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Academic staff perceptions of knowledge sharing practices in the Faculty of Communication and Information Science, National University of Science and Technology, Zimbabwe

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Abstract

Rationale of Study – The purpose of this study was to find out whether academics in the Faculty of Communication and Information Science, National University of Science and Technology (NUST), Zimbabwe freely share academic knowledge.

Methodology – The study adopted a descriptive survey design. Using a census method, a questionnaire was administered to 55 academics in the faculty. Data collected was analysed using Microsoft Excel, frequency count and simple percentages.

Findings – The results indicate that academics in the faculty are aware of the importance of sharing knowledge but they do not share it frequently as and when it is necessary; NUST creates an environment for knowledge sharing though the Internet is not reliable for easy access of online digital resources, connectivity and flow of knowledge; academics require knowledge for postgraduate supervision, writing grant proposals.

Implications – This paper can be used as a stepping stone to develop an institutionalised written university knowledge management policy to help set standards and initialise the knowledge sharing and transfer in the Faculty of Communication and Information Science at NUST.

Originality – This empirical study will contribute to the theoretical knowledge on knowledge sharing in the higher education sector, which has been neglected in universities. It also contributes to knowledge on KM in the institutions of higher learning.

Keywords

Academics, knowledge sharing, NUST, tacit knowledge, explicit knowledge, Zimbabwe

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1 Introduction

Academics in institutions of higher learning acquire and create knowledge as they conduct their duties. Such knowledge should be shared to improve the staff competency and their key mandates of research, teaching and community service. Organisational knowledge consists of tacit knowledge (knowledge in the mind, skills and competencies) and explicit knowledge or information (the 'know-how' and 'know-who'). Tacit knowledge is necessary for continual improvement and responding to the external changing environment (Chugh, 2013). Knowledge exists not only in the minds (tacit) but also in the business processes and structures of organisations (Arun, 2017). Both business and academic communities believe that by leveraging knowledge, an organisation can sustain its long-term competitive advantages (Shrestha et al, 2016). Knowledge can contribute to improvements in organisational processes and is a key element in creating and sustaining competitive advantage (Chugh, 2013).

Sandhu, Jain, Ahmad (2011) define knowledge sharing as the transfer of valuable facts, beliefs, perspectives, and concepts learned through study, observation or personal experience from knower to "knowee". Knowledge sharing has its benefits to the individuals and the organisation at large. Sharing knowledge helps the organisation in producing new knowledge that leads to improvement in service delivery, production, staff retention among others (Fari & Ocholla, 2015; Al-Hawamdeh, 2003). An organisation's ability to effectively utilise its knowledge relies substantially on its people who actually share, create and use knowledge (Henttonen, Kianto & Ritala, 2016). Knowledge sharing is one of the areas that can be improved by creating awareness and understanding of its implications, particularly knowledge loss (McEvoy, Ragab & Arisha, 2017). Knowledge sharing is also known as knowledge transfer, dissemination, exchange, and distribution (Al-Hawamdeh, 2003). In fact, knowledge transfer and knowledge sharing are sometimes used synonymously or are considered to have overlapping content (Paulin & Suneson, 2012). While knowledge sharing and knowledge transfer are often confused as one, in this study the two terms are treated differently.

Fari and Ocholla (2015) conducted a comparative assessment of information and knowledge sharing among academics in selected universities in Nigeria and South Africa. The findings indicate that academics participated in knowledge sharing in different ways though the South African academics utilised advanced technologies compared to their colleagues in Nigeria. Maiga (2017) investigated knowledge sharing among universities in

Tanzania and the findings revealed that universities in Tanzania generally promoted a culture of knowledge sharing among academics through seminar presentations, publications, public lectures, conferences and colloquia. Kamatula (2017) contends that the process of knowledge sharing can be ineffective should some employees resist sharing their knowledge with the rest of the organisation. Nonaka (1994) submits that the key to the success in knowledge sharing is ultimately individual and organisational commitment. Amayah (2013) argues that employees' tacit knowledge, by its very nature, is difficult to transfer. Tacit knowledge is generally sticky and people find it hard to share even when there is willingness to share by both parties (Edwards, 2017).

In the view of the Association of Commonwealth Universities (2006) as cited in Wamundila and Ngulube (2011), the core business of universities is to create, manage and transfer knowledge. Universities are the world's highest educational institutions where adults acquire and impart knowledge either orally, by reading, experimentation, research or by a combination of two or more of those methods. The duties of academics are grouped into three categories which are teaching, university/community service and research. According to Balakrishnan and Chandramalar (2019), all the three missions of universities are closely linked with knowledge creation, knowledge dissemination and knowledge transfer. Regarding teaching, the academics are expected to teach or deliver lectures in accordance to the department and or faculty guidelines and standards. University or community service is when the academics are expected to participate in all department, faculty/school and university activities such as attending meetings, training workshops, as well as conferences and seminars, among others. It has been observed that universities are communities of scholars tasked with ensuring the free flow, acquisition, sharing, and transfer of information and knowledge (Salter, 1983; Hannah, 1998; Banjo, 2000 as cited in Fari and Ocholla, 2015). Academics are also expected to engage in active research in their areas of specialisation which benefit the students, university and the community. New knowledge is generated through such research and can only be meaningful when it is shared.

