Influences on Knowledge Sharing in the Academes: Implications for Individual Performance

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Abstract
Performance can be achieved as well as enhanced by giving individuals practical and useful knowledge. It is also contended that knowledge sharing (KS) among individual employees significantly influence the performance across organizations. The purpose of this paper is to examine the influences on knowledge sharing practices in academic environment with the view to drawing implications for individual performance. The paper largely drew on secondary data. Based on the review of literature, Ipe’s categorization of influences on knowledge sharing practices was examined. The influences include: nature of knowledge, working culture, motivation to share and opportunities to share. In addition, this research revealed that knowledge sharing has the potential to enhance academics’ performance, thus, the more positive these factors shape the exchange of knowledge the more impact it exerts on individual performance. However, there is little empirical research to validate these claims. Hence, this study proposed a conceptual relationship (model) to establish a link between the influences, knowledge sharing and individual academic staff performance. In final submission, this paper is limited to just proposing a model in that, it is a conceptual paper. Thus, this paper calls on future research to be empirical to validate the result of this research.

Keywords: Academies; knowledge; knowledge sharing; Individual performance.

1. Introduction
The academes are citadels of learning in which knowledge is the one and only stock in trade, thus play a key role in production and management of knowledge through its varied activities. The academies via its employees (basically academic staff) play an instrumental role in transmission of knowledge through collaborative activities with other business entities to brace creativity in economic, social and cultural undertakings; also facilitate acquisition of knowledge via its functions of teaching, research and other outreach services to the host communities. In the same breath, knowledge in the 21st century is one of the factors of production, hence the overriding resource in any given organization be it private or public driven (Sohail and Daud, 2009). As the globe is largely “knowledge driven economy”, knowledge is perceived as the leading light of the global economy. Previous studies demonstrated that the accomplishment of economies in years to come will be largely dependent on the extent to which organizations procure, deploy as well as leverage knowledge efficiently; hence knowledge is crucial to all types of organizations, notably institutions of higher learning such as universities (Sizer, 2001). In the light of the preceding, this treasure (i.e. knowledge) of the organizations ought to be managed in an effective and efficient manner to yield the desired effect(s). Knowledge management entails a planned process of acquisition, organization, retention, application, sharing (transmission) and renewal of knowledge to improve performance and add values. In this light, knowledge sharing is engrained in the spectrum of knowledge processing where it is created and deployed (Shapira et al., 2006). Producing new knowledge over and over does not make for the success of any given organization but what does, is the extent of transmission i.e. knowledge sharing. Thus, effective strategies for knowledge management ought to underscore the function played by knowledge sharing to accomplish optimum results for organization(s) (Jain et al., 2007).

In the information-aged economy, knowledge sharing is profusely perceived as indispensable to the effectiveness of the organizations (Quigley et al., 2007). It is contended that knowledge sharing significantly influences the performance of employees as well as that of the organizations (Silvi and Cuganesan, 2006). Hence, this process of knowledge management (i.e. sharing) has gained currency in organizations seeking to achieve a competitive gain (Felin and Hesterly, 2007). However, knowledge sharing is a formidable task in organizations on two grounds – one, individuals’ tacit knowledge, by its fabric, is complex to share and two, sharing knowledge is an action driven by discretion Lin et al. (2008). Thus, knowledge resources can be managed efficiently granted the willingness on the part of individuals to share what they know with others. To enhance knowledge sharing among academic staff and across institutions, it is pertinent to appreciate the factors influencing individuals’ willingness to share their knowledge. Accordingly, there is a substantial amount of research on factors that may influence knowledge sharing in organizations; however, majority of studies on knowledge sharing has been carried out in commercial entities (Brown and Brudney, 2003; Haraand and Hew, 2007; Land et al., 2008; Li et al., 2010; Sandhu...
et al., 2011). Research focusing on knowledge sharing in the public organizations particularly universities is very restricted (Sandhu et al., 2011; Yusof et al., 2012).

