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Relationship between Knowledge Management and Creativity among Teachers of Public and Private Sector Universities at Lahore

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Abstract

The main purpose of this research was to examine the relationship between knowledge management and creativity of university teachers. In this research quantitative research technique and correlational research design was used. The population included teachers from the universities of Lahore that were selected using stratified random sampling. Two close ended questionnaires: Knowledge Management Assessment Tool (KMAT) and Creativity Questionnaire were used to collect data from the respondents. The instruments were validated by using Cronbach's alpha coefficient. A total of 400 questionnaires were distributed, out of which 327 questionnaires were returned. Data were analyzed using descriptive statistics techniques (mean, standard deviation and percentage) and inferential statistics techniques (Pearson r, One-way ANOVA and independent sample t-test). The study shows that there is a positive and significant relationship between knowledge management and its dimensions include process, leadership, culture, technology and measurement with creativity at $p \leq 0.01$. Furthermore, no noteworthy variance was found among university teachers regarding knowledge management in terms of university type, nature of job, designation, teaching experience, qualification, gender and universities. Whereas, a significant variance was found in terms of age. In addition, it revealed that no noteworthy variance was found among university teachers regarding creativity in terms of nature of job, teaching experience, gender, university basis and age. However, a noteworthy variance was found in terms of university type, designation and qualification.

Keywords: Knowledge management, creativity, university teachers

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Introduction

Today, due to the growing development in the fields of science, social issues, economy and policy, issues and concerns of organizations has changed to a new and complex form and has created different expectations. Therefore, the correct application of knowledge potential to solve problems and meet the needs of the organization is necessary, that requires a special management and it is known to knowledge management in literature (Ghorbani, Noghabi, & Nikoukar, 2011). The implementation and execution of knowledge management also need specific modules and well informed executives. Educational organizations and especially the education which prepare forces for the society are located in the center of knowledge creation (Koma & Farabod, 2013).

Knowledge management (KM) is a contemporary approach for every organization, if any organization want to be successful in competitive era they should be based on this approach (Keung, 2006). Today, knowledge management rush to develop its domain on organizations and we can observe newer and more applicable models of knowledge management, however, many organizations do not consider knowledge management and it seems that there is no meaningful and organizational movement in this field especially in educational organizations (Ghorbani, Noghabi, & Nikoukar, 2011).

Knowledge management (KM) is broad and multidiscipline concept. Every researcher has to define this according to their research. But one thing is common in all definitions that are ability to manage knowledge (Chawla & Joshi, 2010). It is a broad view of structure and procedures that depends on the construction, assortment, storage, recovery, spreading and application of association knowledge that is an inter-disciplinary modification in the educational world especially in the administration (Lawson, 2003). There are number of different dimensions of knowledge management but in this study five knowledge management dimensions are explored. These dimensions are presented by American Production and Quality Center and author Anderson which are KM process, leadership, culture, technology, and measurement.

In research of psychology and management creativity is considered as vital factor (Shalley, Zhou, & Oldham, 2007). Hosseini (2001) defined creativity as applying mental abilities in suggestion of old elements to create a valuable and targeted idea or solution. Luthans expressed that creativity is a combination of solutions by individuals or groups in a new way (Hosseini, 2001). According to Moorhead and Griffin (1989) creativity is the process of creating original perspectives and imagination on the situations. They also believed creativity is creation and production of minds through the imagination to illustrate the situation and the important indicator of it, is the strength of the mind in the form of phenomena and situations. Creativity is the ability to apply knowledge to solve problems. Creative synergy occurs when a group of people want to solve their problems through collective mind. Creative people are often spontaneous in nature (Rahimi & Najafi, 2007).

In the era of knowledge, both knowledge management and creativity are taken as the most important and interrelated factors in the long term success of persons and organization. Knowledge collection is scattered in many areas such as library resource, document centers, databases, knowledge bases, and archives around the human mind and agencies. Therefore, its management is required for optimal use of distributed collections to produce new knowledge and information (Ghoreyshi & Ahmadi, 2008). Knowledge management can be used as an alternative strategy to assist teachers with the related skills to deal with challenges to improve performance in universities as well as commercial sectors. In the beginning, for applying knowledge in practice, teachers' understanding of knowledge management is very important (Chu, Wang, & Yuan, 2011). Universities with a large population of students and teachers are known as the most important breeding ground of society intellectual and knowledge capital. Education invests in people intellectual capital and the role of university administrators in this regard is very important. Carol believed that knowledge management in universities is a challenge that we need to consider (Salgi, 2011).