Universities are knowledge organisations with knowledge embedded in people and processes (Chugh, 2013). While students form part of the university population, the people employed in universities are academics and support staff involved in administrative work. There are various processes in these institutions where knowledge flows. The processes include registration of students, processing of examinations, chairing of meetings, attending Higher Degrees and Staff Development Committee

meetings to determine studies, make decisions, and organise conferences, among others. Nonaka and Takeuchi (1995) suggest that collecting, storing and disseminating knowledge to the right people at the right time in the right place and in the right format is the key to effective knowledge management.

2 The National University of Science and Technology (NUST)

NUST is the second oldest university in Zimbabwe after the University of Zimbabwe (UZ). It has seven academic faculties. The faculties are Applied Sciences, the Built Environment, Commerce, Communication and Information Sciences, Industrial Technology, Medicine Science as well as Science and Technology Education. The faculties house 43 academic departments that offer degree programmes. The staff compliment consists of 432 academics. The current study was conducted in the Faculty of Communication and Information Science. Through such faculties, universities are the main formal means of creating, disseminating and transferring knowledge, which is the key-factor for the growth of the global economy (Trivella & Dimitrios, 2015). Knowledge within an organisation remains in the people constituting it. For a university, it is mainly the faculty, students and researchers (Shrestha et al, 2016).

Indeed, knowledge sharing as a strategy for retaining knowledge, critical knowledge may be transferred to new entrants to ensure that they establish and develop confidence and academic credibility in academic circles (Dube & Ngulube, 2013). In knowledge processes, the effective sharing of relevant specialised knowledge plays a fundamental role in an organisation's competitive advantage and sustained performance (Kogut & Zander, 1992; Argote & Ingram, 2000; Wang & Noe, 2010). In view of the above, the Faculty of Communication and Information Science at NUST can evaluate and measure its performances and innovativeness in the university by how it shares knowledge and gains value among its members. McEvoy, Ragab and Arisha (2017) surveyed literature on knowledge management and found that in discussing knowledge sharing, individuals' reluctance to share knowledge with others is the common challenge.

3 Statement of the problem

The study was conceived against a background of academics' reluctance to share knowledge or as anecdotal evidence gathered by the researcher. Poor knowledge sharing practices among academics is associated with many organisations including institutions of higher learning such as universities (Chugh, 2013; Trivella & Dimitrios, 2015). Because knowledge is a source of power, it is common that staff in organisations, of whatever size

or type, hoard it and consequently find it difficult to share information and knowledge due to mistrust (McEvoy, Ragab & Arisha, 2017). Some studies have identified "sticky" forms of knowledge that resist movement across organisational boundaries (Dee & Leisyte, 2017). The study was undertaken on the backdrop of knowledge stickiness (Edwards, 2017) while colleagues in organisations are considered to be less willing to share knowledge (Sandhu Jain, Ahmad, 2011; McEvoy, Ragab & Arisha, 2017).

A number of studies have been conducted with respect to information and knowledge sharing in universities (Chugh, 2013; Wamundila & Ngulube, 2011; Fari & Ocholla, 2015; Maiga, 2017; Trivella & Dimitrios, 2015; Shrestha, 2016) but they did not focus on knowledge sharing in a faculty or school which has related degree programmes and courses. However, a study by Ghodsian *et al* (2017) investigated knowledge sharing and transfer at Tehran University of Medical Sciences but used a qualitative approach (using semi- structured interview) to gather data from 17 faculty members of 10 distinct departments.

This current study therefore aimed at investigating the knowledge sharing practices and perceptions among academics in the Faculty of Communication and Information Science which looks slightly misplaced in that NUST is basically a Science, Technology and Mathematics (STEM) university. Specifically, the study sought to answer the following questions:

1. What are the academic staff's views towards knowledge sharing in the faculty?
2. Does the National University of Science and Technology create space and environment which is conducive for knowledge sharing among Faculty of Communication and Information Science academics?
3. How frequently do faculty academic staff share newly acquired and/or generated knowledge with available technology enablers?
4. Which type of knowledge do academics require in order to improve performances in their positions?
5. Which barriers affect knowledge sharing practices among academic staff in the Faculty of Communication and Information Science at NUST?

