AN ASSESSMNT OF KNOWLEDGE SHARING AMONG ACADEMICS IN BAYERO UNIVERSITY, KANO, KANO STATE, NIGERIA

KABIRU DAHIRU ABBAS, *PhD*

Department of Library and Information Sciences,

Bayero University, Kano.

P.M.B. 3011

kdabbas.lis@buk.edu.ng

ABSTRACT

The paper aims to investigate the phenomenon of knowledge sharing among academic staff in Bayero University, Kano, Nigeria using quantitative approach through questionnaire, administered randomly on one hundred and twenty (120) academic to collect data for the study. The study found the evidence of knowledge sharing among academics in the university through workshops, seminars and conferences, membership of professional associations/societies and postgraduate thesis supervision. The findings further show that phone (both landline and mobile), instant messaging/chat, LinkedIn and face-to-face interaction were the means of communication among academics. The study serves as a source of encouragement for the Universities and their lecturers in Nigeria to re-evaluate and re-strategise the present scenario, particularly regarding use of sophisticated technologies to increase awareness, communication and networking for improved research and teaching activities. Knowledge sharing as critical factor in the survival of educational institutions across the globe, Bayero University, Kano academics, in particular and academics all over the country, are encouraged to foster collaborations and synergies in order to boost scholarship and knowledge production. The main contribution of this paper is that it investigated the knowledge sharing activities in Bayero University, Kano, thereby created awareness on the for collaboration and communication among academics.

Keywords: Knowledge sharing, Knowledge dissemination, Scholarly communication, Academic staff, Bayero University, Kano.

Introduction

Bayero University, Kano as one of the forty (40) Nigeria's federal government-owned universities, became a full-pledge university in 1977, when it was renamed from Bayero University College under the then Ahmadu Bello University, Zaria to a full university status. At present, B.U.K. has nine (9) Faculties with a student population of thirty seven thousand, seven hundred and forty seven (37 747) and one thousand and sixty (1 060) academic staff. Knowledge sharing (KS) refers to the process by which team members share ideas that are task-related, information, improvements as well as suggestions with one another. Knowledge, whose validity has been recognized through testing, has emerged as a strategically significant resource of firms (Liebeskind, 1996). Therefore, knowledge management has become an important factor to gain and sustain a firm's competitive advantage. More importantly, KM is the process of capturing, sharing, storing and using knowledge. As such, a major management issue is the method used to convert individual knowledge into organizational knowledge, since organizational knowledge is essentially created and inherently resides in individuals. Besides that, the other issue

concerns the combination and control of organizational knowledge resulting in successful organizational performance.

Knowledge sharing is normally supported by knowledge exchange through information technology (Liao, Fei and Chen, 2007). The ability of information technology to enhance knowledge access to academics and facilitate collaborative work would help universities, especially in Nigeria to enhance productivity in addition to promoting knowledge sharing. In addition, collaboration with other scholars and stakeholders would be invaluable in improving knowledge sharing capabilities in knowledge organisations (Inkpen and Beamish, 1997). By integrating knowledge in different parts of the firm, reduced redundancy, a more consistent representation, and better efficiency can be realized (Davenport and Klahr, 1998; Grant, 1996).

Statement of the Problem

Knowledge-sharing is vital for the survival of academic institutions in a dynamic economy. Shared knowledge keeps the organisation alive and is used as a reference for future use by employees of the organisation. Shared knowledge allows learning and re-examination of the knowledge that was created, which is necessary for the organisation to have a competitive advantage (Munyua, 2011). Employees thus become innovative and there is quick responsiveness by the organization to new situations. Knowledge-sharing amongst employees contributes to the creation of new knowledge in the organisation, which is a critical activity that contributes to the success of the organisation as new knowledge becomes available for everyone in the organisation to take advantage of. This may lead to innovative initiatives within the organization, giving the company an advantage in the competitive world (Nonaka, 1991). As knowledge is shared, people are no longer mere receivers of the new knowledge; instead, they become innovative actors with the new knowledge which makes it more context-specific to different situations.

However, in Nigeria, knowledge sharing among academics in universities has been severely hampered due to inadequate awareness about the importance of knowledge sharing in academic community and poor attitude of academic staff to the ideal of sharing knowledge with one another (Lawal, Agboola,, Aderibigbe, Owolabi and Bakare, 2014). Based on these scenarios, the present study focuses on the following;

- Determine how academics in Bayero University, Kano interact and share knowledge with colleagues within and outside the university; and.
- Identify the means of communication and collaboration among the academics in the university.

