Knowledge Sharing Practices Amongst Doctorate Degree Candidates in an Agro-allied University in South-East Zone of Nigeria

Dr Chuma O. Nnadozie[1] & Dr Chidi C. Nwosu[2]
Michael Okpara University of Agriculture, Umudike.
[2]*Imo State University*

Abstract

The study examined the prevalent knowledge sharing practices (KSP) amongst doctoral candidates in Michael Okpara University of Agriculture, Umuahia (MOUAU), South-East Zone, Nigeria. The descriptive survey research design was adopted. After the validation, a test-retest of the measuring instrument was done using Cronbach's Alpha Reliability coefficient which yielded a reliability index of 0.82. Out of the 200 copies of questionnaire administered, 167 were retrieved and found usable resulting in 83.5% return rate. Data collected were analyzed using mean and standard deviation statistics. The result revealed that the major KSPs amongst doctoral students in MOUAU include participation in group assignments, lectures, researches, meetings and exchange of reading materials. Most of the knowledge shared were utilitarian in nature as depicted in statistical knowledge, presentation knowledge, lecture-centric knowledge, research knowledge and published knowledge. There was a high extent of use of various information technologies, especially the Internet, telephones, computers and social media platforms. The reasons advanced for knowledge sharing had direct bearing on problem-solving, maintain reciprocity in relationship, and spread new discoveries. Although respondents appreciate the need for knowledge sharing and participate actively, they encounter series of challenges principal of which are fright of losing privileges, threat of competition and fear of criticisms. Amongst the recommendations made to address these problems are: provision of current and relevant information materials and establishment of functional institutional repositories.

Keyword: Knowledge; Knowledge Sharing; Knowledge Doctoral Candidates; MOUA, Umudike; University Libraries

Introduction

Knowledge sharing (KS) is a major aspect of knowledge management and has been of interest in recent years. This much can be inferred from professional literature as captured in the works of Hong and Kuo (2009), Otuza and Enyinnah (2016) and Igwe, Ewah-Otu and Adediji (2016). The phenomenon of KS can simply be defined as the process by which people share data, information, ideas, facts and views with one another. KS, therefore, involves the exchange of information, knowledge, skills, beliefs, experiences, feelings, expertise, assumptions, prejudices, etc between and amongst individuals, groups and corporate entities. This clarification resonates with an earlier description of KS as the exchange of beliefs and assumptions (Clark & Brennan, 2001). The knowledge so shared or exchanged could be educational, historical, statistical, recreational, task-oriented or informational. It could also be suggestive, objective or subjective, depending on the target participants and contexts. A careful analysis of this explanation indicates that knowledge shared could be typified as explicit (as found in books, journals, novels, notebooks, disks, etc) or tacit (as captured in

stories, gossip, gist, discussions, etc) (Nnadozie, 2016). KS is, therefore, a natural process that readily manifests wherever a community or group of people exists. It attracts research interest because of its recognition as a key facilitator of information diffusion and social interaction. Hence, some of the synonyms of KS are knowledge transfer, knowledge exchange and knowledge distribution.

People exhibit different habits or mannerisms in their sharing of knowledge. This diversity of attitudes has, inevitably, birthed the concept of knowledge sharing practice (KSP). For purposes of clarification, knowledge sharing practice (KSP) describes the series of activities, strategies and processes through which knowledge is exchanged amongst people and between organizations. It also captures the different mannerisms, attitudes and behaviours that are exhibited in the course of KS. These differences exist because the participants in the business of KS come from plural backgrounds. Added to this is the fact that, people who seek and share knowledge are motivated by different aims/objectives, expectations and experiences. Information and knowledge have, jointly, become an important factor that oils and lubricates social relationship, institutional efficiency and overall productivity. Survival and success in the contemporary world have become dependent on the level of awareness and knowledge. Efforts and structures are deliberately put in place to facilitate free flow of knowledge, bearing in mind its propensity to enlighten and unify the people, enhance productivity, as well as facilitate individual and corporate success. Since information is now regarded as one of the factors of production (Curras, 1987), it is not entirely surprising that KS has become a dominant issue of interest in various corporate organizations and institutions.

The nature and mandate of universities (and other tertiary institutions of learning) make them key participants in knowledge sharing. In lecture theatres/classrooms, libraries, laboratories, workshops and allied academic units/fora, vital nuggets of knowledge and wisdom accumulated over the years are shared between faculty and different categories of students. There is no doubt that instruction strategies like problem-oriented teaching, contextualized teaching, target-oriented teaching, collaborative teaching and practicum are statutory channels through which knowledge is shared in universities. In addition to these lecture-centric approaches are methods such as seminars, laboratory experiments, workshop practical, group reading, discussion, meetings, library research, study tours, etc. The approaches to knowledge sharing and volume of information shared often vary among various categories of people. This has been the justification for investigation of KS among different groups within the same organization or institution.

