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Research Article

Knowledge Sharing Culture Among Academic Staff: A Case of Government Universities in Addis Ababa, Ethiopia

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Abstract

This study was aimed to explore the knowledge sharing culture among academic staff in two higher education institutions namely; Addis Ababa University (AAU) and Addis Ababa Science and Technology University (AASTU) in Ethiopia. Both quantitative data and qualitative data were collected from academic staff and managers, respectively. Observation was conducted to assess the availability of facilities for knowledge sharing. The result showed that both academic staff and managers had positive attitude and perception towards knowledge sharing. The academic staff had good trust to their colleagues and university to share their knowledge. There was no scientifically established platform for knowledge sharing, and lack of laboratories and equipment's were the main constraints that limit knowledge sharing in both universities. We found that the management support in creating opportunities for knowledge sharing and the rewarding system for knowledge sharer was poor. Intrinsic motivation was significantly higher than that of extrinsic motivation. Generally, the study provides valuable information about the knowledge sharing culture and practice of AAU and AASTU. We recommend that managers of both universities should work to create more enabling knowedlge sharing platform, opportunities and rewarding system that can faciltitate knowedlge sharing.

Keywords

Knowledge sharing; academic staff; higher education institution; motivation; trust; management support

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Introduction

Knowledge sharing play key roles for the growth, development and advancement of a society, and become a crucial aspect in global development at individual or societal level (Kurtić and Đonlagić, 2012). Organizations that have the supreme role and obligation in knowledge sharing are higher education institutions (HEIs), where knowledge is produced through research (Fullwood, Rowley & Delbridge, 2013). The main purpose of higher education institutions is to create and disseminate knowledge, therefore faculty members are required to share this knowledge for maintaining and improving the quality of education in these institutions. The importance of knowledge sharing in higher education is limitless (Hussein & Nassuora, 2011). It is well established that for a sustainable knowledge sharing process, creating a suitable knowledge sharing culture is compulsory. As shown in previous studies, knowledge sharing process could be affected by various interlinked factors such as the nature of knowledge, working culture, staff attitude, motivation, but working culture and the nature of knowledge play more roles for enhancing knowledge sharing among academic staff in universities (Sohail and Daud, 2009). In addition, management support and positive social interaction culture are also the determinate factors to bring positive knowledge sharing culture (Connelly & Kelloway, 2003). Recently, Santhosh (2016) found that organizational culture had a significant influence on the knowledge sharing practice in higher education institution. Generally, literature suggested that, knowledge sharing culture, staff attitude, motivation, trust, opportunities, and management support to share knowledge, and different ways of knowledge sharing are the main elements for promoting knowledge sharing in higher education institutions.

At global level, most studies reported about knowledge sharing were mainly focused on business organization, however recently similar studies were reported in various higher education institutions in different countries (Osama, Ahmad & Amer, 2014; Kim & Ju, 2008; Sohail & Daud, 2009; Nordin, Deros, Wahab, & Rahman,2012; Fullwood et al, 2013). The lack of knowedlge management (KM) and knowedlge sharing (KS) application in HEI in comparison to the business sector can be ascribed to the fewness of the attempts to utilize the widely recognized benefits of KM (Cheng, Ho & Lau, 2009). In their study, Ali, Gohneim & Roubaie (2014) pointed that there were limited number of studies on knowledge sharing in HEIs in contrast to the commercial sector, revealing that existing researches on HEIs do not consider the determinants of knowledge sharing culture comprehensively. Thus, conducting research on this area in Africa and particularly in Ethiopia cannot be overemphasized.

In Ethiopia, higher education was started in 1950 with the establishment of the Addis Ababa University, which had less than 1,000 students and 50 teachers (Bishaw & Melesse, 2017). In recent years, new universities and colleges are being added across the country to an array of old universities. Despite the number of higher education institutions are growing dramatically, however to date only limited studies were reported to about knowedlge sharing (Rahel & Ermias, 2011; Alemu, 2009; Yirga & Shambel, 2016). Thus, the knowledge sharing culture and practice of highr education institutions are not documented. Therefore, exploring the knowledge sharing culture of universities is of a great significant to recommend possible enabling mechanisms to improve knowledge sharing, which will further enhance the quality of education in the country. Moreover, previous studies have suggested that, studying the knowledge sharing culture of higher education institutions is essentially imperative to improve and facilitate the knowledge sharing process and benefit staff members, community and society at large.