Review of related literature

According to Niang (1995), the transfer of technology was synonymous that of transfer of knowledge and expertise. According to Davenport and Prusak (1997), the key purpose of information is to inform people. However, knowledge and information resources can only be drawn on for use if they are communicated and exchanged to satisfy the information needs of the recipient (Drucker, 1999; Vikas Nath, 2000). As pointed out by Powell (2003) it is the flow and exchange of information that determine the use of information and the creation of value. Dervin (2003) viewed as a thing that can be manufactured, processed or transmitted and as construction. Both approaches are useful to informing human beings. As stressed by Smith (2005), there is no single right way of sharing knowledge, but, rather, knowledge sharing activities are determined by how individuals and groups feel about the process and the network of people they socialise with.

In a study to assess the impact of technology on knowledge sharing in transnational organisations using standard literature reviews, plus illustrations from case organisations, Coakes (2006) demonstrated that transnational organisations have specific issues relating to space and time, and increasingly virtuality, in

their working practices. Technology can assist in alleviating these issues and can provide the organisations with ways to share and distribute knowledge throughout their processes, sites and workforces. Successful knowledge management, however, continues to need a sociotechnical approach, where the social aspects of knowledge creation, storage and sharing need to be considered alongside the technical. Sociotechnical theory tells us we must importantly consider people, tasks, processes, and the environment (both internal and external), when considering how best to implement technology into our organisations.

In a divergent argument, Kang and Kim (2013), in a study of knowledge transfer, used hierarchical multiple regression to analyse survey responses from 337 R&D employees. The results of the study revealed that facilitating social networks among employees is not enough for active knowledge transfer. Each employee should be guided to connect to the right experts who have the right knowledge (i.e. embedded resources) for his or her job. This is consistent with one of the tenets of KM (learning by doing) and the source of tacit knowledge in organisations. Storga, Mostashari and Stankovic (2013) used recursive analysis of email interactions, network expansion and network configuration to study electronic knowledge transfer in a non-governmental international organisation. The results of the study indicate that content structure of electronic knowledge networks exhibits hierarchical and centralised tendencies. The social network analysis results suggest that an international non-governmental organisation (INGO) exhibits non-hierarchical and decentralised structure of the individuals contributing to the discussion lists. To investigate the factors that affect knowledge transfer and sharing in public sector organisations, Amayah (2013) used a quantitative research method. The findings were that community-related considerations, normative considerations and personal benefits were three motivators found to have a unique contribution to the variance in knowledge sharing. The following enablers had a significant main effect on knowledge sharing: social interaction, rewards and organisational support. Two barriers, degree of courage and degree of empathy, which measured the organisational climate, were found to have a significant effect on knowledge sharing. The interaction of normative consideration with social interaction, personal benefit with organisational support and normative considerations with degree of courage had a moderating effect on the relationship between motivating factors and knowledge sharing. Connell and Voola (2013) examined how - and whether - members of an industry cluster share knowledge through networking as a means of improving competitive advantage and, in particular, whether trust is present in the knowledge-sharing process. The study used three surveys utilising a relationship marketing orientation (RMO) that were conducted at intervals (in 2004, 2008 and 2010), in addition to interviews with key cluster members, which were also conducted over a seven-year period. The results showed that knowledge sharing and integration were found to mediate the relationship between RMO and competitive advantage in 2004 and 2010, but not in 2008. Lower mean scores for trust were found in 2008. Mura, Lettieri, Radaelli and Spiller (2013) used six hypotheses from the literature, grounded and tested among 198 employees of four hospices and palliative care organisations (H&PCOs) for dying cancer patients to study the relevance of engaging employees in knowledge-sharing behaviors in order to improve current operations. The study had three main results. First, the authors found a positive role of knowledge-sharing behaviors in affecting sharers' innovativeness, in terms of propensity and capacity to promote and implement new ideas. Second, sharing best practices and sharing mistakes are two distinct drivers of individuals' innovativeness. Third, individuals' perceptions of social capital have a relevant moderation effect on the linkage between knowledge sharing and innovative behavior.