A study of the literature reveals an abounding scholarly interest in knowledge sharing (KS) amongst students in institutions of higher education across the globe (Majid & Yuen, 2006; Hussien & Nassuora, 2011; and Cheng, Ho & Lau, 2012). It is equally evident that this phenomenon has, of recent, become popular amongst scholars and researchers in Nigerian universities. This increasing interest is reflected in the surveys of knowledge sharing in the country's universities as reported by Okonedo and Popoola (2012); Ezigbo (2013); Aiyebelehin (2016); Awodoyin, Osisanwo, Adetoro and Adeyemi (2016) and Abbas (2016). This notwithstanding, available literature suggests that none of these research reports specifically captured knowledge sharing (KS) as practiced by doctoral candidates in Nigeria. It is this gap in knowledge that this pilot survey study is designed to fill.

Purpose of the Study

The primary purpose of this study is to ascertain the prevalent knowledge sharing practices (KSPs) amongst persons studying for the award of doctorate degree in Michael Okpara University of Agriculture, Umudike (MOUAU). The specific objectives are, to:

a). point out the prevalent knowledge sharing practices amongst doctoral degree candidates;

b). identify the attitudes of doctoral degree candidates to knowledge sharing;

c). find out the types of knowledge shared amongst doctoral degree candidates;

d). ascertain the extent to which doctoral degree candidates utilize technologies for knowledge sharing;

e). examine the reasons for which doctoral degree candidates practice knowledge sharing; and

f). highlight the challenges to the practice of knowledge sharing amongst doctoral degree candidates.

Literature Review

Knowledge Sharing Practices: Knowledge sharing practices (KSPs) are composed of the sets of activities through which knowledge is exchanged amongst people, friends, family, communities and organizations (Otuza & Enyinnaya, 2016). Studies by Majid and Yuen (2006) and Majid and Wey (2009) suggest that assignments are the most common academic task for which students share ideas and knowledge with their peers. Other KSPs that readily come to mind are collaborative learning and team work. These activities are intertwined and mutually-reinforcing as evident in the statement that "collaborative learning is a form of knowledge sharing that brings out the best in students even as they better one another through team work" (Aiyebelehin, 2016 p. 2). Some examples of collaborative academic activities that boost knowledge sharing (KS) are team projects, group presentation, in-class and online discussions and collective problem-solving (Hendricks, 2009). Furthermore, research indicates that students can learn effectively when they work in teams where they can perceive different ideas and collaborate to achieve solutions to team projects. The trio of Parirokh, Daneshgar and Fattahi (2008) listed some of the activities and strategies that encourage knowledge sharing as research projects, group discussion, training programmes, publication of manuals for staff and documentation of experiences. Okonedo and Popoola (2012) also articulated series of KSPs, including reading books, meetings, telephone conversation and exchange of documents. According to Riege (2005), interaction and sharing of information/knowledge among students enhance the learning process. These interactive learning activities bring benefits such as higher student achievement, better communication skills, group cooperation and information sharing (Aiyebelehin, 2016).

Attitude to Knowledge Sharing Practices: Yang (2008) reported that individuals' attitudes have significant influence on organizational knowledge sharing. Similarly, Cheng and Ku (2009) observed that most studies conducted in colleges and organizations reveal that personal attitudes affect KS behaviour. The result of Aharony's (2011) study also showed that personality and situational characteristics influence participant's KS in the organization. One of the negative attitudes to KS is hoarding. This issue is of concern because the success of KSPs is highly dependent on individuals' willingness to share the knowledge they possessed or created with others (Azhar, 2012). This attitude, usually developed during the student's earlier school life, could then become part of their personality and likely continue at the workplace (Majid & Yuen, 2006). Some

people perceive the whole KS process as both mechanical and formal which gives the impression that KS is a one-way communication process (Lockspeiser, O'Sullivan, Teherani & Muller, 2008). Another group, however, sees KS as a reciprocal venture wherein the parties bring and receive knowledge (Van den Hooff & Hendrix, 2010). Another factor in KS bothers on mutual cooperation and reciprocity. This point finds ample expression in the statement that: "when individuals are assured that those they are sharing knowledge with will most likely share whatever knowledge they have now and in the future, they tend to freely share knowledge without any self-restraint" (Cheng, Ho & Lau, 2012, p. 318). The fact that knowledge is seen as a property makes its ownership very important (Dalkir, 2005). The implication of this attitude is that, people attempt to hoard their knowledge in order to be more recognized and indispensible within the organization (Otuza & Enyinnaya, 2016).