As previous studies indicated knowledge sharing behavior is guided by different theories. Therefore, our study is supported by the three most important knowledge sharing theories namely: Social exchange theory, Theory of Reasoned Action and Knowledge Market Perspective, which are common and well known to explain the existence of knowledge sharing behaviors among different individuals. These theories were chosen to guide and address the issue of knowledge sharing in identifying factors that contribute to the individuals' intent to carry out the behavior. Social exchange theory (SET) is a model which emerged in sociology and social psychology to explain people's personal interactions in terms of calculating the cost by the outcome of the benefit they will receive out of it. Social Exchange Theory (SET) is employed to examine observed benefits. Moreover, costs and the effects of institutional justice and confidence on knowledge sharing (Wang & Noe, 2010). When an individual expects to benefit from knowledge sharing due to reciprocity it has a positive impact (Cabrera & Cabrera, 2005). Besides trust, individuals expect a reward for their sharing. According to SET theory, trust and reward should be taken under

consideration to maximize knowledge sharing among faculty members. The Theory of Reasoned Behavior (TRB) was integrated into motivational perspectives to study the effect of extrinsic and intrinsic motivation in understanding an individual's knowledge sharing intentions (Lin, 2006). These motivational factors influence the attitude towards knowledge sharing, that in turn impact the intentions to share knowledge and in the long run resulting in the individual's performing the behavior. According to Davenport & Prusak (1998), Knowledge Market Perspective (KMP) is used to propose knowledge circulation, consisting of the one who demands knowledge (the buyer), the one who provides knowledge (the seller), the broker who acts as the connecting thread between the buyer and seller, and the price mechanism. Hung, Durcikova, Lai & Lin (2011) used the KMP theory to find out factors that impact knowledge sharing. In the context of the current study, this theory also helped to find out the main factors that influence knowledge sharing culture among academic staffs in selected higher education institutions.

Generally, the objective of this study was to explore the knowledge sharing practice culture among academic staff in the two higher education institutions (AAU and AASTU) in Ethiopia. The study could offer recommendations that would help universities to effectively manage the academic staff knowledge assets in order to enhance their reasonable advantage in a highly competitive globalized higher education environment.

Method

Study area

The study was conducted in the two higher education institutions namely; Addis Ababa University (AAU) and Addis Ababa Science and Technology University (AASTU) found in the capital city, Addis Ababa, Ethiopia. The total population of the present study was 3361 (AAU; 2790 and AASTU; 571).

Study design and data collection

The survey research design was used to explore the knowledge sharing culture among academic staff in the two universities according to previous report (Jolaee, Nor, Khani &Yusoff, 2014). The study adopted a mixed method to collect both quantitative and qualitative data from academic staff and managers, respectively. A total of 400 questioners were randomly administered to collect quantitative data from academic staff in both universities to explore their knowledge sharing culture. In addition, 30 managers holding different administrative and managerial positions (department heads, college deans and vice-presidents) were selected for an interview to unravel their understanding and role in facilitating knowledge sharing in both universities. The semi-structured interview was used to collect qualitative data from randomly selected managers.

Knowledge sharing instruments

The knowledge sharing instruments adopted in this study include knowledge sharing culture, staff attitude, motivation to share, opportunities to share, trust and management support according to previous studies (Kim & Ju, 2008; Lin, Lee & Wang, 2009; Sohai & Daud, 2009). In the questionnaire, participants' demographic information such as gender, age, educational level, academic rank, work experience, and employment status were included. For knowledge sharing instruments, a five-point Likert scale 'strongly disagree' (1) to 'strongly agree' (5) was adopted from previous studies (Kim & Ju, 2008). Prior to the actual data collection, the questionnaires were pre-tested on 15 academic staff at Kotebe Metropolitan University (one of the public universities found in the capital city), and interview questions were also pre-tested on two dean and five department heads in the same university. In this study, observation was included for qualitative data collection to assess the availability of infrastructure and facilities for knowledge sharing.

Data analysis

Descriptive statistics including frequencies, means, and standard deviations were calculated for the quantitative data using SPSS ver.20 (IBM corporation, Chicago, USA). Correlation and ANOVA were performed to investigate the association and difference between the factors of knowledge

sharing. Correlation analysis was performed to examine the association of knowledge sharing factors. Thematic data analysis was employed for the semi-structured interview data analysis. Furthermore, triangulation analysis was performed to cross check quantitative and qualitative data for the validity and reliability of the results.

Results

Demographic data of Academic staff and Managers

A total of 382 correctly and successfully filled questionnaires were collected and used for analysis. The key demographic characteristics (gender, age, level of education, academic rank, and work experience) of academic staff respondents and interviewed managers of both universities are shown in Table 1. Out of the 382 academic staff respondents, the majority (87.17%) were male with n=333 individuals, and female respondents occupied only 12.83% with n=49 participants. Regarding the age, about 48.69%, (n=186) of the academic staff were belonged to the age range of 30-39 (followed by 20-29 with 93 respondents (24.35%) (Table 1). The majority 89.9% (195) of the academic staff had 1-5 years of work experience, and only 6.28% of respondents had work experience above 15 years. Regarding the level of education, out of the 382 respondents, the majority 227 (59.42%) were a master's degree holder. Almost all the staff respondents were full-time worker with 355 individuals (92.93%) (Table 1).