In addition, however there have been limited studies on the conceptual approach to the factors that influence knowledge sharing practices among academics and specifically its implications for individual performance in academies in terms of the three basic components of academic staff responsibilities – teaching, research and community services. Accordingly, this paper aims at contributing to the understanding of knowledge sharing in academies through a conceptual analysis of factors influencing knowledge sharing with the view to drawing on the possible implications for individual performance.

The next part captures the conceptual analysis of some concepts– knowledge and its typology, knowledge management - knowledge sharing and factors that influence knowledge sharing practices. Subsequently, the methodology is discussed; this is followed by implications for individual performance. The next part captures’ results and discussion’ followed by conclusion which forms the final part.

2. Literature Review

2.1. Academes

This entails the academic institutions such as universities and other higher institutions of learning. Academes in a simple parlance refer to academic organizations.

2.1.2. Academic Staff

Academic staff consist of all the employees in the academic institutions that are saddled with the basic functions of teaching, research and services. They form the pillar of academic world.

2.1.3. Knowledge and its Typology

Knowledge as a concept has a shade of meanings but for this study the following views were considered: Davenport et al. (1998) perceived knowledge as “a fluid mix of framed experience, values, contextual information, and expert insights that provides a framework for evaluating and incorporating new experiences and information; It originates in and is applied in the minds of knowers” (p. 5). According to Nonaka (1994) perspective, knowledge is more encompassing in this spectrum and is perceived as “a dynamic human process of justifying personal belief toward the truth” (p. 58). Given the above definitions, this paper perceives knowledge as the capability of possessing information, facts, ideas, principles or truths about some subject(s), fields, phenomena, events, or activities etc.

There has been a fair unanimity on knowledge classification (Ismail and Chua, 2005). In this light, Despres and Chauvel (2000) admitted that there are two basic forms of knowledge - tacit and explicit knowledge which is often used in research. Polyanicited in Jain et al. (2007), Choi and Lee (2003) and Barth (2002) conceive explicit knowledge as knowledge that is codified into documents or records like databases as well as libraries, i.e. this is basically formal and systematic cited in Jain et al. (2007).Tacit knowledge on the other hand, entails intuitions and uncodified mental images, while explicit knowledge refers to codified information in clear expression (Nonaka, 1994; Taylorand and Wright, 2004). The explicit component may be transmitted via documented stationery (hard form) or electronic devices (soft form), but the tacit aspect of the knowledge entails mental processes acquired through training, experience and work practices and can be shared through observation and application (Choi and Lee, 2003). Accordingly, Barth (2002) conceives tacit knowledge as knowledge that dwells in minds of individuals which is complex to share. On the part of Polyanicited in Jain, et al. (2007) tacit knowledge is described as a knowledge that is largely personal and is engraved in an individual’s day to day work schedules cited in Jain et al. (2007). These forms of knowledge are jointly complementary Nonaka (1994). Work settings usually promote explicit sharing of knowledge, as opposed to the tacit knowledge transmission which by default, is a function of individuals’ willingness(Nenonen, 2004). Tacit knowledge could be a means of accomplishing competitive gains in work settings (Chen and Edgington, 2005; Jashapara, 2003; Lopez, 2005) particularly in knowledge-driven institutions (Bryant, 2005). In this context, the focus is more on how the influences shape the dissemination of tacit knowledge as possessed by academic staff. Thus, in the academes, the tacit knowledge residing in the minds of academics and what shapes its dissemination is the preoccupation of this conceptual exploration.