Technologies/Tools Used for Knowledge Sharing: There is a range of technologies and tools for sharing knowledge. These technologies/tools can be broadly divided into social media tools and other communication gadgets. Some of the digital-cum-social media tools are Facebook, Twitter, LinkedIn, WhatsApp, Google$^+$, weblogs, Youtube, snapchat, and Instagram (Igwe, Ewah-Otu & Adedeji, 2016). The other communication devices that aid KS are computer systems, desktops, laptops, tablets and iPads, fax machines, scanners, cameras (Igwe, et al, 2016). Others are Internet, intranets/extranets and e-mails (Jain, 2012). It is equally worthy of note that KS is enhanced through various technology-mediated platforms like discussion/chat rooms, expert-led discussions, web seminars (i.e. webinars), online meetings, virtual classroom sessions, videoconferencing and consortia initiatives (Jain, 2012). However, respondents in Otuza and Enyinnaya (2016) opine that the most utilized channel for communication in their organization was electronic, especially, emails, screen casts and short message service (sms). This is similar to the submission of Aiyebelehin (2016) to the effect that online chat, e-mails, telephone and online message board are the preferred channels for KS among undergraduate students. These technological factors, as tools of KS, ensure greater collaboration between individuals (Paulin & Suneson, 2012). According to Awodoyin, Osisanwo, Adetoro and Adeyemo (2016), the tools used for KS enhance innovation, efficiency, effectiveness and emotional relief.

Reasons for Knowledge Sharing: The reasons for KS are many. One such reason is the need or desire to maintain reciprocity in relationship. Majid and Yeung (2006) amplified this point noting that reciprocity, together with trust, promotes KS. This implies that KS processes consist of both bringing (or donating) and getting (or collecting) knowledge (Van den Hooff & Hendrix, 2010). People also share knowledge in the bid to utilize available knowledge to improve academic performance (Salisbury, 2003). The value of knowledge expands when it is shared and applied. Therefore, if managed properly, KS can greatly improve work-quality, decision-making skills, problem-solving efficiency, as well as competence for the benefit of the organization at large (Yang, 2007 and Cheng, Ho & Lau, 2009). The study by Ugwu, Eze and Idoko (2012) have shown that librarians in Nigerian universities engage in KS in order to obtain reward and recognition. In another vein, Otuza and Enyinnaya (2016) recognized that KSPs create and sustain competitive advantages. According to Rafaeli and Ravid (2003), KS benefitted participants in terms of learning outcomes and cognitive performance in that it assists students in gaining deeper understanding of certain topics from their colleagues. This is because, active information and KS is now considered an important attribute of the learning process in institutions of higher learning (Lipnack & Stamps in Aiyebelehin, 2016). Knowledge sharing amongst students enhances group co-operation, interpersonal development and positive attitude towards their fellow students

(Cheng & Ku, 2009). It also boosts academic performance because it helps students answer questions and solve problems, learn new things, increase understanding regarding a particular subject or merely act as a means to help one another (Majid & Yeun, 2006). Another study found that students' ability to share and the degree of competitiveness among the classmates as additional factors that would influence KS (Hussien & Nassuora, 2011). In summary, KS fosters innovation by encouraging free flow of ideas, helps in understanding markets and customers, helps develop products and services, builds competences, improves customer services, boosts revenue, enhances employee retention rate by recognizing employees' knowledge and rewarding them for it, as well as streamlines operations and reduces cost via elimination of redundant and unnecessary processes (Ezigbo, 2013).