Review of the Related Studies

After investigation and study to collect results and summary from researches conducted in Iran, Malaysia, UK, India and other countries research topic which is exactly identical with the subject of this research was not found, but a brief summary of closest research conducted is found in agreement with topics of this study, which are mentioned here.

A research conducted by Rahimi (2011) in Iran with title surveying relationship between knowledge management process and creativity among teachers of Esfahan University reached the conclusion that there are positive and noteworthy association between the dimensions of knowledge management and creativity and there are not noteworthy variance between mean of knowledge management in university teachers in term of gender, age and field of study and also between mean of the creativity rate of university teachers in terms of age, education and employment status.

The research conducted by Nayer and Jokar (2012) with title "Association between knowledge management and creativity among librarians in academic libraries in Shiraz" reached the conclusion that there is a positive and noteworthy association coefficient 0.261 at the level of 0.01 between knowledge management and creativity, in addition between component scores of people and culture in knowledge management of librarians with their creativity score there is not a significant relationship and gender, work experience and education of librarians has no significant effect on creativity.

According to Ansari (2011) research with title "Knowledge management and creativity in physical education department of Tehran province" concluded that knowledge management and creativity in general office is average and there is positive and significant relationship between knowledge management and creativity and among four dimensions of knowledge management, externalizing and socializing has a significant relationship with creativity.

Azari, Baryamani and Gholikani (2011) in research with the title "Investigate the role of knowledge management on creativity of manager in secondary schools" reached the conclusion that there is a relationship between knowledge management, knowledge refinement, knowledge organizing, knowledge application and knowledge dissemination with creativity of teachers but there is no relationship between knowledge perception and teachers creativity. Also impact of knowledge management is not different on the creativity female and male teachers.

Mosloo and Abbasi (2009) in their study titled "Investigate the role of knowledge management in public organizations to improve employees creativity (Case study: Hospital Sadoughi) reached the conclusion that there is a significant relationship between creativity and organizational knowledge management in among knowledge workers of hospital. There is a significant and positive correlation between creativity and organizational knowledge acquisition, registration of the organizational knowledge, organizational knowledge transfer, organizational knowledge creation and application of organizational knowledge.

Ardakani, Damaki, Nasab and Golkarieh (2008) in research with the title "Investigate of the correlation rate between commitment to knowledge management and employees creativity (case study: Yazd University employees) reached the conclusion that there is significant correlation between knowledge management and creativity.

Objective of the Study

The objective of this study was to investigate the relationship between knowledge management and creativity of university teachers in public and private sector Universities at Lahore.

Research Hypotheses

The following research hypotheses were formulated to achieve the above mentioned objective:

$\boldsymbol{H_1}$**:** There is a significant relationship between knowledge management and creativity of university teachers in Lahore

H_2: There is a significant relationship between knowledge management process and creativity of university teachers

H_3: There is a significant relationship between leadership in knowledge management and creativity of university teachers

H_4: There is a significant relationship between knowledge management culture and creativity of university teachers

H_5: There is a significant relationship between knowledge management technology and creativity of university teachers

H_6: There is a significant relationship between knowledge management measurement and creativity of university teachers

H_7: There is a significant difference between knowledge management and creativity of university teachers in terms of demographic variables (gender, age, qualification, teaching experience, designation, nature of job, university type and university).

Methodology

In this research quantitative research technique and correlational research design was used to explore the relationship between knowledge management and creativity among teachers of public and private sector universities in Lahore. The population of the study consisted of all the public (10) and private sector (14) Higher Education Commission recognized universities of Lahore. Multistage stratified random sampling technique was used to select the sample. At first stage three universities each between public and private sector were selected randomly. At the second stage faculties were selected randomly from those universities. At the third stage departments were randomly selected and at the last stage teachers were randomly selected. Two close ended questionnaires Knowledge Management Assessment Tool (KMAT, 1995) developed by the American Productivity and Quality Center and Arthur Anderson and Creativity Questionnaire developed by Rahmini (2011) with Likert type scales were used to collect data from the respondents. The instruments were validated by using Cronbach's alpha coefficient and confirmed reliability of Knowledge Management Assessment Tool (0.92) and creativity questionnaire (0.85). A total of 400 questionnaires were distributed, out of which 327 questionnaires were returned. The respondents were requested to tick one of the given five options of every question. The options were, Strongly Disagree (SD) = 1, Disagree (D) = 2, Neutral (N) = 3, Agree (A) = 4, and Strongly Agree (SA) = 5. The researcher visited each university personally, distributed the instruments to the subjects and explained to subjects if needed. The ethical considerations were met during the data collection. In the data collection phase, permission was obtained from the heads of institutions or their representatives to collect data from employees at their institutions.