Methodology
The main methodologies or research approaches in social research include the quantitative, the qualitative (Myers, 1997; Babbie and Mouton, 2001; Creswell, 2003; Sheppard, 2004) and mixed methods research (Creswell and Plano, 2007; Greene, 2008; Teddlie and Tashakkori, 2009). In the present study, the methodology adopted was the quantitative method of data collection using questionnaire in which one

hundred and twenty (120) academic staff were randomly selected from a population of one thousand and sixty (1 060), accounting for about 12% of academic staff in the university.

Generally, the questionnaire was organised in sections A-C, covering questions 1-9. The issues covered the following themes: collaboration among academics; nature of collaboration; knowledge sharing among academics; means of communication for research and teaching.

The data collected from the survey (questionnaire) were sorted, scrutinised, edited and analysed using the Statistical Package for Social Sciences (SPSS) version 20.0 for Windows 7 to generate descriptive statistics, including percentages and frequencies. The frequency and percentage displayed a number of occurrences side-by-side with the corresponding percentage, as well as relating this to the variables used in the research
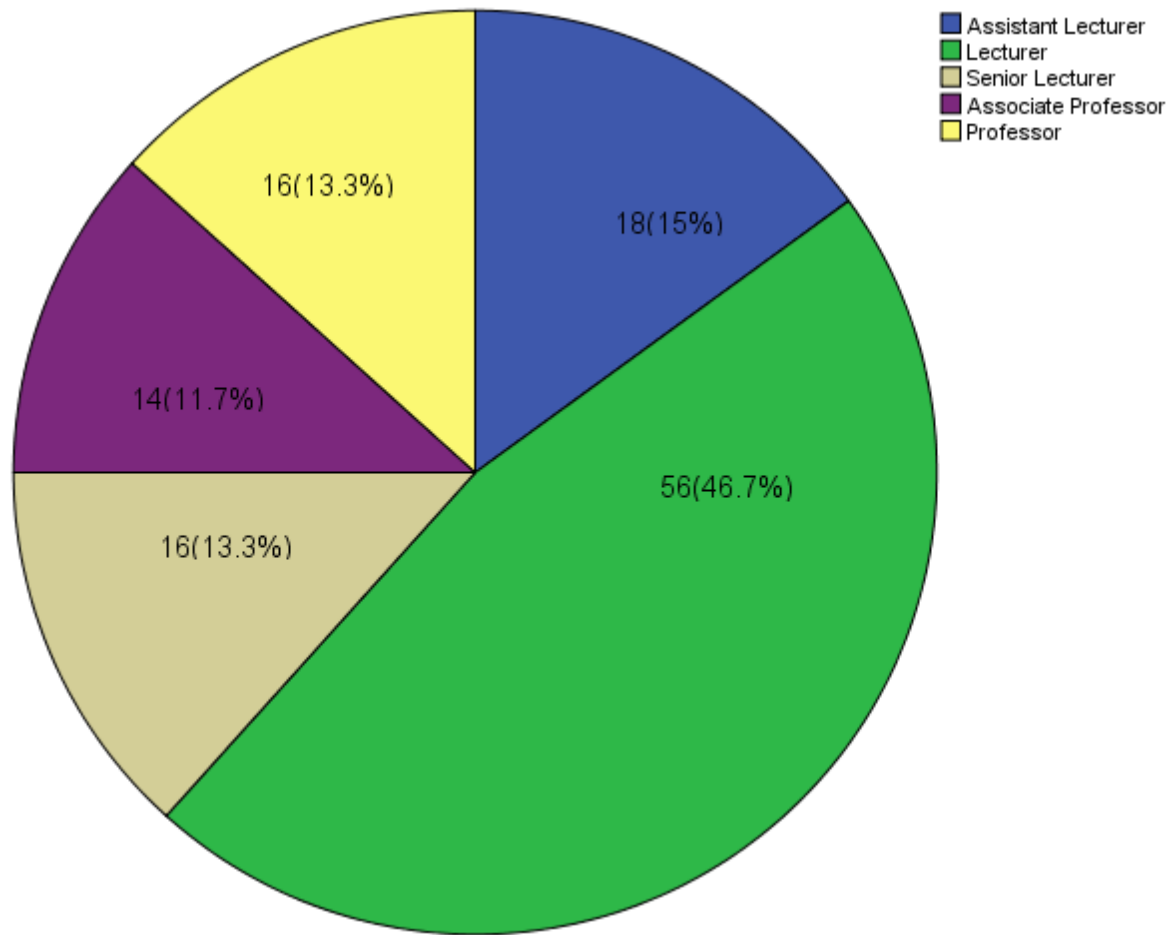
Results and analysis

Profile of respondents

In this segment, the respondents' profile, namely gender, educational qualification, academic rank and discipline are presented.