Challenges to Knowledge Sharing: One of the major obstacles to knowledge sharing (KS) is reluctance to share. The study by Majid and Yeun (2006) reported that students were less inclined to share for those academic activities that were to be graded, while others fear that their ideas or knowledge may be "stolen" by others when shared. It is possible that the reluctance to share information and knowledge could have is roots in the prevailing educational system where students face pressure to outperform their classmates (Al-Busaisi, Olfman, Ryan & Leroy cited in Aiyebelehin, 2016). Chen, Koch, Chung and Chu-Keong (2007) observed that academic competition was associated with decreased KS while trust, teamwork and instructors' positive attitude resulted in more KS. A likelihood exists that this intense competition might have created some anxiety in the minds of these students, resulting in disinterest in share knowledge with their peers (Aiyebelehin, 2016). It is, therefore, not surprising that the survey by Wang (2004) concluded that people who feel threatened by competition from colleagues might reduce their knowledge sharing practice (KSP). Another challenge to KS is the fear that the idea shared would be criticized by others (Majid & Yeun, 2006), as well as shyness to provide and canvass ones personal opinion (Aiyebelehin, 2016). There is also the fear of losing the privileges conferred by knowledge. This stems from the fact that people that have acquired knowledge attempt to hoard their knowledge in order to be recognized and become indispensible within the organization (Dalkir, 2005). An additional problem is the lack of institutional support for KS. This point is embedded in the revelation that activities which account for effective KSPs are not fully promoted, thereby creating the avenue for employees to resist sharing their knowledge with colleagues (Cabrera & Cabrera, 2002). Besides, many organizations still find it challenging to put in place, effective knowledge management systems that will enhance KS explicitly (Tong-Ming, Siew & Angela, cited in Otuza & Enyinnaya, 2016). Other obstacles worth mentioning are lack of depth in relationship, fear of being perceived as 'show off', lack of knowledge sharing culture and ignorance (Otuza & Enyinnaya, 2016 p.11).

Methodology

This study investigated the prevalent knowledge sharing practices (KSPs) amongst persons studying for the award of doctorate degree in Michael Okpara University of Agriculture, Umudike (MOUAU). At the time of the study, the number of doctoral candidates in MOUAU was estimated at a few hundreds. The figure does not include the newly-admitted PhD candidates in 2017/2018 academic session. A descriptive survey research design was adopted while the total enumeration method was considered appropriate to achieve wide coverage of the target respondents. A research instrument entitled "Rating Scale for Knowledge Sharing Practices Amongst Doctorate Degree Candidates" was used to elicit responses. The questionnaire was also

presented for face and content validation to experts in Library and Information Science (LIS) and Measurement and Evaluation (ME), College of Education, MOUAU who made some modifications. To ensure that the structured instrument is reliable, a pilot study was conducted using 20 doctoral students from the Federal University of Technology, Owerri, which is outside the study area. The result of the reliability test using Cronbach's Alpha Reliability coefficient is 0.82. This result is above the acceptance point of 0.05 which confirms the instrument as reliable. The researchers were assisted by two research assistants who were first taught how to administer and retrieve the instrument from the respondents. Out of the 200 copies of the research instrument distributed, 167 were retrieved which gives a return rate of 83,5%. Data collected were analyzed using descriptive statistics while the IBM Statistical Package for the Social Sciences (SPSS) version 19 software was used to calculate the mean and standard deviation. Results and findings are presented in frequency tables numbered 1-6.

Findings and Discussion

Research Question 1: What are the Prevalent Knowledge Sharing Practices Amongst Doctorate Degree Candidates in MOUAU?

Table 1: Prevalent Knowledge Sharing Practices Amongst Doctorate Degree Candidates in MOUAU (N = 118)

S/N	Knowledge Sharing Practices	SA	A	D	SD		SD	Remark
1	I use my contributions during lectures and seminars to share my knowledge	62	28	10	18	3.14	1.10	Accept
2	Classroom interactions offer me the opportunity to share my knowledge	50	33	15	20	2.96	1.11	Accept
3	I use the avenue of group discussion to share my knowledge	45	50	13	10	3.10	0.91	Accept
4	Knowledge is shared during one-to-one discussions	60	35	11	12	3.21	0.98	Accept
5	I share my knowledge during brainstorming sessions	31	49	17	11	2.68	1.20	Accept
6	I usually share my knowledge through group assignments/researches	61	42	9	6	3.34	0.83	Accept
7	I obtain useful knowledge from contributions made during meetings	53	34	13	18	3.03	1.08	Accept
8	I use the opportunity of conferences and workshops to share my knowledge	20	11	56	31	2.17	1.00	Reject
9	I share my knowledge by publishing my research findings	18	14	53	33	2.14	0.99	Reject
10	I share my knowledge through exchange of lecture notes	40	46	15	17	2.92	1.02	Accept
11	Exchange of books/journals enables me share my knowledge	51	42	13	12	3.12	0.97	Accept

| 12 | I share knowledge through collaborative learning | 36 | 47 | 15 | 20 | 2.84 | 1.04 | Accept |
| | **Grand Mean** | | | | | **2.89** | | Accept |

