywords: Rewards System, Knowledge Creation, Knowledge Sharing, Knowledge Application, Education Sector.

JEL Classification: Z000

Introduction

According to Nonaka and Takeuchi (1995) study of 'human knowledge' is as old as history of human being itself, but it gain prominence as a research topic since 1990 (Krogh et al., 2000). Today's business and education systems are interested to know that how information can be collected, disseminated and shared among individuals more effectively, even in the presence of increased internal and external demands of accountability; requirement of improved education, combined with

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the demand on the time of teachers (Petrides & Nodine, 2003). As, we have seen that today's business-es leaders consider knowledge as chief asset for organization which can serve as a key to sustainable competitive advantage (Davenport & Prusak, 2000). Therefore, leaders can serve as the main drivers of knowledge management practices in an organization who create an environment of knowledge sharing by incorporating their own knowledge in an organization's pool of knowledge (DeLong & Fahey, 2000). Another key challenge for KM in educational institutions is to ensure that employees continually learn new knowledge, share it with others as well as apply it for the effective functioning of an organization (Carroll et al., 2011). For this reason rewards are important source of motivation to learn new knowledge as well as the share it with others (Bartol & Srivastava, 2002; Jahani et al., 2011).

Despite the widespread acceptance of reward system, leadership style and knowledge management practices, the current level of knowledge management, rewards system and leadership style is known in a miniature within the education sector of Pakistan. There are very few researches which investigate leadership behavior or styles needed to enhance the extent of knowledge manage-ment practices in organizational settings (i.e. Crawford, 2005; Noruzy et al., 2013; Nguyen & Mohamed, 2009; Singh, 2008; and Tombul, 2011). However, with the exception of rhe research conducted by Crawford (2005), the scope of the above mentioned researches were limited towards specific areas or practices of knowledge management. These researches did not investigate knowl-edge management as a holistic process that involves knowledge creation, sharing, and application. Although we found many researches on different aspects of knowledge management, but no such attention has been given towards the relationship of leadership styles (transformational and transac-tional) with knowledge management (Gelard et al., 2014). Therefore, this study was proposed to check the effect of transformational and transactional leadership styles with knowledge creation, sharing, and application. In addition to a gap of literature between full range leadership styles and practices of knowledge management, relationship between reward system and practices of knowledge management is also at its initial stages. For example, the theoretical framework has been developed recently regarding the reward system for enhancing knowledge sharing (Sajeva, 2014). Sajeva (2014) stated that while researching on knowledge sharing, intrinsic and extrinsic rewards are important to be explored for knowledge sharing. Hence, this study filled a gap by empirically testing a relationship between rewards (intrinsic and extrinsic) and full range leadership styles (Transformational & Trans-actional) with individual level practices of knowledge management (creation, sharing and applica-tion) in education sector of Pakistan. But unfortunately, there is lack of significant leadership role in educational sector of Pakistan, as well as, learning is also at the bottom quartile according to it bencmarks' scores (Hafeez et al., 2013). However it is proved empirically that if knowledge frame-work is applied properly in academia, then it will increase overall learning practices which also contributes towards the enhancement in quality practices (Zaki & Zubairi, 2012). Therefore, this study has adopted education sector, in order to provide a framework which can improve the situation and make education sector more worthwhile and competitive.

Research Objective

This research is intended to investigate the relationship of the rewards (extrinsic & intrinsic) and leadership styles (transformational & transactional) with individual's knowledge management practices (creation, sharing & application).

Literature Review

Knowledge Management

According to Educational KM website (2010), knowledge management is defined as an efficient management of knowledge assets in order to create value. KM basically consists of the processes, initiatives, systems and strategies that maintain and increase the storage, appraisal, sharing, improvement, and creation of the knowledge (Oxford Dictionary, 2015). For organizations in the global competitive environment, knowledge creation, sharing, and application are important activities (Davenport & Prusak, 2000). A Taiwanese scholar, Chen (2014), states that in knowledge society, teacher is professional knowledge worker, who helps in transference, creation, and learning of knowledge. KM has following three components:

Knowledge Creation

Knowledge creation refers to "the activities through which an individual synthesizes existing knowledge to develop new ideas" (Nonaka, 1994; Nevis et al.,1995; Muhammed et al., 2011).

Knowledge Sharing

Knowledge sharing is a process in which knowledge of one individual is transferred to other people in an understandable form which can be used and absorbed by other individuals (Ipe, 2003). Whereas, according to Muhammed et al. (2011) knowledge sharing is done with the help of system documentation by simply exchanging ideas with one another. It specifically entails activities or behaviors involving the transmission of knowledge from one individual to another (Jalal, Toulson, & Tweed, 2010).