Table 1 Gender and academic qualification of respondents

	Freq	%	Valid %	Cumulative %
Gender of Respondents				
Male	89	74.2	74.2	74.2
Female	31	25.8	25.8	100.0
Total	120	100.0	100.0	
Academic Qualification				
Master's Degree	83	69.2	69.2	69.2
PhD	37	30.8	30.8	100.0
Total	120	100.0	100.0	

Based on the findings, 89(74.2%) were male academics, while 31(25.8%) were females, while the educational qualification of the respondents reveals that 83(69.2%) were holders of Master's degree, while 37(30.0%) have Doctor of Philosophy degrees.

Figure 1 Academic rank of respondents

The distribution of respondents in Figure 1 by academic rank show that 18(15%) were at the rank of assistant lecturer, 56(46.7%) were either lecturer I or lecturer II, while 16(13.3%) were senior lecturers. The analysis further reveal that 14(11.7%) of the respondents were associate professors, while 16(13.3%) were full pledge professors in the university. The results show that majority of the respondents were at the medium level of lecturer I and lecturer II. The results confirmed the findings in Table 2 in which majority of the respondents were holders of Master's degree.

Table 2 Discipline of respondents

Discipline of Respondents			
	Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Agriculture	29	24.2	24.2	24.2
Humanities/Social Sciences	37	30.8	30.8	55.0
Medical Sciences	24	20.0	20.0	75.0
Science/Technology	30	25.0	25.0	100.0
Total	120	100.0	100.0	

The results in Table 2 show that 29(24.2%) were in the discipline of agricultural sciences, 37(30.8%) in the humanities and social sciences, while 24(20%) were academics based in medical sciences. The findings further reveal that 30(25%) of the respondents were lecturers in science and technology

disciplines of the university. The results show that majority 37(30%) of the respondents were in the field of humanities and social science disciplines of the university.

Interaction and sharing of knowledge
The study investigated the knowledge sharing activities through interactions among academics in the university.

Membership of professional association/society
The respondents were asked to state whether or not they belong to any professional association/society, as one of the determinants of knowledge sharing through interactions with professional colleagues.

The study found that 17(14.2%) of the respondents does not belong to any professional association/society, while 103(85.8%) were members of their respective associations/societies. This suggests the existence of knowledge sharing avenues for the academics across the university because of the opportunities to exchange knowledge and research through seminars, workshops and conferences.

Interactions with colleagues on scholarly matters
The respondents were asked to describe their interaction with colleagues on scholarly matters for the purpose of knowledge sharing and exchange of ideas. The results are found in Table 3.

Table 3 Interaction with colleagues on scholarly matters

Discussing ideas, solutions and scientific proposal with colleagues			
	Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Rarely	5	4.2	4.2	4.2
Sometimes	50	41.7	41.7	45.8
Always	65	54.2	54.2	100.0
Total	120	100.0	100.0	
Holding of professional meetings with colleagues in department based on a pre-planned schedule			
Rarely	44	36.7	36.7	36.7
Sometimes	63	52.5	52.5	89.2
Always	13	10.8	10.8	100.0
Total	120	100.0	100.0	
Holding of professional meetings with colleagues from other departments based on pre-planned schedule			
Rarely	70	58.3	58.3	58.3
Sometimes	50	41.7	41.7	100.0
Total	120	100.0	100.0	
Willingness of colleagues to share knowledge and resources with others			
Rarely	24	20.0	20.0	20.0
Sometimes	57	47.5	47.5	67.5
Always	39	32.5	32.5	100.0
Total	120	100.0	100.0	

Based on the findings: discussing ideas, solutions and scientific proposal with colleagues was cited by 5(4.2%) as rarely, 50(41.7%) sometimes, while 65(54.2%) always; holding of professional meetings with colleagues in your department based on a pre-planned schedule 44(36.7%) rarely, 63(52.5%) sometimes and 13(10.8%) always; holding of professional meetings with colleagues from other departments based on a pre-planned schedule 70(58.3%) rarely, 50(41.7%) sometimes; colleagues sharing knowledge and resources with others 24(20%) rarely, 57(47.5%) sometimes and 39(32.5%) always.