Criterion Mean 2.5

Table 1 presents the analysis of data on research question one which examines the prevalent knowledge sharing practices amongst doctorate degree candidates in MOUAU. The result revealed that all the items raised were accepted but items 8 and 9. Some of the identified KSPs are: group assignments/researches, one-to-one discussions, contributions during lectures and seminars, exchange of books/journals, group discussions, obtain useful contributions during meetings, classroom interactions, exchange of lecture notes, collaborative learning and during brainstorming sessions. A careful analysis of the result indicates a strong inclination by respondents to exploit every available avenue to receive and exchange knowledge. this predilection to tap information from any available source is consistent with the attitude of people involved in serious academic pursuit like doctoral studies and research. The implication is that respondents to this study carry out many collaborative academic activities in an attempt to excel in their educational programmes. The venues of these knowledge sharing exercises are not restricted to the classrooms. It is also worthy to note that knowledge sharing by this category of people is not confined to formal gatherings. In several ways, the findings of this study buttress earlier reports regarding the knowledge practices among different categories of people in the society (Reige, 2005; Majid & Yuen, 2006; Hendricks, 2009; Parirokh, Daneshgar & Fattahi, 2008; Okenedo & Poopola, 2012; Aiyebelehin, 2016; Otuza & Enyinnaya, 2016). However, the result in respect of items 8 and 9 is quite instructive. Based on the rejection of item 8, it can be deduced that these doctoral candidates do not utilize the opportunity of conference and workshop where new knowledge from research is presented. This is surprising bearing in mind that majority of the people undergoing doctoral studies are already academic staff. Hence, the rejection of item 9 indicates that most doctoral candidates are not involved in publishing. Some factors could be responsible for this, including the demanding nature of doctoral programme, cost implication of publishing, the fact that some doctoral candidates may not yet require publication for appraisal and promotion, as well as the desire to concentrate on timely completion of the programme. The response to item 9, therefore, contradicts the submission of Okonedo and Poopola (2012) who listed publication of staff manual and documentation of experiences among the knowledge sharing practices of respondents in their respective studies.

Research Question 2: What is the Attitude of Doctorate Degree Candidates of MOUAU to Knowledge Sharing?

Table 2: Attitude of Doctorate Degree Candidates of MOUAU to Knowledge Sharing (N = 118)

S/N	Attitude to Knowledge Sharing Practices	SA	A	D	SD	MEAN	SD	Remark
13	I share my knowledge freely	65	42	5	6	3.41	0.79	Accept
14	I hoard my knowledge	13	19	50	36	2.08	0.95	Reject
15	I am shy about sharing my knowledge	10	7	43	58	1.74	0.91	Reject
16	I share my knowledge to boost my ego	47	56	6	9	3.19	0.85	Accept

17	I don't share my knowledge because it confers me some advantages	11	16	49	42	1.97	0.93	Reject
18	I disregard knowledge sharing	3	10	65	40	1.80	0.70	Reject
19	I see knowledge sharing as normal	61	45	2	10	3.33	0.87	Accept
20	I share knowledge with those who share with me	41	50	8	19	2.96	1.03	Accept
21	I avoid sharing my knowledge with strangers	64	44	6	4	3.42	0.74	Accept
22	I only share my knowledge when approached	12	15	51	40	1.99	0.93	Reject
	Grand Mean 2.59							Accept

Criterion Mean 2.5

Table 2 is the result on the attitude of doctorate degree candidates of MOUAU to knowledge sharing practices. It reveals that respondents share knowledge freely, share knowledge to boost their ego, see knowledge sharing as normal, share knowledge with those who reciprocate same, and avoid sharing knowledge with strangers (see items 13, 16, 19-21). Although this result generally presents a picture of positive attitude to KS, there are implications and ramification that need further clarifications. Knowledge is perceived as a valuable asset which, when acquired and shared, boosts the collective egos of those involved. This attitude may be an indication that as mature and advanced students, doctoral candidates appreciate the indispensability of expanding their knowledge through exchange of information. Hence, it is not a one-way communication process contrary to the perception and impression of some respondents in the study by Lockspeiser, et al (2008).They may have been predisposed to sharing their knowledge freely because knowledge sharing is a normal activity among people involved in various academic pursuits due to the need for co-operation and reciprocity. This point is in line with an earlier finding to the effect that people freely share their knowledge when they are sure that those they share with will most likely reciprocate the gesture (Azhar van den, Hooff & Hendrix, 2010 and Cheng, Ho & Lau, 2012). It is therefore no wonder that respondents rejected negative attitudes like hoarding, shyness, disregard of KS. The findings of this study in respect of item 17 indicates that most doctoral candidates share knowledge, not necessarily because it confers some advantages. This contradicts a recent submission that people attempt to hoard their knowledge in order to be more recognized and indispensible (Otuza & Enyinnaya, 2016).