2.1.4. Knowledge Sharing

Knowledge management (KM) has gained currency in intellectual discourse within and amongst the circles of academics as well as practitioners in recent times (Ismail and Chua, 2005). The transmission of information among individual employees is a crucial aspect of the KM process. KM incorporates the creation, acquisition, storage, transmission and application of knowledge; in addition, Hooff and Riddercited in Sohail and Daud (2009) extended the catalog of activities involved in KM to include donation and collection. Accordingly, Tiwana Sohail and Daud (2009) basically categorizes KM into three processes: knowledge acquisition, knowledge sharing and knowledge utilization. The acquisition describes the process of creation and development of ideas, insights, acumens and skills. The sharing entails the activities of exchanging, disseminating or transmitting knowledge that is already acquired; and finally, the utilization involves acting on the knowledge i.e. applying what is known to solve problem(s) in organizations. Knowledge sharing (KS) is an integral aspect of the KM strategies. Knowledge sharing is conceived as disseminating ideas, thoughts, experiences, understandings or events on given subject(s) with an anticipation to achieve more understandings/insights. According to Willem cited in Haraand and Hew (2007); Sharratt and Usorocited in Haraand and Hew (2007) viewed KS as the transfer of knowledge between two or more individuals in
a mutual manner giving room for remodeling and sensemaking of the information in the different context cited in Chen and Edgington (2005). KS refers to the “process of capturing knowledge or moving knowledge from a source unit to a recipient unit” (Bircham-Connolly et al., 2005). In addition, Jain, Sandhu and Sidhu Jain et al. (2007) added that “it also occurs when an individual is willing to assist as well as to learn from others in the development of new competencies”. Many institutions achieve competitive gains through the facilitation of knowledge dissemination cited in Sohail and Daud (2009). Therefore, knowledge sharing among individual employees and its potential influences performance has gained currency globally specifically in knowledge-intensive institutions like universities (Davenport et al., 1998). Accordingly, Steyn cited in Sohail and Daud (2009) submitted that to exploit the influence of knowledge in institutions of higher learning; people, structures and technology must be accorded equal emphasis. Thus, knowledge transmission is a means to an end. Previous studies reveal that effective engagement of knowledge sharing (KS) culminates in improved organizational performance. In the same vein, result of knowledge transmission leads to new knowledge and innovation being created which in turn enhance the performance of organizations.

### 2.1.5. Individual Performance

Individual performance is a critical factor influencing the performance of organizations. In an academic setting, academic staff performance has a strategic role and constitutes the principal factor shaping student performance and hence institutions’ performance. Accordingly, Kingdon and Teal (2007) observed that teachers are key actors in the learning process that takes place in institutions. Thus, investigating factors influencing lecturer performance in higher educational institutions is very instrumental as well as useful for not only enriching and refining theory but also for advancing reasonable recommendations to improve quality of higher educational institutions (Sukirno and Siengthai, 2011). The job description of university academics is characterized by three major elements: teaching, research and community service (Asiyai, 2015; Tinuke, 2015). Thus, individual performance is conceptualized by the three main elements that define the job of academics. Given the preceding, individual performance is conceived as the upshot(s), result(s) or outcome(s) accomplished by an individual at work. In more succinct words, individual performance incorporates the achievement(s) or rather accomplishment(s) recorded by an employee at work over a given period. Thus, in this context, it refers to the achievement(s) across the three basic functions (i.e. teaching, research and community services) of academics over a specific period.

### 2.2. Influences on Knowledge Sharing Practices in the Academes

Appreciation of how to manage knowledge sharing is embedded in understanding the influencing factors (Jacobson, 2008). The review of literature revealed different classifications or rather categories of influences on knowledge sharing. Some of the categories are ‘positive and negative factors’; ‘encouraging and discouraging factors’. Also, we have the categorization that includes: ‘human or individual factors, organizational factors and information technology factors’ (Jain et al., 2007). Based on the reviews, knowledge sharing in this study is conceptualized by the principal factors that influence the exchange of knowledge between and amongst individuals in organizations as adapted from the following studies: Ipe (2003); Sohail and Daud (2009); Cheng et al. (2009); Titi (2013); Wangand and Noe (2010) the nature of knowledge, motivation to share, opportunities to share, and the culture of the work environment.

#### 2.2.1. Nature of Knowledge

By nature, knowledge exists in two (2) forms – “tacit and explicit knowledge” (Ipe, 2003). Conversely, the upsurge in the recognition of the significance of knowledge in organizations triggered off the discrepancy in value attachment to different forms of knowledge within organizations. The two attributes of the nature of knowledge i.e. tacitness and explicitness of knowledge, in addition to the value attached to knowledge have a substantial influence on the ways and manners knowledge is shared or exchanged amongst academics and within academic environments.