Collaboration and communication
This section investigated the phenomenon of collaboration and communication among academics both within and outside their respective departments for knowledge sharing and dissemination.

Collaboration with colleagues
The study sought to determine whether or not academics collaborate with each other for the purpose of knowledge sharing. The findings revealed that 24(20%) were not collaborating with colleagues, while 96(80%) believe they are collaborating with their colleagues on scholarship and knowledge sharing. The findings show that majority of the respondents are engaged in one collaboration or another for the growth of knowledge through knowledge sharing and cross fertilization of ideas.

Nature of collaboration among academics
The respondents were asked to state the nature of collaboration they are engaged in with colleagues. The findings are found in Table 4.

Table 4: Nature of collaboration

Publishing/writing articles			
	Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
No	78	65.0	65.0	65.0
Yes	42	35.0	35.0	100.0
Total	120	100.0	100.0	
Data collection				
No	82	68.3	68.3	68.3
Yes	38	31.7	31.7	100.0
Total	120	100.0	100.0	
Sharing data				
No	91	75.8	75.8	75.8
Yes	29	24.2	24.2	100.0
Total	120	100.0	100.0	
Data analysis				
No	100	83.3	83.3	83.3
Yes	20	16.7	16.7	100.0
Total	120	100.0	100.0	
Supervision				
No	55	45.8	45.8	45.8
Yes	65	54.2	54.2	100.0
Total	120	100.0	100.0	
Workshops/Seminar presentations				
No	19	15.8	15.8	15.8
Yes	101	84.2	84.2	100.0
Total	120	100.0	100.0	

The responses in Table 4 show the nature of collaboration among academics in Bayero University, Kano, as thus: publishing/writing article, 78(65%) responded no, while 42(35%) said yes; data collection 82(68.3%) said no and 38(31.7%) claimed yes; sharing data 91(75.8%) were not collaborating, while 29(24.2%) believed yes; data analysis 100(83.3%) claimed no, while 20(16.7%) claimed yes; supervision 55(45.8%) no and 65(54.2%) believed yes; workshops/seminar presentations 19(15.8%) no, while 101(84.2%) claimed yes.

Means of communication for teaching and research

The study investigated the means through which academics communicate with one another for facilitation of their teaching and research activities. The findings rest indicated in Table 5

Table 5: Means of Communication

Phone i.e. landline and mobile			
	Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Not important	1	.8	.8	.8
Moderately important	12	10.0	10.0	10.8
Important	59	49.2	49.2	60.0
Very important	48	40.0	40.0	100.0
Total	120	100.0	100.0	
Email				
Not important	10	8.3	8.3	8.3
Moderately important	66	55.0	55.0	63.3
Important	30	25.0	25.0	88.3
Very Important	14	11.7	11.7	100.0
Total	120	100.0	100.0	
Web forums/blogs/wikis				
Not important	11	9.2	9.2	9.2
Moderately important	46	38.3	38.3	47.5
Important	46	38.3	38.3	85.8
Very important	17	14.2	14.2	100.0
Total	120	100.0	100.0	
Instant messaging service/chat				
Not important	2	1.7	1.7	1.7
Moderately important	15	12.5	12.5	14.2
Important	87	72.5	72.5	86.7
Very important	16	13.3	13.3	100.0
Total	120	100.0	100.0	
VOIP e.g. Skype, Google talk, Viber				
Moderately important	40	33.3	33.3	33.3
Important	62	51.7	51.7	85.0
Very important	18	15.0	15.0	100.0
Total	120	100.0	100.0	
Social networking sites e.g. Facebook, Twitter, WhatsApp				
Not important	7	5.8	5.8	5.8
Moderately important	61	50.8	50.8	56.7
Important	44	36.7	36.7	93.3
Very important	8	6.7	6.7	100.0
Total	120	100.0	100.0	
LinkedIn				
Not important	3	2.5	2.5	2.5
Moderately important	34	28.3	28.3	30.8
Important	69	57.5	57.5	88.3
Very important	14	11.7	11.7	100.0
Total	120	100.0	100.0	