Research Question 3: What are the Types of Knowledge Shared by Doctorate Degree Candidates in MOUAU?

Table 3: Types of Knowledge Shared by Doctorate Degree Candidates in MOUAU(N = 118)

S/N	Types of Knowledge Shared	SA	A	D	SD	MEAN	SD	Remark
23	Personal knowledge (experience)	40	43	20	15	2.92	1.00	Accept
24	Practical knowledge	38	45	15	20	2.86	1.05	Accept
25	Theoretical knowledge	41	40	21	16	2.90	1.03	Accept

26	Lecture-centric knowledge	53	51	10	4	3.30	0.76	Accept
27	Published knowledge	50	52	6	10	3.20	0.88	Accept
28	Professional knowledge	42	46	14	16	2.97	1.01	Accept
29	Research (Information search) knowledge	50	52	8	8	3.22	0.85	Accept
30	Historical knowledge	32	38	20	28	2.63	1.12	Accept
31	Statistical (data analysis) knowledge	69	40		9	3.43	0.84	Accept
32	Presentation knowledge	61	50	2	5	3.42	0.73	Accept
	Grand Mean					**3.09**		Accept

Criterion Mean 2.5

Table 3 shows the result on the types of knowledge shared by doctorate degree candidates in MOUAU. It is clear from the result displayed in *Table 3* that the respondents adopted all the items raised. However, a closer study of the distribution of mean scores shows that the five (5) highest ranked items are: knowledge of statistical/data analysis, presentation knowledge, lecture-centric knowledge, research/information search knowledge and published knowledge. While the high mean rating for lecture-centric knowledge is a pointer to the emphasis on a mandatory course work in recent time for PhD candidates in Nigeria, that of published knowledge, information search, statistical knowledge/data analysis and presentation knowledge could have been influenced by the requirement for presentation of supervised thesis/dissertation as a prerequisite for graduation. Apparently, the type of knowledge sought by respondents in this study (doctoral candidates) were largely motivated by utilitarian purposes. The findings of this study, therefore, are generally in agreement that participation in KS is influenced by personality variables such as occupation/profession, personality and structured characteristics (Aharony, 2011 & Aiyebelehin, 2016)**.**

Research Question 4: To What Extent are Knowledge Sharing Technologies Used by Doctoral Degree Candidates in MOUAU?
able 4: Extent of Knowledge Sharing Technologies Used by Doctoral Degree Candidates in MOUAU (N = 118)

S/N	Extent to Which Technologies are Used for Practicing Knowledge Sharing	VHE	HE	LE	VLE	MEAN	SD	Remark
33	Desktop computers	42	48	13	15	2.99	0.99	Accept
34	Laptops, tablets and iPads	40	43	14	21	2.86	1.07	Accept
35	Telephones	47	42	17	12	3.05	0.97	Accept
36	Internet (intranet and extranet)	65	40	13	-	3.44	0.68	Accept
37	Scanners and digital cameras	35	30	21	32	2.58	1.17	Accept
38	Fax machines	15	18	40	45	2.03	1.02	Reject
39	Social media platforms	35	32	21	30	2.61	1.16	Accept
	Grand Mean	**2.79**				2.79		Accept

Criterion Mean 2.5

It can be observed from *Table 4,* which presents the extent of knowledge sharing technologies used by doctoral degree candidates in MOUAU that the respondents endorsed items 33 to 37 and 39 but disputed items 38. Hence, it can be concluded that the extent of knowledge sharing technologies used by doctoral degree candidates in MOUAU is high. This corroborates the submission of Jain (2012), Penlin and Suneson (2012) and Awodoyin, et.al. (2016) that technological factors ensure greater collaboration amongst individuals. Nevertheless, it is noteworthy that, there is a strong relevance on the Internet and this affirms the view of Otunza and Enyinnaya (2016) that it is one of the most utilized channels of communication. The mean score for social media indicates that although these tools are driven by the Internet, most doctoral candidates in MOUAU do not really reckon with them as sources of academic knowledge. It is most likely that despite their potential as a tool for learning, the pervasive or extensive use of the social media for entertainment and interactive but non-academic purposes influenced this result. This underlines the earlier submission (Table 3) that most doctoral candidates engage in knowledge sharing in order to achieve utilitarian ends. The low extent of use of fax machines is both instructive and indicative of its diminishing relevance as tool of communication and knowledge sharing amongst students. This aspect of the result contradicts the finding of Igwe, Ewah-Otu and Adedeji (2016) wherein fax machines were widely utilized by majority of the respondents.