#### 2.2.2. Motivation to Share

Knowledge in general, tacit in particular is closely interconnected with the egos of individuals and as such does not flow freely within the organization (Davenport et al., 1998). Accordingly, Stenmark (2000) contends that individuals or employees within organizations are not inclined to sharing or disseminating knowledge without robust personal influence/motivation. In other words, the stimulating factors (i.e. motivational elements) that influence sharing of knowledge between and amongst individuals are classified into two -- internal and external factors. Internal factors entail the perceived authority/power connected to the knowledge and the reciprocity that ensues from disseminating/sharing. While external factors refer to the relationships between the knower/sender and the recipient on one hand, and on the other hand, the relationship with the rewards for exchanging. Thus, the preceding is no exception in the academes.

#### 2.2.3. Opportunities to Share

Knowledge sharing practices can be influenced or affected by some favourable conditions or circumstances presence in organizations which in this study are referred to as ‘opportunities to share’. These opportunities or conditions are broadly categorized into two – formal and informal. Formal opportunities incorporate organized work teams, training programs/workshops, and technology-based systems that stimulate, enhance and facilitate knowledge sharing. Accordingly, Bartol & Srivastava cited in Ipe (2003) conceived these as formal interactions,
while Rulke & Zaheer cited in Ipe (2003) termed them as purposive learning channels — that is, these are designed to openly assimilate and distribute knowledge. Informal opportunities entail personal relationships as well as social networks that stimulate and enhance learning and the dissemination of information. Rulke & Zaheer considered the informal opportunities as relational learning channels in which confidence and trust are built among parties involved.

2.2.4. Culture of the Work Environment/ Organizational Culture

The preceding factors are instrumental to appreciating the ways in which knowledge is exchanged between and amongst individuals in organizations. However, the entire factors are informed by the organizational culture (i.e. the culture of the subunit and/or the culture of the organization at large). Organizational culture has been progressively recognized as a main barrier to effective knowledge sharing and application (Cheng et al., 2009; Ipe, 2003; Sohail and Daud, 2009). Organizations are culture driven and thus, irrespective of what organizations do to handle knowledge, the forces of the organizational culture are much more impacting. In addition, Schein Ipe (2003) conceived culture as a pattern of basic assumptions that is built by a set of individuals as they strive with solutions for daily problems. If these assumptions prove effective, they are imparted to new employees as the sanctioned means of addressing given problems. Schein expanded further that a major part of every culture is a set of assumptions about how to identify what is real and how members of a group take action (s), how they determine what is relevant information, and when they have enough of it, to determine whether to act and what to do. Therefore, culture is mirrored in the norms, values, and practices of organizations, whereas values are reflected in norms that in turn influenced specific practices in organizations (Cheng et al., 2009). In this context and reality, the institutions of higher education being referred to as intensive knowledge driven environment ought to be a perfect description of the features of organizational culture, in that, the academies accommodate knowledge workers (academic staff). Hypothetically, dissemination of knowledge is freer, easier and more effective than any other environment(s) because ‘academic culture is the culture of knowledge’.

3. Methodology

Basically, only secondary data were collected and utilized in this study. In consonant with the content analysis, knowledge sharing and its influencing factors were drawn from the studies carried out, in which the factors affecting dissemination of knowledge were the preoccupation of investigation. On this basis, the results of the previous studies were conceptually analyzed. The conceptual analysis as carried by this study resulted in drawing implications for individual performance of academic staff; hence, the main contribution of this paper by proposing a framework that establishes the relationship or rather connection between influencing factors on knowledge sharing and individual performance.