Fax				
Not important	23	19.2	19.2	19.2
Moderately important	84	70.0	70.0	89.2
Important	11	9.2	9.2	98.3
Very important	2	1.7	1.7	100.0
Total	120	100.0	100.0	
Post mail				
Not important	25	20.8	20.8	20.8
Moderately important	66	55.0	55.0	75.8
Important	28	23.3	23.3	99.2
Very important	1	.8	.8	100.0
Total	120	100.0	100.0	
Face to face				
Moderately important	9	7.5	7.5	7.5
Important	71	59.2	59.2	66.7
Very important	40	33.3	33.3	100.0
Total	120	100.0	100.0	

The results in Table 5 identify the means of communication for respondents' teaching and research activities. Based on the findings: phone (both landline and mobile) was cited by 1(.8%) as not important, while 12(10%) said moderately important, 59(49.2%) important and 48(40%) very important; email 10(8.3%) claimed not important, 66(55%) moderately important, 30(25%) important, while 14(11.7%) very important; web forums/blogs/wikis 11(9.2%) not important, 46(38.3%) moderately important, 46(38.3%) important and 17(14.2%) very important. For instant, messaging service/chat, 2(1.7%) not important, 15(12.5%) moderately important, 87(72.5%) important, while 16(13.3%) very important; VOIP such as Skype, Google talk, Viber 40(33.3%) not important, 62(51.7%) moderately important, 18(15%) regarded them as important; social networking sites such as Facebook, twitter, WhatsApp 7(5.8%) regarded them as not important, 61(50.8%) moderately important, 44(36.7%) important and 8(6.7%) very important; LinkedIn 3(2.5%) not important, 34(28.3%) moderately important, 69(57.5%) important, while 14(11.7%) believed it was very important to their research and teaching activities;

While fax 23(19.2%) of the respondents claimed was not important, 84(70%) moderately important, 11(9.2%) important and 2(1.7%) very important; post mail 25(20%) not important, 66(55%) moderately important, 28(23.3%) important, 1(.8%) very important; face to face 9(7.5%) moderately important, 71(59.2%) important, while 40(33.3%) very important.

Discussion of the Findings

Interaction and sharing of knowledge

Consistent with the findings of the present study, Hopkins (2011) studied the development of learned societies through history with a focus on the Regional Studies Association. The author showed that learned societies throughout history have emphasised knowledge and the challenge of dispersing it. To achieve this, learned societies have used publication of journals, reports and book series as well as conferences and meetings

Also related to findings of the present study, Mata, Latham and Ransome (2010) recounted their personal experiences as members of the Society for Public Health Education (SOPHE). They cited benefits of joining the society and attending the conferences which had allowed them access to a broad network of health educators and professional giving them more exposure and deeper understanding of their profession and the opportunities available to them. In their opinion, professional societies bring

together members from the academy, students, practitioners and researchers (both senior and junior) who bring their unique perspectives, training and experiences to the interaction for professional development. Furthermore, similar to findings of the present study, Ridzuan, Sam and Adanan (2008) examined knowledge management practices in higher learning institutions in Sarawak. The study showed that although universities were places where knowledge sharing occurred freely, knowledge sharing and dissemination was only happening moderately.

The study by Ridzuan *et al.* (2008) also found that academics were hesitant to share knowledge with people outside their research areas or in other departments of the university since they did not attach much importance to the various aspects of knowledge management such as knowledge sharing. However, Garfield (2006) outlines 10 reasons that may prevent people from sharing knowledge in organisations: people are unwilling to share knowledge when they do not know why they should share it; when they do not know how to do it; when they do not know what they are supposed to do; when they think the recommended way will not work; when they think their way is better; when they think something else is more important; when there is no positive consequence to them for doing it; when they are rewarded for not sharing and when they are punished for doing it.

Collaboration and Communication

The results in the present study showed that academics were not collaborating in publishing/writing article, data collection, sharing data and data analysis. This could be attributed to the practice of allotting half-point or less for co-authorship as dictated by Bayero University promotion guidelines. The findings also revealed that academics were collaborating on supervision and workshops/seminar presentations. Consistent with findings of the present study, Borgman, Wallis and Enyedy (2007) assert that few scientists see a need to use others' data, so they do not request data, and they have no need to share their own data.