Data were analyzed using descriptive and inferential statistical techniques. Descriptive statistics techniques were applied to find out mean, standard deviation and percentage. While inferential statistics techniques, Pearson product moment correlation (Pearson r) were applied to find out the relationship between knowledge management and creativity among teachers of public and private sector universities at Lahore, whereas t-test was applied to compare the difference between public and private sector universities. One-way ANOVA and independent t-test were applied on the demographic variables like gender, age, qualification, faculty, teaching experience, designation, nature of job, university type and universities name.

Results

Table 1

Frequency and Percentage of Demographical Variables

Variables	Frequency	Percentage
Gender of teachers		
Male	161	49.2
Female	166	50.8
Age		
20-30 years	140	42.8
30-40 years	132	40.4
30-40 years	35	10.7
More than 50 years	20	6.1
Qualification of teachers		
Master	76	23.2
M. Phil	154	47.1
Ph.D	97	29.7
Teaching experience		
1-5	160	48.9
5-10	82	25.1
10-15	44	13.5
Above 15	41	12.5
Designation		
Lecturer	171	52.3
Assistant Professor	120	36.7
Associate Professor	19	5.8
Professor	17	5.2
Nature of job		
Permanent	252	77.1
Contract	75	22.9

University type		
Public	191	58.4
Private	136	41.6
Universities		
University of the Punjab	77	23.5
Lahore College for Women University	54	16.5
University of Engineering & Technology	60	18.3
University of Lahore	76	23.2
University of South Asia	30	9.2
Minhaj University	30	9.2

This section deals with the details of demographic variables. Table 1 indicate that 49.2% males and 50.8% females participated in this study. As for as age of the participants are concerned, 42.8% were between 20-30 years, 40.4% were between 30-40 years, 10.7% were 40-50 years and only 6.1% were having ages more than 50 years. Whereas the matter of education is concerned 23.2% were having Master degree, 47.1%M. Phil and 29.7% Ph. D. While detail of teaching experiences 48.9 % were having experience between 1- 5 years, 25% were 5-10 years, 13.5% were 10-15 years and only 12.5% were having more than 15 years teaching experience. In this research the results of designation of university teachers' 52.3% lecturers, 36.7%Assistant Professors, 5.8% Associate Professors and only 5.2% were Professors. In those above mentioned demographic detail 58.4% were from public, 41.6% were from private universities, 77.1%were permanent and 22.9% were on contract basis. Details of universities are given in table 1 at the end.

Table 2

Summary of relationship between knowledge management and component of knowledge management with creativity of university faculty members

	Variables	*R*	*p*-value	Hypotheses
H_1	KM and Creativity	.300 (**)	.000	Accepted
H_2	KMP and Creativity	.329 (**)	.000	Accepted
H_3	LKM and creativity	.399 (**)	.000	Accepted
H_4	KMC and Creativity	.390 (**)	.000	Accepted
H_5	KMT and Creativity	.919 (**)	.001	Accepted
H_6	KMM and Creativity	.392 (**)	.000	Accepted

**Correlation is significant at the 0.01 level (2-tailed).

The strength of the relationship between knowledge management and creativity is r = .392 (**) and p-value is .000. It shows that a significant moderate relationship exists between knowledge management and creativity at $p \leq 0.01$. Therefore, first research hypothesis is accepted.

The table2 shows that the degree of the association between knowledge management process and creativity is r = .300 (**) and p-value is .000. It is concluded that there exists a noteworthy slight association between knowledge management process and creativity at $p \leq 0.01$. Therefore, the second research hypothesis is also accepted.