4. Results and Discussion

The results of the review of previous literature revealed that there are various factors that inform the level of knowledge sharing among individuals in academies. Accordingly, the factors did not enjoy consensus in terms of categorization i.e. the factors were classified in various manners across the spectrum of the research undertakings in this sphere. Here are some of the discovered classifications of factors that influence dissemination of knowledge: some past research categorized the factors into positive and negative factors. The negative factors are described as ‘barriers’ to knowledge sharing, while the positive factors are viewed as motivators. In Singapore, a research carried out revealed that dissemination of knowledge is shaped or rather determined by “management support, motivation to share knowledge, cultural factors, trust, teamwork spirit, and the degree to which knowledge is considered as a source of power” Neo, cited in Jain et al. (2007). In another classification, it is submitted that the success or otherwise of knowledge sharing may be determined by the necessity to put in place a reward system, corporate culture, trust, and effective leadership that enhances knowledge dissemination. Kristina’s cited in Jain et al. (2007) research on ‘knowledge sharing among Multinational Corporations’ divulged that “perceived interpersonal trust” and “shared cognitive ground” are key factors informing the level of knowledge sharing. Conversely, Nesancited in Jain et al. (2007) on his part disclosed that “work practices” as may be sanctioned by given organizational behaviours are formidable influence on knowledge sharing behaviours. In a similar connection, Sharratt and Usoro (2003) discovered that dissemination of information is largely informed by “the organizational structure (centralized and decentralized), technical infrastructure, trust, motivation and sense of community”. Some individual employees perceive sharing knowledge as a threat to career advancement. This opinion described as “kiasumentality”, was discovered to be embedded in a research conducted by Chuaan Singapore cited in Jain et al. (2007). This is not unconnected with the fact that if the knowledge in question vastly involved technical expertise perceived as a source of power i.e. this opinion is also intandemwith “knowledge is power mentality”. Another common category is the classification that incorporates the following as factors: human or individual factors, organizational factors and information technology factors (Sandhu et al., 2011). Above all, this paper adapted the classification from the following studies: Ipe (2003); Sohail and Daud (2009); Cheng et al. (2009); Titi (2013); Wangand and Noe (2010) - the nature of knowledge, motivation to share, opportunities to share, and the culture of the work environment. This classification seems to be more encompassing because it broadly incorporates all the various categories observed in the reviewed studies into four factors as encapsulated in Ipe’s studies. To amplify this further, the four factors mentioned in Ipe’s studies are individually significant but collectively influence on knowledge dissemination. The nature of knowledge, the motivation to share, the opportunities to share, and the culture of the organization are all interrelated with each other to exert influence in a nonlinear manner which emanated from the literature review. In
addition, the review of literature has revealed that there are few previous studies on knowledge sharing that alluded to the potentials of knowledge sharing in enhancing organizational performance and competitive edge (Davenport et al., 1998). However, there is limited studies that made attempt to establish a synergy between the influence(s) exerted by the factors on knowledge sharing on one hand, and on the other hand, how that translates to shaping or influencing the individual performance of academic staff. Hence, implications drawn by this studies for individual performance through proposing a model that calls for validation in future studies.

4.1. Implications for Individual Performance

Given the review of literature carried out by this study, the following implications hold for individual performance of academic staff. In the knowledge-driven organizations such as universities, knowledge sharing has profusely been perceived as key to organizational performance (Quigley et al., 2007). It is contended that knowledge dissemination among individuals significantly influences their performance be it in private or public setting (Silvi and Cuganesan, 2006). Thus, knowledge dissemination has attained currency in seeking to achieve competitive advantage(s) (Felin and Hesterly, 2007). However, knowledge dissemination is very demanding in institutions of higher education (academies) for dual reasons. One, individuals’ tacit knowledge is very taxing to disseminate given the nature of information in which it is resident in the minds of the individuals (i.e. the knowers/academics). Second, transmission of knowledge is basically voluntary activities (Lin et al., 2008). Knowledge resources can be handled more effectively and efficiently provided there is willingness to share amongst the individual employees. To enhance knowledge sharing activities among academics and across institutions, it is important to find the relationship of the factors influencing knowledge dissemination with performance (Aslam et al., 2013). By implication, there is little previous research that link knowledge sharing with performance, therefore, factors influencing knowledge sharing can by extension, shape the level of performance of individual(s). Therefore, the more positive the influence of the factors on knowledge sharing the more the performance of academic staff in the areas of teaching, research and community services. Hence, the proposed model that aims at finding the relationship between the factor influencing on knowledge sharing and individual performance which will be subject to future empirical validation.