A contrast with findings of the present study, Sooryamoorthy (2009) found that collaborative research in South Africa (Africa's research leader) has been growing steadily and the scientists are highly oriented towards collaborative rather than individualistic research. Olmeda-Gomez, Perianes-Rodriquez, Ovalle-Perandones, Guerrero-Bote, and Anegon, (2008) found that greater visibility of research was attained with international collaborations than with any other type of collaboration they studied.

The results also showed that phone both line and mobile, instant messaging/chat, LinkedIn and face to face were largely the means of communication for the research and teaching activities of the respondents. This suggests that modern means of communications and interactions such as web forums/blogs/wikis, Skype, google talk, Facebook, twitter and other social networking sites were not adopted by academics in Bayero University, Kano to facilitate their research and teaching activities.

Contrary to the findings of the present study, Tenopir and King (2008) in a longitudinal study of thousands of scientists in the US found that the presence of digital technologies for information searching, communication and publication had vastly improved their capabilities and availed broader information resources including access to older articles. Cohen in Veletsianos and Kimmons (2012) observes that technology has given rise to social scholarship which uses social technology tools as an integral part of research and publishing. This scholarship is characterised by openness, conversation, collaboration, access, sharing and transparent revision. Veletsianos and Kimmons (2012) examined the relationship between scholarly practice and technology. They proposed that technology has mediated the emergence of a new form of scholarship that they referred to as Networked Participatory Scholarship.

Conclusion and Recommendations

Knowledge sharing has become an important factor to gain and sustain organizations competitive advantage, especially universities in the present knowledge-based economy. The present study concludes that knowledge is evident among academics of Bayero University, Kano through workshops, seminars and conferences, membership of professional associations/societies and postgraduate thesis supervision.

However, various ICT-based communication and interaction channels (e.g. Twitter, WhatsApp, Viber, Skype, Google talk, Facebook) were not adopted by the academics to improve teaching, research and foster collaborations with colleagues both within and outside their immediate environment. Based on these prevailing circumstances, the study recommends;

- Bayero University Management should review the section of promotion guidelines which discourage co-authorship, in order to stimulate multi-disciplinary approaches in research and foster collaborations among academics.
- There is need for massive deployment of ICT infrastructure in the university so as to enhance real-time access to literature and create network of scholars both within and outside the country.

REFERENCES

Amayah, A. T. (2013). Determinants of knowledge sharing in a public sector organization. *Journal of Knowledge Management*, 17 (3), 454-471.

Babbie, E. & Mouton, J. (2001). *The practice of social research*. Oxford University Press: Cape Town.

Borgman, C. L., Wallis, J. C. & Enyedy, N. (2007). Little science confronts the data deluge: habitat ecology, embedded sensor networks, and digital libraries. *International Journal on Digital Libraries*, 7, 17-30.

Coakes, E. (2006). Storing and sharing knowledge: supporting the management of knowledge made explicit in transnational organizations. *The Learning Organization*, 13 (6), 579-593.

Connell, J. & Voola, R. (2013). Knowledge integration and competitiveness: a longitudinal study of an industry cluster. *Journal of Knowledge Management*, 17 (5), 208-225.

Creswell, J. W. & Plano, C. V. (2007). *Designing and conducting mixed method approaches*. Sage Publishing: Thousand Oaks.

Creswell, W. J. (2003). *Research design, qualitative, quantitative, and mixed methods approaches*. Sage Publishing: London.

Davenport, T. & Prusak, L. (1997). *Information ecology: mastering the information and knowledge environment.* Oxford University Press: New York.

Davenport, T. & Klahr, P. (1998). Managing customer support knowledge. *California Management Review*, 40(3), 195-208.

Dervin, B. (2003). *Information as non-sense: information as sense: the communication technology connection*. In. Dervin, B., L. Foreman-Wernet and Lauterbach, E. (eds), *Sense-making methodology reader: selected writings of Brenda Dervin.* Hampton Press Inc: Cresskill.

Drucker, P. F. (1999). *Management challenges for the 21st Century*. London: Butterworth Heinemann.

Garfield, S. (2006). 10 reasons why people don't share their knowledge. *KM Review,* 9(2), 10-11.

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17, 109-22.

Greene, J. C. (2008). Is mixed methods social inquiry a distinctive methodology? *Journal of Mixed Methods Research,* 2(1), 7-22.

Hopkins, J. (2011). The role of learned societies in knowledge exchange and dissemination: the case of the Regional Studies Association, 1965-2005. *History of Education,* 40, 255-271.