The value of association between leadership in knowledge management and creativity is r =.329 (**) and p-value is.000. It indicates that there exists a noteworthy slight association between leadership in knowledge management and creativity at $p \leq 0.01$. Therefore, third research hypothesis is also accepted.

The strength of the association between knowledge management culture and creativity r =.399 (**) and p-value is .000. It is further concluded that there exists a noteworthy moderate association between knowledge management culture and creativity at $p \leq 0.01$. Therefore, fourth research hypothesis is accepted.

The strength of the association between knowledge management technology and creativity is r = .390 (**) and p-value is .000. It is stated that there exists a noteworthy moderate association between knowledge management technology and creativity at $p \leq 0.01$. So fifth research hypothesis is also accepted

The strength of the association between knowledge management measurement and creativity is r =.919 (**) and p-value is .000. It shows that there also exists a significant very strong association between knowledge management measurement and creativity at $p \leq 0.01$. Therefore, sixth research hypothesis is also accepted.

Findings of the last research hypothesis states that there is no noteworthy variance found among teachers of public and private universities regarding knowledge management in term of university type, nature of job, designation, teaching experience, qualification and gender. Whereas, noteworthy variance found among university teachers regarding knowledge management in term of ages. It is reveled from the study that there is no noteworthy variance found among university teachers regarding creativity in terms of nature of job, teaching experience, gender, university basis and age. In addition, a noteworthy variance was found among university teachers regarding creativity in terms of university type, designation and qualification.

Discussion

1. First hypothesis stated is that there is significant relationship between knowledge management and creativity of university teachers.

The finding shows that the strength of the association between knowledge management and creativity is r = .392 (**) and p-value is .000, which shows that a significant moderate relationship exists between knowledge management and creativity at $p \leq 0.01$. The result of this hypothesis confirms the results of Ansari's study (2011) who examined the association between knowledge management and creativity in the physical education department of Tehran, showed noteworthy association between knowledge management and creativity. Result of present study is also consistent with results of Nayerand Jokar (2012); Ansari (2011); Mosloo (2009); Ardakani (2008); Rahimi (2012). The results of all of these studies indicate that there is a significant positive association between knowledge management and creativity. Also according to results of Najm (2009) and Amani (2008) there is a noteworthy positive association between knowledge management and creativity therefore results of this study are consistent with their research. Furthermore, in a study conducted by Najm (2009) results one of the hypotheses showed variables of organizational culture, organizational learning and knowledge management has a direct effect and association, significant with creativity variable of schools managers in Tehran. Then this study also showed that there is a positive and noteworthy association between knowledge management and creativity that is consistent with present study. In explaining this, it can be said that knowledge management is one of the important factors on the creativity of university teachers.

2. Second hypothesis stated is that there is significant relationship between knowledge management process and creativity of university teachers

The result of second hypothesis denotes that the degree of the association between knowledge management process and creativity is r = .300 (**) and p-value is .000. It is concluded that there exists a noteworthy association between knowledge management process and creativity at $p \leq 0.01$. The result of this hypothesis is supported by the result of Rahimi and his colleague research finding. Rahimi (2011) research in examining the association between knowledge management processes and creativity of university teachers, has shown a noteworthy and positive correlation between degree of knowledge management process and creativity. The mean of faculty members about knowledge management based on department, age and gender and also between the mean of university teachers about creativity based on age, faculty and designation is not a significant difference.

3. Third hypothesis stated that there is significant relationship between leadership in knowledge management and creativity of university teachers

The value of association between leadership in knowledge management and creativity is *r*=.329 (**) and *p*-value is.000, it indicates a noteworthy slight association between leadership in knowledge management and creativity at $p \leq 0.01$. The result of this hypothesis are supported by the result of Hind and his colleague research finding. Hind (2008) study is about the association between knowledge management and the role of creativity and innovation in higher education centers (quoted by Niknami and others, 2009), showing a positive significant relationship among knowledge management variables , innovation and creativity and also coefficient of creativity and innovation in knowledge management together, can explain 25% of variance.

Karimi (2012) in a study entitled the association between knowledge management and creativity of secondary school principals in Rasht come to the conclusion that a positive and noteworthy association exists among knowledge management, its aspects and creativity. Stepwise regression analysis results also showed that knowledge management (all elements together) is effective on creativity and the criterion variable has predictive power. Coefficient of determination showed that about 42% of creativity variable could be explained by the knowledge management.