4 Research methodology

The research method used was descriptive in design. Using a census approach the study targeted 55 academics (lecturers, research fellows and teaching assistants) in the Faculty

of Communication and Information Science at NUST. From this target population, 55 questionnaires were administered to academics in all the four departments of Journalism and Media Studies, Library and Information Science, Records and Archives Management, and Publishing Studies. The academics completed the questionnaire at their convenience and returned them through their departmental secretaries. A total of 45 questionnaires were completed and returned giving a response rate of 81.8%. Only 10(18.18%) questionnaires were not returned. The collected data was then analysed using Microsoft Excel. Close-ended questions in the questionnaire were structured using the Likert-scale format ordered as agree, strongly agree, neutral, disagree and strongly disagree. The frequency and percentage displayed a number of occurrences side-by-side with the percentage relating this to the variables used in the study.

5 Demographic profile of the respondents

Respondents were asked questions about personal information such as their gender, education, title, experience and nationality. The structured questions were meant to determine relationships between respondents' characteristics and the knowledge sharing practices in the faculty. The majority (15; 33.3%) of the respondents were from the Department of Library and Information Science followed by respondents from the Journalism and Media Studies (14; 31.1%). Respondents from Records and Archives Management (10; 22.2%) and Publishing Studies (6; 13.3%) were ranked third and fourth respectively. The Department of Publishing Studies has the least proportion of respondents which can be attributed to the different staffing levels across the faculty.

In terms of gender 25 (55.6 %) respondents were male and 20 (44.4%) were female. This is in sharp contrast with Dube and Ngulube's (2013) study in select academic departments in the College of Human Sciences at the University of South Africa where they found that in lower academic categories there were more female than male academics. Analysis by levels of education revealed that most (25:55.6%) respondents had acquired Master's degrees, while 8 (17.8%) had doctorates, seven (15.6%) had Bachelor's degrees and, five (11.1%) had MPhil qualification. Regarding titles, it emerged that 34 (75.6%) were lecturers, 8 (17.8%) teaching assistants, 1(2.2%) senior lecturer, 1(2.2%) professor and 1(2.2%) research fellow. In a similar study conducted by Dube and Ngulube (2013) it was noted that from the number that participated in the study, the highest percentage (117; 25%) were at lecturer level followed by professors (111; 24%), associate professors (90; 19%), senior lecturers (80; 17%) and lastly junior lecturers (74;

16%). Senior lecturers are those academics in the middle of the academic ladder, positioned between the professoriate and lower academic levels while lecturers are future professors who need to be leveraged, developed and nurtured properly through progressive retention strategies (Dube & Ngulube 2013). In terms of experience, 33 (73.3%) indicated that they were between 0-10 years, 8 were between 11-20, 1 was between 21-30 years and 3 were above 30 years' experience. All the respondents (45; 100%) were Zimbabweans by nationality.

6 Findings

The findings are presented and discussed under the headings that follow.

6.1 Views of the academic staff towards knowledge sharing in the faculty

Respondents were asked to indicate their degree of agreement or disagreement to issues regarding sharing their knowledge. The results are shown in Table 1.

Table 1: Views of the academics towards knowledge sharing in the faculty (N=45)

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Knowledge sharing in the faculty meets our needs anytime	1 (2.2%)	14(31.1%)	14 (31.1%)	12(26.7%)	4 (8.9%)
Knowledge sharing in the faculty meets our needs anywhere	1(2.2%)	10 (22.2%)	13(28.9%)	18(40%)	3(6.7%)
Knowledge sharing in the faculty is the critical path to success of the Faculty of CIS	25(55.6%)	13 (28.9%)	5(11.1%)	-	2(4.4%)

Only 15 (33.3%) of the respondents agreed that current knowledge sharing in the faculty meets their needs at any given time. A sizable proportion of 14 (31.1%) respondents were not sure whether the knowledge sharing practice in the faculty meets their needs anytime whist 16 (35.6%) disagreed. Concerning whether knowledge sharing in the faculty meets their needs anywhere, 21 (46.7%) respondents disagreed and 13 (28.9%) were not sure, leaving the remaining 11 (24.4%) in agreement (strongly agree or just agree). The majority (38; 84.5%) agreed that knowledge sharing plays a critical role to the

success of the Faculty of Communication and Information Science, 2 (4.4%) of the respondents disagreed while the remaining 5 (11.1%) gave no opinion.

The respondents were requested to identify their respective university committees where they represent the faculty in their capacities as either main representatives or alternates. Figure 1 shows that almost all of the University Committees included in the questionnaire are represented by the members of the faculty with exception of the Teaching and Learning Committee. On the committees represented Associate Status and Library Committee are the only ones with alternate representation while the Navison Committee, Senate Representation, Time Tabling, Faculty Proctor and the Industrial Attachment Committee had the main representative. The rest of the committees have both the main and alternate representatives.