Inkpen, A. & Beamish, P. (1997). Knowledge, bargaining power, and the instability of international joint ventures. *Academy of Management Review*, 22 (1), 177-202.

Kang, M. & Kim, B. (2013). Embedded resources and knowledge transfer among R&D employees. *Journal of Knowledge Management*, 17 (5), 709-723.

Lawal, W. O., Agboola, I. O., Aderibigbe N. A., Owolabi K. A. & Bakare, O. D. (2014). Knowledge sharing among academic staff in Nigerian university of agriculture: a survey. *International Journal of Information, Library and Society*, 3(1) 69-80.

Liao, S-H., Fei, W.-C. & Chen, C.-C. (2007). Knowledge sharing, absorptive capacity, and innovation capability: an empirical study of Taiwan's knowledge intensive industries. *Journal of Information Science*, 33 (3) 340-359.

Liebeskind, J. P. (1996). Knowledge, strategy, and the theory of the firm. *Strategic Management Journal,* 17 (Winter Special) 93-107.

Mata, H., Latham, T. P. & Ransome, Y. (2010). Benefits of professional organization membership and participation in national conferences: Considerations for students and new professionals. *Health Promotion Practice,* 11, 450-453.

Munyua, H. T. (2011). *Agricultural knowledge and information systems (AKISs) among small-scale farmers in Kirinyaga district, Kenya* (Ph.D. thesis). University of KwaZulu-Natal: Pietermaritzburg.

Mura, M., Lettieri, E., Radaelli, G. & Spiller, N. (2013). Promoting professionals' innovative behavior through knowledge sharing: moderating role of social capital. *Journal of Knowledge Management*, 17 (4), 527-544.

Myers, M. D. (1997). Qualitative research in information systems. *MIS Quarterly,* 21(2): 241-242.

Niang, T. (1995). *The promotion of the dissemination of agricultural information in Africa: CTA's role*. In: Aina, L. O., Kaniki, A. M. and Ojiambo, J. B. (ed.). (1995), Agricultural information in Africa. Third World Information Services Ltd: Ibadan.

Nonaka, I. (1991). The knowledge-creating company. *Harvard Business Review*. 69 (6), 96-104.

Olmeda-Gomez, C., Perianes-Rodriquez, A., Ovalle-Perandones, A., Guerrero-Bote, V. P. & Anegon, F. M. (2009). Visualization of scientific co-authorship in Spanish universities: From regionalization to internationalization. *Aslib Proceedings: New Information Perspectives,* 61, 83-100.

Powell, M. (2003). *Information management for development organisations*. Oxfam GB: Oxford.

Ridzuan, A. A., Sam, H. K. & Adanan, M. A. (2008). Knowledge management practices in higher learning institutions in Sarawak. *Asian Journal of University Education,* 4, 69-89.

Sheppard, M. (2004). *Appraising and using social research in the human services: an introduction for social work and health professionals*. Jessica Kingsley Publishers: London.

Smith, E. A. (2005). Applying knowledge-enabling methods in the classroom and in the workplace. *Journal of Workplace Learning*, 12 (6), 236-244.

Sooryamoorthy, R. (2009). Collaboration and publication: How collaborative are scientists in South Africa. *Scientometrics,* 80, 419-439.

Storga, M., Mostashari, A. & Stankovic, T. (2013). Visualization of the organization knowledge structure evolution. *Journal of Knowledge Management*, 17 (5), 724-740.

Teddlie, C. & Tashakkori, A. (2009). General typology of research designs featuring mixed methods. *Research in the Schools,* 13(1): 12-28.

Tenopir, C. & King, D. W. (2008). Electronic journals and changes in scholarly article seeking and reading patterns. *D-Lib Magazine*. Available at: http://www.dlib.org/ dlib/november08/tenopir/11tenopir.html#note4 (accessed 12/6/2014).

Veletsianos, G. & Kimmons, R. (2012). Networked participatory scholarship: Emergent techno-cultural pressures toward open and digital scholarship in online networks. *Computers and Education,* 58, 766-774.

Vikas, N. (2000). Heralding ICT enabled knowledge societies: way forward for the developing countries. Available at: <wysiwyg://1/http://sdnp.delhi.nic…ternetinfo/articles/herading.htm> (accessed 12/03/2014).