4. Fourth research hypothesis stated that there is significant relationship between knowledge management culture and creativity of university teachers

The outcomes show that the strength of the association between knowledge management culture and creativity *r* =.399 (**) and *p*-value is .000. Further it is concluded a noteworthy moderate association between knowledge management culture and creativity at $p \leq 0.01$. The result of this hypothesis is aligned with the result of Nayyer and Jokar research findings. Nayyer and Jokar research (2012), to examine the association between knowledge management and creativity among academic librarians in Shiraz has been suggested that there was a strong association between knowledge management and innovation.

5. Fifth research hypothesis stated that there is significant relationship between knowledge management technology and creativity of university teachers

The result indicates that the strength of the association between knowledge management technology and creativity is *r*= .390 (**) and *p*-value is .000, It is stated a noteworthy moderate association between knowledge management technology and creativity at $p \leq 0.01$. These findings supported by the Nayyer and Jokar (2011) research on the role of knowledge management on innovative teachers in secondary schools have shown, there exists a relationship between knowledge management (refinement, organization, technology, application) and distribution with teachers' creativity.

6. Sixth research hypothesis stated that there is significant relationship between knowledge management measurement and creativity of university teachers

The finding of this research hypothesis denotes that the strength of the association between knowledge management measurement and creativity is r =.919 (**). It shows that there also exists a significant very strong association between knowledge management measurement and creativity at $p \leq 0.01$. Similar results found research conducted by Mosloo (2009) on the importance of knowledge management in promotion of employees creativity in public organizations has shown a positive and noteworthy association among creativity and knowledge management and its dimensions including; organizational knowledge acquisition, registration, transfer, creation and application of hospitals knowledge employees. Ardakani study (2008) to investigate the correlation between degree of commitment to knowledge management and creativity of Yazd University employees has shown a noteworthy correlation between knowledge management and creativity.

Findings of last the research hypothesis states that there is no noteworthy variance found among university teachers regarding knowledge management in term of university type, nature of job, designation, teaching experience, qualification, gender and universities. Whereas, noteworthy variance found among university teachers regarding knowledge management in term of ages. It is reveled from the study that there is no noteworthy variance found among university teachers regarding creativity in terms of nature of job, teaching experience, gender, university basis and age. In addition a noteworthy variance found among university teachers regarding creativity in terms of university type, designation and qualification. These findings confirm the results of Rahmini (2011) which shows a similar result that there is the mean of faculty members' knowledge management based on gender, age and department and also between the mean of university teachers about creativity based on age, department and designation is not a significant difference.

Conclusions

It is concluded that there exists a noteworthy moderately strong association between knowledge management and creativity at $p \leq 0.01$.The results also indicates a noteworthy and positive association exists between knowledge management dimensions (process, leadership, culture, technology and measurement) and creativity of university teachers. Furthermore, no noteworthy variance found among university teachers regarding knowledge management in term of university type, nature of job, designation, teaching experience, qualification, gender and universities. Whereas, a significant variance found among university teachers regarding knowledge management in term of ages. It is revealed from the study, no noteworthy variance found among university teachers

regarding creativity in terms of nature of job, teaching experience, gender, university basis and age. In addition, a noteworthy variance was found among university teachers regarding creativity in terms of university type, designation and qualification.

Recommendations

Findings of this study showed a significant positive relationship between knowledge management and creativity of university teachers. In the light of findings following recommendations are suggested.

The role of knowledge management for university teachers should describe and the importance of knowledge sharing in achieving the goals of the organization to teachers during training courses or administrative sessions should understand them. In addition trying to establish atmosphere of trust and security, budget to encourage the teachers who will share their knowledge. Various technologies include work with Internet, internal network (intranet), e-mail, and databases be trained in order to enhance skill acquisition and storage knowledge to teachers.

It is better teacher in this field have received the necessary training and be making culture for them that they can along with creating trust and encourage the timely teachers who will share their knowledge, they use from its legal powers to influence colleagues in order to knowledge sharing. Furthermore, observed that observance of copyright and intellectual property related to knowledge culture component the among university teachers has not high value such a right to respect for someone who will respect and consider rewarding for them. It is suggested that in addition will make culture in this field.

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