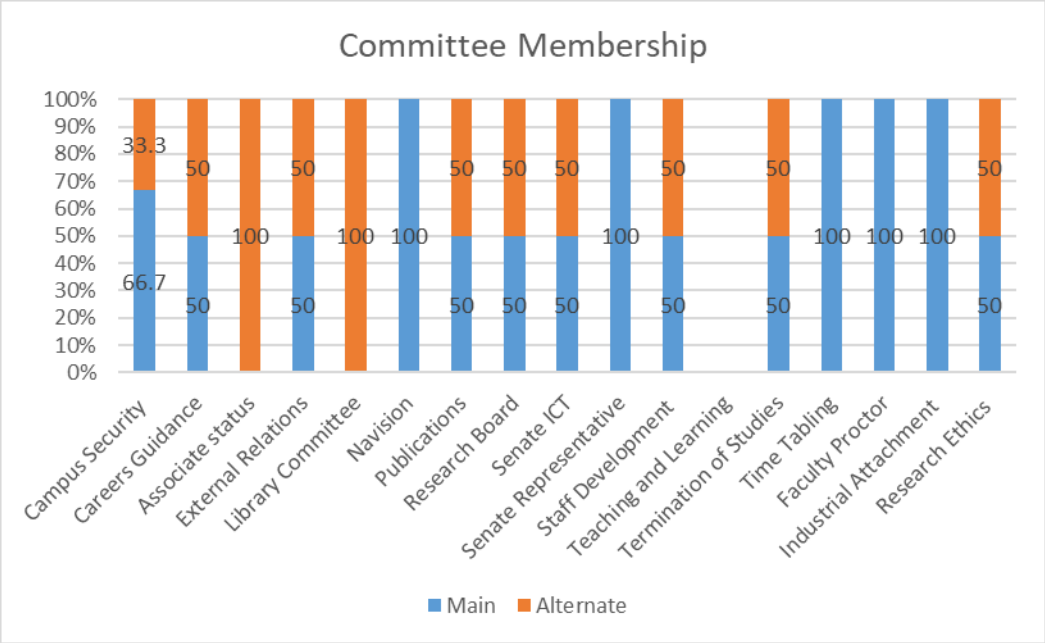

Figure 1: Faculty Representation in the University Committee

The respondents were asked with whom they share knowledge that is generated from these committee meetings. Figure 2 shows the results.

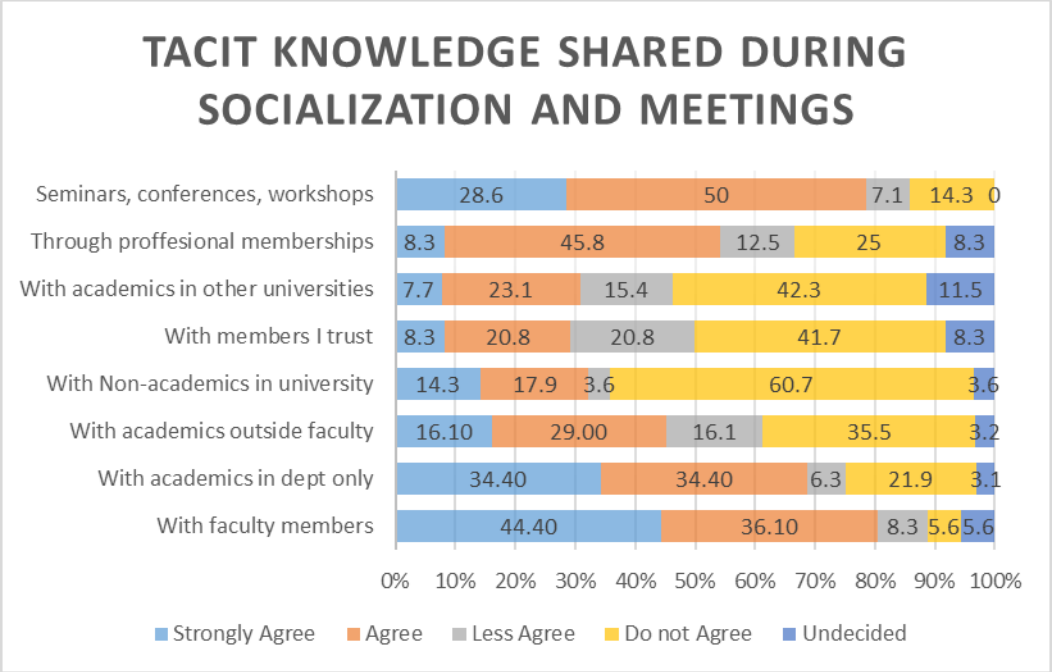

Figure 2: With whom is knowledge shared

The results reveal that 29 (80.50%) agreed that knowledge gained is usually shared with faculty members. However, 17 (64.3%) respondents confirmed that they do not share academic knowledge with non-academics in the university. Knowledge acquired from the committees is shared through professional memberships (13; 54.1%). The current study established that knowledge is shared through seminars, conferences and workshops (22; 78.6%).