Knowledge Application

Knowledge application refers to "the actual utilization of knowledge for productive purposes" (Muhammed et al., 2011). Also, knowledge application is defined in terms of available knowledge which is used or applied at the time of decision making and task performance (Becerra-Fernandez & Sabherwal, 2010).

Reward System

Reward is defined as anything that can reinforce, maintain and strengthen the behavior of individuals in an organization (DeCenzo & Robbins, 2013). According to self-determination theory of motivation (Deci & Ryan, 1985), reward can also be classified into two types like extrinsic and intrinsic rewards (Mottaz, 1985; Mahaney & Lederer, 2006).

Reward System and Knowledge Management

There are many knowledge management enablers which effect the level of knowledge management practices such as, collaboration, mutual trust, incentives/rewards and leadership (Gan et al., 2006). Individual-based reward system is in favor of firm because it encourages workers to share their knowledge (Amayah & Nelson, 2010). Moreover, lack of reward is found to be most dominant hurdle for knowledge sharing among employees in public sector universities (Zawawi et al., 2011). Pee (2012) found that extrinsic rewards created weaker effect as compared to intrinsic rewards on employee's behavior to contribute their knowledge. Additionally, it was confirmed that behaviors of academicians can be varied to share knowledge, because of established reward system (especially intrinsic rewards) and leadership styles prevailing in an organization (Jahani et al., 2011). In short, knowledge sharing behavior of individuals should be recognized and rewarded as well (O'Dell & Hubert, 2011; Wickramasinghe & Widyaratne, 2012). However, if extrinsic motivation is combined with intrinsic motivation in a synergistic way then it can also leads towards the enhancement in the creativity of people, as well as, promote the application of technical knowledge (Amabile, 1993). Consistently, Charoenngam and Teerajetgul (2006) found that incentives and rewards are significant predictors of knowledge creation (Berraies & Chaher, 2014). It was also found that formal reward system of an organization leads towards the increase of knowledge application (Song et al., 2005). Summarizing, it can be said that reward and incentive system are said to be the valuable tool for engaging employees in knowledge management activities (Lawler, 2013). Therefore it is expected that;

H1: Intrinsic rewards positively influence knowledge creation (H1a), knowledge sharing (H1b), and knowledge application (H1c).

H2: Extrinsic rewards positively influence knowledge creation (H2a), knowledge sharing (H2b), and knowledge application (H2c).

Full range leadership model

Interest in leadership started increasing from the beginning of twentieth century which leads to the evolution of many leadership theories starting from Great Man approach to full range leadership including two styles i.e. transformational leadership and transactional leadership (Cherry, 2012).

Leadership Styles and Knowledge Management

Noruzy et al. (2013) found a direct link between transformational leadership, organizational learning and knowledge management. Nguyen and Mohamed (2009) also found a positive association of transactional and transformational leadership styles (full range leadership model) with knowledge management practices in SME of Turkey. However, research by Crawford (2005) found that transformational leadership style is a strong contributor of knowledge management while the transactional behavior is related to KM only to some extent.

Berraies and Chaher (2014) suggested that organizations can enhance the level of knoweldge creation by their human capital, only by having manager who practice best leadership style and have ability to engage employees around a common goal of knowledge creation (Berraies & Chaher, 2014). Initially the leadership in relation to knowledge creation was identified by Nonaka et al. (2001), who stated that "leaders provide the knowledge vision, develop and promote sharing of knowledge assets, create and energise ba and enable and promote the continuous spiral of knowledge creation". Later on, Krogh et al. (2012) and Kumar et al. (2013) develop theoretical framework that identify role of leadership for enhancing knowledge creation processes. They argue that 'establishment of the relationship between leadership styles and knowledge creation is important, because it will help to recognize those leadership activities that promote and enhance the knowledge creation. It will ultimately help organizations to gain competitive edge'. Not only knowledge creation is effected by the role of leader, but it can be noted that knowledge sharing ability of employees is also affected by the leadership styles (Carmeli et al., 2011; Huang et al., 2010). It is important for institutions to share knowledge and to do this; it needs involvement of the leaders (French, 2010). Leaders support greater knowledge sharing so that human resources can develop inspired problem-solving capacity (Abraham, et al., 2013). Tombul (2011) also analyzed the effect of knowledge sharing and leadership styles on police officers performance and supported the relationship between knowledge sharing and perceived transactional and transformational leadership behaviors. But he also stated that knowledge sharing activities were not influenced by other leadership style i.e. laissez-fair. However, Birasnav et al. (2011) suggested that HR managers need to be trained in order to develop behavior of a transformational leader because of the fact that these leaders enhance the level of their followers' creativity and have the greatest potential to involve them in the KM process. Lastly, it was found that management style and position of a team leader have great influence on the learning, as well as, on the application of knowledge (Sarin & McDermott, 2003). Overall, literature provides a support for the relationship between full range leadership styles and dimensions of knowledge management (Analoui et al., 2013). Therefore it is expected that:

H3: Transformational leadership style positively influences knowledge creation (H3a), knowledge sharing (H3b), and knowledge application (H3c).

H4: Transactional leadership style positively influences knowledge creation (H4a), knowledge sharing (H4b), and knowledge application (H4c).
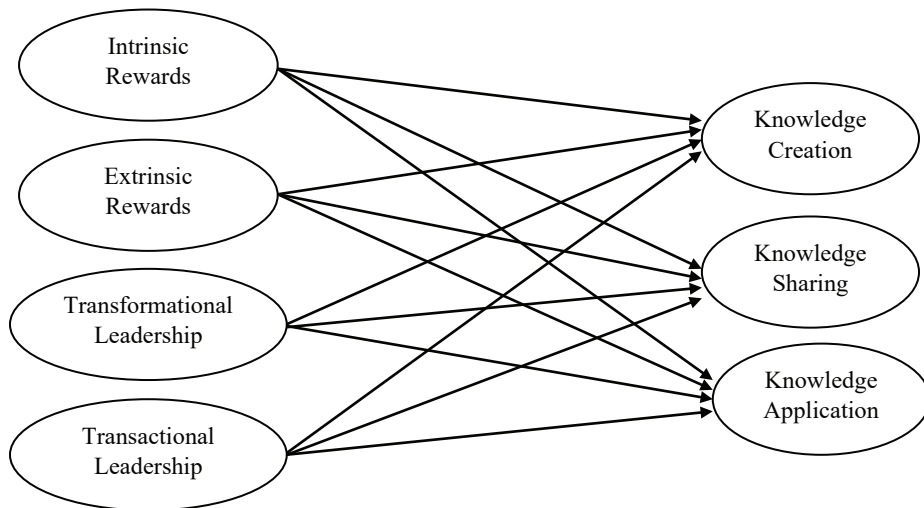
Figure 1: Model of study

Methodology

Sampling

The unit of analysis for this study includes teachers as they are the players in of knowledge creation in any organization (Nonaka & Takeuchi, 1995). Due to unavailability of updated sampling frame, the sample size was drawn with the help of the technique of analysis i.e. SEM. So, for applying SEM, the total number of items was multiplied by ten (Munro, 2012).

Sample Size =   48 x 10 = 480

To draw sample, targeted population of Punjab was divided into 9 clusters according to its divisions. One cluster was chosen from those 9 clusters through simple random sampling. The selected cluster (Gujranwala) was further divided into 6 sub-clusters on the basis of districts. Those districts were further divided into strata's according to the branches of colleges. In order to get 480 respondents, 32 colleges were selected randomly from the list of colleges (Higher Education Department, 2014).

Measures

The measuring instrument i.e. questionnaire designed in two parts. Section-A was designed to ask about the demographic information from the respondents. Demographic information included age, gender, and marital status, level of their education, salary and teaching experience. Section B was designed to measure the impact of rewards and leadership styles on individual's knowledge manage-

ment practices. To measure intrinsic and extrinsic rewards, we adopted already used scale of Mottaz (1985). This well calibrated scale has also been used in various good indexed studies e.g. used by Rehman et al. (2010). The scale for two styles of leadership i.e. transformational and transactional leadership style was adopted from "Multifactor Leadership Questionnaire-5X Short Form" (Bass & Avolio, 1997). This scale was also used in various good indexed studies such as in the study of Analoui et al. (2013), Birasnav et al. (2011), Huang et al. (2010) and Tombul (2011) etc. Lastly, well calibrated scale for measuring individual's knowledge management practices was adopted from Muhammed et al. (2011).