Research Question 5: What are the Reasons for Knowledge Sharing by Doctorate Degree Candidates in MOUAU?

Table 5: Reasons for Knowledge Sharing by Doctorate Degree Candidates in MOUAU (N = 118)

S/N	Reasons for Practicing Knowledge Sharing	SA	A	D	SD	MEAN	SD	Remark
40	To satisfy personal ego	29	34	19	36	2.47	1.16	Reject
41	To learn from others	32	37	21	28	2.62	1.12	Accept
42	To enlighten others	30	33	35	20	2.62	1.04	Accept
43	To spread new discoveries	40	28	24	26	2.69	1.15	Accept
44	To help others	37	34	20	27	2.69	1.14	Accept
45	To enhance interpersonal development	30	33	25	30	2.53	1.13	Accept
46	To answer questions	30	30	32	26	2.54	1.09	Accept
47	To solve problems	42	45	11	20	2.92	1.06	Accept
48	To maintain reciprocity in relationship	40	38	22	18	2.85	1.05	Accept
49	To obtain reward and recognition	30	30	17	41	2.42	1.20	Reject
50	To project an image of importance/relevance	28	34	16	40	2.42	1.18	Reject
	Grand Mean					2.62		Accept

Criterion Mean 2.5

Based on the result presented in *Table 5* with respect to the reasons for knowledge sharing by doctorate degree candidates in MOUAU, it is clear that majority of the respondents affirmed that the reasons for

knowledge sharing include, to: learn from others, enlighten others, spread new discoveries, help/assist others, enhance interpersonal development, answer questions, solve problems, and maintain reciprocity in relationship. None of these reasons can be faulted considering the caliber of respondents. People share knowledge in order to enlighten, educate, empower and solve problems. This is because, by virtue of their literacy level and purpose of doctoral education, it can be concluded that these respondents are being responsive to their societal expectations and obligations. The reasons that have to do with learning from and enlightening one another, answering questions, helping people and spread of new discoveries reinforce the findings in respect of reciprocity (Majid & Yeung, 2006). Scores for items 45 and 46 (enhanced inter personal development and answered questions) support the view that participants in knowledge sharing benefit in and help improve learning outcomes, cognitive and positive interpersonal development (Salisbury, 2003, Rafaeli & Ravid, 2003 and Cheng & Ku, 2009). When juxtaposed with the mean scores for items 40, 49, and 50, it may not be wrong to conclude that PhD candidates in MOUAU do not participate in knowledge sharing for selfish reasons. This aspect of the finding, however, contradicts earlier reports that people share knowledge for such selfish purposes as to obtain reward and recognition (Ugwu, Eze & Idoko, 2012), as well as sustain competitive advantages (Otunza & Enyinnaya, 2016).

Research Question 6: What are the Challenges to Knowledge Sharing by Doctoral Degree Candidates in MOUAU?

Table 6: Challenges of Knowledge Sharing by Doctorate Degree Candidates in MOUAU (N = 118)

S/N	Challenges to the Practice of Knowledge Sharing	SA	A	D	SD	MEAN	SD	Remark
51	Reluctance to share knowledge	20	16	33	49	2.06	1.11	Reject
52	Fear of criticism	41	32	20	25	2.75	1.14	Accept
53	Anxiety about losing my specialized/unique ideas	37	44	16	21	2.82	1.06	Accept
54	Fright of losing the privileges which knowledge confers	40	42	22	14	2.92	1.00	Accept
55	Inadequate support for knowledge sharing	22	15	39	42	2.14	1.10	Reject
56	Inexperience on how to share knowledge	14	20	35	49	1.99	1.03	Reject
57	Threat of competition from colleagues	38	43	17	20	2.84	1.06	Accept
58	Resistance to new ideas	15	20	46	37	2.11	0.99	Reject
59	Fear of being perceived as a 'show off'	33	41	20	24	2.70	1.08	Accept
	Grand Mean					2.48		Accept

Criterion Mean 2.5

It can be observed from *Table 6,* that the challenges to knowledge sharing by doctoral degree candidates in MOUAU include; fear of criticism, anxiety about losing my specialized/unique ideas, fright of losing the privileges which knowledge confers, threat of competition from colleagues and fear of being perceived as a 'show off'. It is necessary to clarify some aspects of this result as presented in the table above.