Figure 3 illustrates that social media (28; 62.2%) is the most widely used means of sharing knowledge generated from committee meetings. It is followed by joint publication (22; 48.8%), voice calling (18; 40%), social gatherings (17; 37.8%) and lastly emails (16; 35.6%).

Figure 3: Methods of sharing knowledge generated from committee meetings

6.2 Spaces created by NUST for knowledge sharing

The respondents were asked if NUST provided an enabling environment where knowledge could be acquired, shared or transferred in the spaces. Figure 4 showed that NUST provides an enabling environment to acquire and share knowledge especially through formal meetings (39; 88.6%), intranet/ emails (38; 88.4%) as well as ICTs (28; 68.3%) and a senior common room interaction (20; 48.8%), lunch (14; 35.1%), staff sporting facilities (10; 15.2%) and least was tea break meetings (8; 18.8%).

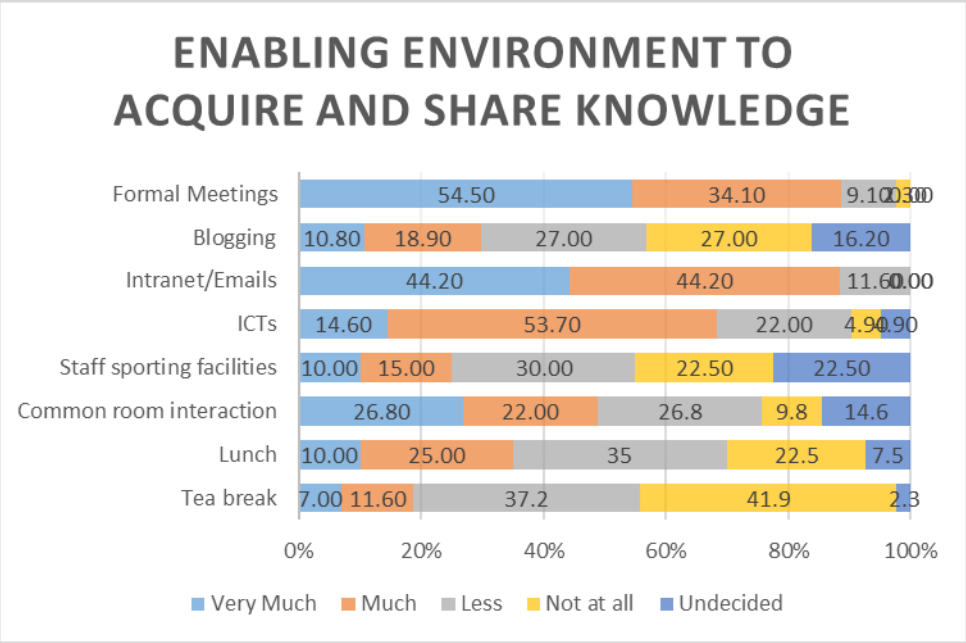

Figure 4: Enabling environment to acquire and share knowledge

6.3 Type of knowledge required by staff to improve in their positions

The other objective was to identify the type of knowledge required by academics in order for them to competently perform duties expected of them in the university. Figure 5 shows the results.

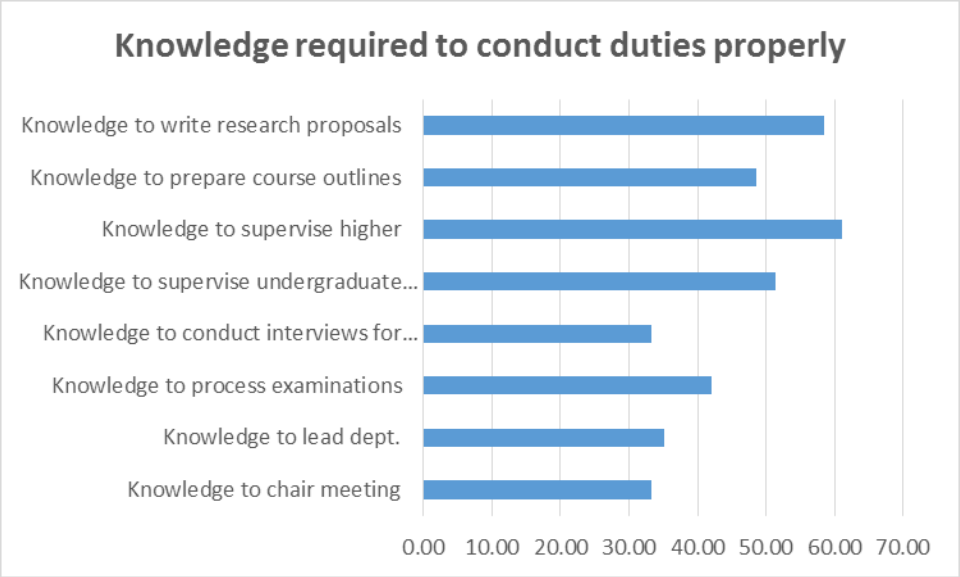

Figure 5: Knowledge required to conduct duties properly.