Data Analysis

Demographics

Demographic profile of respondents showed most of the respondents were in the age bracket of 21-30 (208 respondents out of 342) and 31 to 40 (110 respondents). However very few respondents were above 50. We found 51 percent female lecturers and 48.8 percent males in sector of study. Most of the respondents 158 (46.2 Percent) had master's degree and 134 (39.2 Percent) had MS/ M.Phil degree but only 5 (1.5 Percent) respondents had done Ph.D. The salary bracket of 10,001-30,000 was found biggest one (150 respondents). However the second largest salary bracket was 30,001-50,000 (121 respondents). Very few respondents were earning below 10,000 (22 respondents) and above 70,000 (23 respondents). Lastly average job experience of 342 respondents was almost 5 years (5.05 years) with standard deviation of 5.436.

Measurement Model

The measurement model is based on the evaluations of reliability and validity of the measures. Reliability was checked by cronbach's alpha. Value for all variables ranges from 0.751 to 0.872 showing that each measure is reliable as the cutoff value of cronbach's alpha for a reliable construct is considered to be 0.7 according to Chin (1998) cited by Bock et al. (2005). Construct validity including convergent and discriminant validity was also checked. For this study, each latent variable have factor loading values greater than the cut-off point and is therefore considered to be confirmed factor showing the convergent validity of constructs used in the research. Moreover, the correlation between factors of this study was also not excessively high and exhibiting discriminant validity.

Structural Model

Model Fitness Index

Fitness of the model was assessed by evaluating it with the variety of indices or criterions

(see table 1). These criterions indicate that hypothesized relationships in the model under study are good enough to be accepted for its further analysis.

Table 1
Goodness of Fit Indices

	X^2	d.f	X^2/d.f	CFI	GFI	NFI	RMSEA	RMR
Model Values	266.5	110	2.42	0.951	0.910	0.916	0.081	0.057
Recommended			≤3	≥0.9	≥0.9	≥0.9	≤0.08	≥0.05

Hypothetical Analysis

For the testification of the hypothesis, structure equation modeling technique was used. Path coefficients of SEM technique are reported in figure 2. Intrinsic rewards are found to have significant positive relationship with knowledge creation (β = .061, t = 4.206, P = 0.000), knowledge sharing (β = .065, t = 4.456, P = 0.000) and knowledge application (β = .065, t = 4.352, P = 0.000). Thus providing support for the hypotheses H1a, H1b and H1c. Interestingly, the results indicated that extrinsic rewards have no significant relationship with any dimension of individual's knowledge management practices i.e. with knowledge creation (β = .004, t = .199, P = 0.842), knowledge sharing (β = .041, t = 1.917, P = 0.055) and knowledge application (β = .017, t = .764, P = 0.445). Therefore, H2a, H2b and H2c hypotheses does not found support in this study. As expected, transformational leadership found to have significant positive relationship with all dimensions of individual's knowledge management practices i.e. with knowledge creation (β = .233, t = 19.536, P = 0.000), knowledge sharing (β = .189, t = 15.606, P = 0.000) and knowledge application (β = .133, t = 10.759, P = 0.000). Thus providing support for the hypotheses H3a, H3b and H3c. But contrary to expectations, we found significant negative relationship between transactional leadership and two dimensions of individual's knowledge management practices i.e. with knowledge creation (β = -.053, t = -2.379, P = 0.017) and knowledge sharing (β = -.058, t = -2.556, P = 0.011). However, transactional leadership has significant positive effect on knowledge application (β = .082, t = 3.583, P = 0.000). These results provide support for H4c and reject H4a and H4b hypotheses of this research. Following figure exhibits the path coefficients of the research model which indicated the strength of the relationship between constructs.
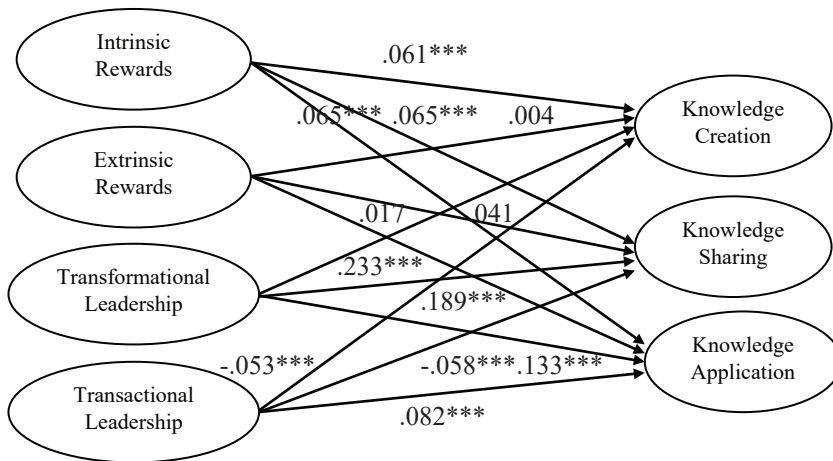
Figure 2: Hypotheses Testing: Full Model (N = 342)