![Figure-3. Proposed Model](http://www.destination.com/print/default.asp?ArticleID=949)

5. Conclusion

In a nutshell, this paper arrives at the conclusion that despite different categories or classifications of factors that influence knowledge sharing, the Ipe (2003) version appears to be more comprehensive, concise and above all, reflective of academic setting(s) which includes: nature of knowledge, motivation to share, opportunities to share and culture of the work environment. The classification broadly incorporates all the factors that really influence dissemination of knowledge in the academies. In addition, it is revealed through the review of previous literature that knowledge sharing has the potential to enhance employees’ performance, thus, the more positive these factors influence the exchange of knowledge the more impact it exerts on individual performance. However, there is little empirical research to validate these claims. Hence, this study proposed a model to establish a relationship between the influencing factors, knowledge sharing and individual performance of academic staff. In final submission, this paper is limited to just proposing a model in that, it is a conceptual paper. Thus, this paper calls on future research to be empirical to validate the result of this research.

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References

Asiyai, R. I. (2015). Improving quality higher education in nigeria, The roles of stakeholders. *International Journal of Higher Education*, 4(1): 61-70.

Aslam, M. H., Shahzad, K., Syed, A. R. and Ramish, A. (2013). Social capital and knowledge sharing as determinants of academic performance. *Journal of Behavioral and Applied Management*, 15(1): 25.

Barth, S. (2002). Defining knowledge management. Available: http://www.destination.com/print/default.asp?ArticleID=949
Bircham-Connolly, H., Cornerand, J. and Bowden, S. (2005). An empirical study of the impact of question structure on recipient attitude during knowledge sharing. *Electronic Journal of Knowledge Management, 32*(1): 1-10.

Brown, M. and Brudney, J. (2003). Learning organizations in the public sector? A study of police agencies employing information and technology to advance knowledge. *Public Administration Review, 63*(1): 30-43.

Bryant, S. E. (2005). The impact of peer mentoring on organisational knowledge creation and sharing. An empirical study in a software firm. *Group and Organisation Management, 30*(3): 319-38.

Chen, A. N. K. and Edgington, T. M. (2005). Assessing value in organizational knowledge creation. Considerations for knowledge workers. *MIS Quarterly, 29*(2): 279-99.

Cheng, M. Y., Ho, J. S. Y. and Lau, P. M. (2009). Knowledge sharing in academic institutions, A study of multimedia university Malaysia. *Electronic Journal of Knowledge Management, 7*(3):

Choi, B. and Lee, H. (2003). An empirical investigation of KM styles and their effect on performance. *Information and Management, 40*(5): 403-17.

Davenport, T. H., De, L. D. W. and Beers, M. C. (1998). Successful knowledge management projects. *Sloan Management Review, 39*(2): 43-57.

Despres, C. and Chauvel, D. (2000). A thematic analysis of the thinking in knowledge management. In *c. Despres, and d. Chavel.. Knowledge Horizons, Butterworth Heinemann: Oxford. 55-86.

Felin, T. and Hesterly, W. S. (2007). The knowledge-based view, nested heterogeneity, and new value creation. Philosophical considerations on the locus of knowledge. *Academy of Management Review, 32*(1): 195-218.

Haraand, N. and Hew, K. F. (2007). Knowledge-sharing in an online community of healthcare professionals. *Information Technology & People, 20*(3): 235-61.

Ipe, M. (2003). Knowledge sharing in organizations, A conceptual framework. *Human Resource Development Review, 2*(4): 337-59.

Ismail, M. A. and Chua, L. Y., 2005. “Implication of knowledge management (KM) in higher learning institutions.” In *Paper presented at International Conference on Knowledge Management, PWTC, Kuala Lumpur.*

Jacobson, C. M. (2008). KS between individuals. In Jennex, M. E. (Ed), KM, Concepts, methodologies, Tools and applications. *Hershey. Information Science Reference: 1633-42.