It emerged that the respondents mostly required knowledge to supervise students pursuing higher degrees (Master's and doctorates) (28; 61%) as well as knowledge to write research proposals (17; 58.5%), knowledge to supervise undergraduates (23; 51.3%), knowledge to prepare course outlines (22; 48.6%) and knowledge to process examinations (19; 42.1%).

6.4 Frequency of sharing new knowledge using available ICTs enablers

Results in Figure 6 indicate that computers (39; 86.7%), internet (30; 66.7%), mobile phones (30; 66.7%) are the frequently used technologies enabling knowledge sharing while fax machines, radios, televisions and tele-conferencing are rarely used to share knowledge by the faculty staff.

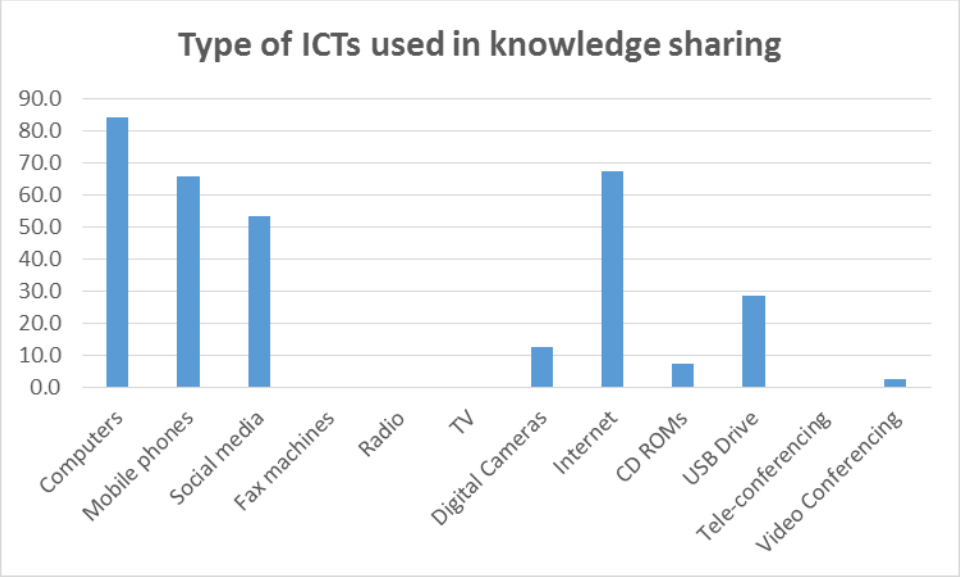

Figure 6: Type of ICTs used in knowledge sharing

6.5 Knowledge sharing barriers affecting academic staff

The respondents were asked to indicate their degree of agreement or otherwise with a number of statements. The results are shown in Table 2.

Table 2: Knowledge sharing barriers affecting academic staff (N=45)

Type of barrier	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Lack of knowledge flow from one department to another	23(51.1%)	13(28.9%)	8(17.8%)	1(2.2%)	-
Lack of communication	13(28.9%)	21(46.7%)	8(17.8%)	3(6.7%)	-
Culture of reluctance to share	20(44.4%)	13(28.9%)	9(20%)	1(2.2%)	2(4.4%)
Lack of incentives to share knowledge	20(44.4%)	14(31.1%)	7(15.6%)	2(4.4%)	2(4.4%)
Lack of appreciation of others	14(31.1%)	11(24.4%)	10(22.2%)	9(20%)	1(2.2%)
Leadership is not committed to knowledge sharing	15(33.3%)	9(20%)	13(28.9%)	5(11.1%)	3(6.7%)
Lack of job security	4(8.9%)	5(11.1%)	16(35.6%)	8(17.8%)	12(26.7%)

Lack of mutual trust	12(26.7%)	16(35.6%)	13(28.9%)	2(4.4%)	2(4.4%)
No teamwork	17(37.8%)	15(33.3%)	9(20%)	2(4.4%)	2(4.4%)

Lack of knowledge flow from one department to another (36; 80%), lack of incentives to share knowledge (34; 75.5%), absence of teamwork (32; 71.1%) and lack of appreciation of others (25; 55.5%) emerged as the prominent barriers to knowledge sharing. It also emerged that knowledge sharing was hindered by poor relationship between management and staff as reflected by high scores in statements such as lack of incentives to share (34; 75.5%) and leadership is not committed to knowledge sharing (24; 53.3%). In the current study it emerged that lack of trust (28; 62.3%) also affects knowledge sharing.