Discussion and Conclusion

The structural relationship of reward system and full range leadership styles with individual knowledge management practices (creation, sharing & application) was analyzed. Findings of this study proposed that a knowledge management practices in an organization is a function of several different aspects, such as leadership styles, and reward system. The findings supported that intrinsic rewards have significant positive relationship with individual's KMP (i.e. creation, sharing and application) in an organization. However, extrinsic rewards were found to have no significant relationship with individual's knowledge management practices i.e. creation, sharing and application of knowledge.

Literature provides strong evidence for the relationship of both types of rewards with individual's knowledge management practices (Bartol & Srivastava, 2002; Berraies & Chaher, 2014). This study also found consistent results with these researches for the relationship between intrinsic rewards and knowledge creation, sharing and application; but we found contrary results for extrinsic rewards. However, these contrary results found support from the latest study conducted by Jahani et al. (2013), who proved that extrinsic rewards does not significantly predict knowledge sharing behavior. There are some other studies which also provide evidence that rewards have insignificant relationship with employee's attitudes towards knowledge sharing (KS) (Seba et al., 2012). It was also suggested that it may be time to revise the motivation theory as a basis for research in KS (Seba et al., 2012). However, this research extended the findings of previous studies by explaining that not only knowledge sharing but knowledge creation and its application are also not affected in the presence of extrinsic rewards within an institution. It is because, financial rewards could only create short-term

effect rather than having long term effects (Huysman & de-Wit, 2002). Hence, in reality knowledge sharing is considered as an essential responsibility by more experienced employees and considered as a part of their work. Thus, they hold a negative perception about the usage of extrinsic rewards for encouraging knowledge sharing behavior among them (constant et al., 1994). The presence of extrinsic rewards can attract only non-intrinsically motivated employee to encourage them for sharing their knowledge (Davenport et al., 2003). Same is the case with knowledge creation and application by employees. Teachers are mostly motivated intrinsically now-a-days (Menyhart, 2008) and did not see extrinsic rewards as an important source of motivation. Another significant contribution of this research study is in the theoretical explanation of intrinsic rewards construct. It is because; intrinsic rewards have operationally defined in terms of; a) task autonomy; b) task significance and; c) task involvement, which can serve as motivators for knowledge creation, knowledge sharing and knowledge application by teachers. Through this, we came to know that intrinsic rewards are important in enhancing knowledge management practices and this can lead to better perception regarding how to create effective reward and recognition systems in an organization for knowledge workers.

Another finding of this study relevant to full range leadership style proves that transformation leadership is a significant contributor in development of knowledge management practices i.e. knowledge creation, sharing and its application. This finding is significant with Berraies and Chaher (2014), Birasnav et al. (2011), Sarin and McDermott (2003) and Tombul (2011). However, Contrary to expectations, transactional leadership has significant negative impact on knowledge creation and sharing but positively affects knowledge application. This can find its support from the study of Crawford (2005) who found that transformational leadership style is a stronger predictor of knowledge management practices then transactional behavior. Crawford (2005) found significant negative correlation between knowledge management practices and management by exception (component of transactional leadership). Moreover, he also did not found support for the overall relationship between knowledge management and transactional leadership. By giving these interesting and conflicting findings, he asked other researchers for further investigation into the relationship. Hence, these finding are extending in this present research by explaining that teachers are not finding any motivation from the transactional behavior of their leaders to create new knowledge or share their knowledge with others. It may be due to the fact that they consciously hoard their knowledge in order to get more rewards from their leader than other employees working in same institution or they may have fear that sharing may reduce or jeopardize their job security. And this fear is not eliminated with the help of transactional behavior of leaders. However, it may be possible that employees use their existing knowledge and apply it in order to make their position better in institution. Therefore, transactional leadership found positive relationship with knowledge application. As we know that transactional leaders exercise their power in order to gain benefits, whereas, followers of these leaders only give performance in exchange of the rewards they receive for their needs (Flood et al., 2000). In short, we found that people are motivated intrinsically and prefer transformational leadership style. Hence, it is proven that intrinsically motivated individuals and followers of transformational leaders plays greater role in enhancing the knowledge management practices i.e. knowledge creation, knowledge sharing and knowledge application.

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