Jain, K. K., Sandhu, M. S. and Sidhu, G. K. (2007). Knowledge sharing among academic staff, A case study of business schools in klang Valley, Malaysia. *JASA, 2*(3): 23-29.

Jashapara, A. (2003). Cognition, culture and competition, An empirical test of the learning organisation. *The Learning Organization, 10*(1): 31-50.

Kingdonand, G. G. and Teal, F. (2007). Does performance related pay for teacher improv student performance? Some evidence from India. Available: http://www.williams.edu/Economics/neude/papers/performancepay18oct02.pdf.

Land, S. M., Draper, D. C., Ma, Z., Hsieh, H. W., Smithand, B. K. and Jordan, R. (2008). An investigation of knowledge building activities in an online community of practice at Subaru of America. *Performance Improvement Quarterly, 22*(3): 23-36.

Li, Z., Zhuand, T. and Luo, F. (2010). A study on the influence of organizational climate on knowledge-sharing behavior in IT enterprises. *Journal of Computers, 5*(4): 508-15.

Lin, H. F., Lee, H. S. and Wang, D. W. (2008). Evaluation of factors influencing knowledge sharing based on a fuzzy ahp approach. *Journal of Information Science, 35*(1): 25-44.

Lopez, S. V. (2005). Competitive advantage and strategy formation, The key role of dynamic capabilities. *Management Decision, 43*(5): 661-69.

Nenonen, S. (2004). Analysing the intangible benefits of workspace, Facilities. *22*(9): 233-39.

Nonaka, I. (1994). The dynamics theory of organizational knowledge creation. *Organization Science, 5*(1): 14-37.

Quigley, N. R., Tesluk, P. E. and Bartol, K. M. (2007). A multilevel investigation of the motivational mechanisms underlying knowledge sharing and performance. *Organization Science, 18*(1): 71-88.

Sandhu, M., Jainand, K. and Ahmad, I. (2011). Knowledge sharing among public sector employees: evidence from Malaysia. *International Journal of Public Sector Management, 24*(3): 206-26.

Shapiro, P., Youtie, Yogeesvaran, K. and Jaafar, Z. (2006). Knowledge economy measurement methods, results and insights from the malaysian knowledge content study. *Research Policy, 35*(10): 1522-37.

Sharratt, M. and Usoro, A. (2003). Understanding knowledge-sharing in online communities of practice. *Electronic Journal on Knowledge Management, 1*(2): 187-96.

Silvi, R. and Cuganesan, S. (2006). Investigating the management of knowledge for competitive advantage, A strategic cost management perspective. *Journal of Intellectual Capital, 7*(3): 309-23.

Sizer, J. (2001). Research and the knowledge age. *Tertiary Education and Management, 7*(3): 227-30.

Sohail, M. S. and Daud, S. (2009). Knowledge sharing in higher education institutions perspectives from Malaysia. *Vine, 39*(2): 125-42.

Stenmark, D. (2000). Leveraging tacit organizational knowledge. *Journal Of Management Information Systems, 17*(3): 9-24.

Sukirno, D. S. and Siengthai, S. S. (2011). Does participative decision-making affect Lecturer performance in higher education? *International Journal of Educational Management, 25*(5): 494-508.

Taylorand, W. A. and Wright, G. H. (2004). Organizational readiness for successful sharing, Challenges for public sector managers. *Information Resources Management Journal, 17*(2): 22-36.
Tinuke, F. M. (2015). Dimensions of university academic staff performance appraisal in selected public universities in Nigeria. *Journal of Global Economics Management and Business Research*, 3(3): 139-47.

Titi, A. A. (2013). Determinants of knowledge sharing in a public sector organization. *Journal of Knowledge Management*, 17(3): 454-71.

Wangand, S. and Noe, R. A. (2010). Knowledge sharing, A review and directions for future research. *Human Resource Management Review*, 20(2): 115-31.

Yusof, Z. M., Ismail, M. B., Ahmad, K. and Yusof, M. M. (2012). Knowledge sharing in the public sector in Malaysia: a proposed holistic model. *Information Development*, 28(1): 43-54.