Comments from some respondents about knowledge sharing by academics in the Faculty of Communication and Information Science at NUST showed views were of a varied nature:

> Respondent A: "*Lecturers just hold onto their knowledge about things and are just reluctant to share. It is like people are in a competition and one wants to get to the finishing line alone and leave the others behind."*
>
> Respondent B: "*In the faculty, we have tended to be selective along the lines of who is from what department. Records and Archives Management, Library and Information Science and Publishing Studies tend to work together in knowledge sharing more than with Journalism and Media Studies. Some staff in the faculty are selective on tribal lines. I am yet to see what is happening along gender lines.*"
>
> Respondent E: *"Staff at NUST seem to be ready to share information pertaining to human resources issues and less about academic issues."*
>
> Respondent G: *"Knowledge is hoarded by those who possess it. I believe they keep any new knowledge to themselves for competitive advantage and job security. Maybe they lack motivation for sharing. However, sharing of this knowledge could improve the departments and faculty as a whole."*
>
> Respondent J: *"What I noticed is that there is a dearth of knowledge sharing culture in the faculty. It is either members do not trust one another or they are completely ignorant about the need for knowledge sharing."*

The respondents also suggested the following strategies to deal with the challenges and thereby enhance knowledge sharing.

> Respondent C: *"All departments should work together in knowledge sharing regardless of status. All people should know that they can learn from every member of the faculty. No one is superior."*
>
> Respondent F: *"There is need for collaboration in research work and sharing of information on such issues as publishing of works in peer reviewed journals which could possibly increase research output."*
>
> Respondent H: *"There is room for improvement and the faculty management should encourage knowledge sharing and support it by availing the necessary training, information and any other resources."*

7 Discussion of findings

The findings of this study indicate that academics in the faculty are aware of the importance and value of sharing knowledge as this meets their needs and speak to the success of the faculty. These findings are in line with Trivella and Dimitrios (2015) who aver that knowledge can be utilised as a tool for a more competitive and constantly changing surrounding by universities. Regarding knowledge sharing Henttonen, Kianto and Ritala (2016) argue that the key issue from the organisational perspective is that knowledge should be transferred to where it is needed and where it can be applied to productive use. The findings of the current study indicate that new knowledge (which is then shared among academics) is generated during meetings when academic staff discuss official university business while attending senate committee meetings. The findings concur with Wamundila and Ngulube (2011) who observed that employees at University of Zambia (UNZA) shared knowledge amongst themselves at a large scale during the meetings. Indeed, tacit knowledge is generated during interaction and exchange of ideas through socialisation and in these university meetings. Knowledge shared is knowledge multiplied. Findings from the current study indicate that knowledge acquired from the university committees is shared through professional memberships thus corroborating Abbas' (2017) study in Nigeria that concluded that the academics in the four universities have good platforms through membership of professional associations/societies for the sharing and dissemination of knowledge, and this has the capacity to trigger the growth of knowledge and innovation.

That a significant number revealed that academics do not share their knowledge with non-academics confirms the findings of Ridzuan, Sam and Asri (2008) in three higher education institutions in Kuching that academics were hesitant to share knowledge with people outside their research areas or in other departments of the university. Frequent flow of information occurs with academics in the faculty and department.

The current study established that academic knowledge is shared through seminars, conferences and workshops thereby confirming Chugh's (2013) findings that workplace environment facilitates the transfer of personal ideas, skills and experiences through seminars and workshops. Tacit knowledge represents procedural or implicit knowledge that is closely held in people's heads such as experience and expertise and, therefore, it is difficult to articulate and codify (Salleh, Chong, Ahmad & Ikhsan, 2013). Tacit knowledge encompasses skills, ideas and experiences that people have in their minds and is, therefore, difficult to access and not necessarily able to be easily expressed (Chugh, 2013) but the more tacit the knowledge, the harder it is to share (Edwards, 2017). In universities, the most important knowledge is often in the mind of academics. Thus, it is difficult to spread through the university and its internal stakeholders because of time and resource constraints (Chugh, 2013).

While academics in the faculty do not actively participate in joint publications to share knowledge amongst themselves in collaboration, Maiga (2017) view collaboration as a significant attribute conducive to the success of the teamwork. Al-Hawamdeh (2003) views collaborating in a research effort culminating in the writing of a joint paper as something that requires knowledge sharing for it to work.

From the study findings, it was established that NUST creates space for knowledge sharing through formal meetings, intranet/ emails, use of ICTs and a senior common room where staff interact during meal time. These findings confirm those of Chugh (2013) who contends that developing tacit knowledge transfer mechanisms needs the workplace environment as the best place for knowledge transfer since workplace provides opportunities for employees to interact with one another on an informal basis in social gatherings. Knowledge is mostly shared in formal meetings and through emails within the faculty. Staplehurst and Ragsdell (2010) underscored the fact that the creation of space to share knowledge was paramount. A study by Trivella and Dimitrios (2015) noted that ICTs are a means of facilitating the creation, dissemination and transfer of knowledge for the society's benefit. Mezher (2007) opines that ICT is the main driver or

tool for building a knowledge society. The sharing of knowledge during lunch and tea breaks within NUST is consistent with Amayah's (2013) suggestion that examples of knowledge sharing include conversations over a cup of coffee and other exchanges with the purpose of helping colleagues get something done better and in a more efficient manner. Participating in a dialogue over coffee or lunch is another form of knowledge and information sharing (Al-Hawamdeh, 2003).