The mean score for item 51 shows clearly that respondents are not hesitant about sharing their knowledge. This is consistent with earlier result in *Table 2* that doctoral candidates share their knowledge freely rather than hoard it. The result of this study in respect of items 53 and 54 indicates that anxiety about losing specialized ideas and other privileges knowledge confers undermines the willingness to participate in knowledge sharing. When the issue of threat of competition is added, it becomes clearer that personal considerations interfere with knowledge sharing amongst doctoral students in MOUAU. The inference is that doctoral candidates, like most compete amongst themselves, crave to be the best amongst their peers and strive to retain the advantages which their unique knowledge confer on them. This is similar to the reports of Wang (2004), Majid and Yean (2006), Chen et. al. (2007) and Aiyebelehic (2016).

However, the respondents disputed the following as challenges; reluctance to share knowledge, inadequate support for knowledge sharing, inexperience on how to share knowledge, and resistance to new ideas. Inadequate support was rejected as one of the challenges to knowledge sharing. It can be deduced from this that doctoral candidates in MOUAU receive the required support to share their knowledge. This is at variance with the submission that many organizations neither promote knowledge sharing nor put in place effective management systems that will enhance knowledge sharing (Cabrera & Cabrera, 2002; Tong-Ming, Siew & Angela, cited in Otuza & Enyinnaya, 2016). It may not be surprising that "inexperience on how to share knowledge" and "resistance to new ideas" were not accepted as challenges to knowledge sharing. First, the respondents are mature research students who understand the benefits of collaborative learning, group discussion and classroom seminars. Secondly, the expectation that doctoral candidates conduct fresh researches and contribute original knowledge naturally means that they should embrace every relevant idea. Hence, a result contrary to that on items 56 and 58 would have defied commonsense and academic logic. The finding of this study in this regard agrees with Salisbury (2003); Rafaeli and Ravid (2003); Majid and Yuen (2006) and Ugwu, Eze and Idoko (2012) all of which showed that respondents were neither inexperienced in KS nor were they resistant to new ideas.
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Conclusion and Recommendations

Doctoral candidates constitute a group of fellows engaged in the pursuit in order to deepen their academic knowledge, sharpen their research and analytical competences and, eventually, earn the doctorate in their chosen areas of educational or professional specialization. In seeking and sharing knowledge, these scholars manifest different mannerisms and character traits. Irrespective of slight differences in individual preferences, the result of this study strongly reinforces the general consensus that most persons share knowledge for utilitarian purposes. Hence, majority of the respondents to this survey shared knowledge in order to excel in their academic pursuits. Much the same way that an organization gains competitive advantage by knowledge sharing, the advantages which knowledge sharing confers on doctoral students may not be easily quantified. Thus, knowledge sharing thrives among doctoral students because it is mutually beneficial to the parties. However, knowledge sharing among this category of researchers is not without it constraints. Some of these challenges have been identified and discussed in this paper.

In order to address the problem associated with knowledge sharing amongst doctoral candidates, it is recommended that the willingness to share relevant and available knowledge should be sustained. Lecturers who teach and supervise in the doctoral programmes should consciously and creatively provide opportunities

for team work among their doctoral students. In addition, current print and electronic versions of quality research findings should be made available in university libraries for the use of students undergoing doctoral programmes. Moreover, management of universities offering doctoral degrees should establish functional institutional repositories where lecture notes, manuals, course descriptions, articles, conference proceedings, textbooks, and other research outputs of lecturers in their institutions should be compulsorily deposited. As a corollary, the bandwidth in Nigerian university campuses should be strengthened to ensure uninterrupted Internet access by doctoral students and other members of the academic community. In addition to the above, should strive not to deliberately trigger-off an unhealthy competition among these class of researchers through undue emphasis on academic performance. Though, the academic high-flyers should be encouraged and motivated, tact is required so that others, not so privileges, are not discouraged. This suggestion is borne out of the empirically proven fact that the desire to out-perform is a major cause of information and knowledge hoarding amongst students.

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About the authors

Dr Chuma Opara Nnadozie is a Senior Lecturer and teaches biblotaxonomy, technical services and knowledge management in the Department of Library and Information Science, Michael Okpara Federal University of Agriculture, Nigeria.

Dr Chidi C. Nwosu is a Reader. She teaches reference services and academic librarianship in the Department of Library and Information Science, Imo State University, Owerri, Nigeria.