Dube and Ngulube (2013) noted that knowledge sharing ensures growth in academic excellence, innovation and leadership. It is not surprising to note that academics needed knowledge to supervise postgraduate programmes in their respective departments since the faculty offers Master's programmes. At the time of this study, there were no doctorate students/candidates in any of the four departments. Amayah (2013) is of the view that improving knowledge sharing processes would ensure that junior employees benefit as much as possible from senior employees' knowledge and experience before they retire. Similarly, Chugh (2013) is of the opinion that rigorous identification of tacit knowledge transfer in universities is warranted, especially if it leads to improvements in organisational performance.

The current study found that computers, internet, social media were the mostly used ICTs enablers for knowledge sharing. These findings corroborate Fari and Ocholla (2015) who established that the majority of the respondents used computers, information and data storage devices, mobile phones and internet facilities for information and knowledge sharing. IT can be used to make tacit knowledge explicit using IT in creating knowledge by codifying the tacit knowledge of the employees in the form of processes and disseminating it further (Chugh, 2013).

Research has identified a range of barriers to the flow of knowledge in higher educational institutions (Dee & Leisyte, 2017). This study established that lack of knowledge flow from one department to another was prominent. This confirms Dee and Leisyte (2017) who attest that researchers have observed that tacit knowledge is more difficult to move from one part of an organisation to another. Al-Hawamdeh (2003) believes that compensation must be used to encourage knowledge sharing. The current study established that lack of appreciation of others and lack of incentives to share knowledge can inhibit knowledge sharing. Studies by Sandhu et al (2011); Henttonen, Kianto and Ritala (2016) and Ghodsian et al (2017) point to the fact that lack of recognition, reward and incentive systems drive people not to share knowledge. Strong people network

connections support knowledge flow (Ghodsian et al, 2017) while absence of strong group affiliation, teamwork and strong personal ties drive individuals not to share their knowledge. According to McEvoy, Ragab and Arisha (2017), the main challenges to successful knowledge sharing include lack of management recognition, inadequate rewards for knowledge sharing behaviour and inadequate organisational IT systems. The findings indicate that knowledge sharing can be hindered by poor relationship between management and staff. Dee and Leisyte (2017) observe that knowledge sharing might be inhibited in universities that are characterised by conflict between managers and academics. The current study revealed that lack of mutual trust affects knowledge sharing. This confirms Amayah's (2013) view that trust leads to greater openness between individuals and for tacit knowledge to be transferred successfully, there must be trust and mutual understanding.

8 Conclusion and recommendations

The study concluded that academics in the Faculty of Communication and Information Science at NUST are aware of the importance of sharing knowledge though they do not share it frequently with colleagues. While NUST has established virtual spaces for knowledge sharing, the Internet infrastructure is inadequate and unreliable. Academic staff requires new knowledge for postgraduate supervision, writing grant proposals and other procedures like processing examinations. Lack of knowledge flow from one department to another, lack of communication, low incentives and poor teamwork were the major barriers to knowledge sharing in the faculty.

The study recommends that NUST should promote and cultivate a culture of interdepartmental knowledge sharing, provide incentives and rewards for knowledge sharing, improve Internet connectivity and other organisational ICT facilities for effective knowledge sharing, among other recommendations. Due to the COVID-19 hiatus, the university should provide more online collaboration platforms that enable virtual interactions as opposed to meetings in physical spaces where academics can meet and converge in a relaxed atmosphere sharing knowledge consciously and unconsciously. To enhance knowledge production at NUST, the Faculty of Communication and Information Science should participate fully in knowledge creation and sharing. The university and the faculty need to realise that human networks are viewed in organisations as the key to knowledge sharing in order to solve business problems and achieve specific faculty business results.

9 Implications of the research

The current study has managerial, practical and research implications. This study was conducted in the faculty of Communication and Information Science only. Future research should extend to all the seven faculties in NUST which generate, share and transfer valuable knowledge.

The findings of the study may be used to design a strategy that can facilitate the creation, sharing and transfer of knowledge much to the benefit of the faculty and NUST at large. This may lead to the realisation of "Education 5.0" which entails enhanced research, teaching, community service, innovation and industrialisation in the university.

Managing knowledge in a university is about creating an environment and culture within it that encourages the creation, sharing and transfer of knowledge. This study has policy implications where a policy should be developed to formalise the implementation of knowledge sharing practices in order to facilitate knowledge growth through knowledge sharing and acquiring culture.

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