Table 1.
Academic staff (n=382) and managers (n=30) demographic data

Characteristics	Academic staff						Managers					
	AAU		AASTU		Total		AAU		AASTU		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Gender												
Male	274	87.5	59	85.5	333	87.17	19	95.0	8	80.0	27	90
Female	39	12.5	10	14.5	49	12.83	1	5.0	2	20.0	3	10
Age												
20-29	65	20.8	28	40.6	93	24.35	0	0	2	20.0	2	6.67
30-39	154	49.2	32	46.4	186	48.69	7	35.0	7	70.0	14	46.67
40-49	60	19.2	6	8.7	66	17.28	7	35.0	0	0	7	23.33
>50	34	10.9	3	4.3	37	9.69	6	30.0	1	10.0	7	23.33
Work experience												
1-5 years	133	42.5	62	89.9	195	51.05	19	95.0	10	100.0	29	96.67
6-10 years	99	31.6	7	10.1	106	27.75	1	5.0	0	0	1	3.33
11-15 years	57	18.2	0	0	57	14.92	0	0	0	0	0	0
> 15 years	24	7.7	0	0	24	6.28	0	0	0	0	0	0
Level of education												
Bachelor	21	6.7	15	21.7	36	9.42	0	0	0	0	0	0
Masters	188	60.1	39	56.5	227	59.42	7	35.0	5	50.0	12	40.0
Doctoral	104	33.2	15	21.7	119	31.20	10	50.0	3	30.0	13	43.33
Postdoctoral	0	0	0	0	0	0	3	15.0	2	20.0	5	16.67
Employment status												

Full-time	294	93.9	61	88.4	355	92.93	20	100.0	10	100.0	30	100.0
Part-time	5	1.6	1	1.4	6	1.57	0	0	0	0	0	0
Contract	12	3.8	7	10.1	19	4.97	0	0	0	0	0	0
Invited lecturer	2	0.6	0	0	2	0.52	0	0	0	0	0	0

A total of 30 managers from both AAU and AASTU were participated in the semi-structured interview. As shown in Table 1, the number of male and female participants were 27 and 3 representing 90.0% and 10.0%, respectively. About 46.67% of the managers fall in the age range of 30-39, followed by 40-49 and >50 with the same 23.33%. Almost all mangers had 1-5 years of work experience as a manager (96.67%), and all interviewed managers were fulltime workers (100.0%) (Table 1).

Factors of knowledge sharing

In this study, factors of knowledge sharing were divided into six main variables including knowledge sharing culture, staff attitude, trust, motivation, opportunity to share knowledge and management support and two sub-variables such as intrinsic and extrinsic motivation (Table 2). The reliability test results of these variables were between 0.61 and 0.78. The overall mean alpha value was 0.72 indicating a strong stability and reliability of the parameters used in this study.

Table 2.
The reliability, mean, SD, and percentage of factors of knowledge sharing (n=382)

Variables	**a**	**Mean**	**S.D**	**Strongly disagree**		**Disagree**		**Neutral**		**Agree**		**Strongly agree**	
				n	%	n	%	n	%	n	%	n	%
Knowledge sharing culture	0.78	4.01	0.695	1	0.3	10	2.6	54	14.1	236	61.8	81	21.2
Staff attitude	0.70	3.69	0.985	7	1.8	39	10.2	103	27.0	149	39.0	84	22.0
Trust	0.77	3.71	0.656	1	0.3	8	2.1	122	31.9	219	57.3	32	8.4
Intrinsic	0.69	4.03	0.71	0	0	10	2.6	60	15.7	219	57.3	93	24.3
Extrinsic	0.61	2.85	0.98	36	9.4	93	24.3	158	41.4	80	20.9	15	3.9
Opportunity	0.71	3.01	0.909	17	4.5	94	24.6	148	38.7	113	29.6	10	2.6
Management	0.75	2.93	0.755	9	2.4	89	23.3	211	55.2	66	17.3	7	1.8

Note: mean scores were based on the five-point scale ranging from 1=strongly disagree to 5=strongly agree

The academic staff were asked whether the knowledge sharing culture of their university promotes knowledge sharing or not. As shown in Table 2, about 61.8% (N=236) of the respondents believed and 21.2% (N=81) strongly believed that the university knowledge sharing culture promotes knowledge sharing. Generally, the knowledge sharing culture had a mean score of 4.01, indicating that the knowledge sharing culture of the universities encourages knowledge sharing. Regarding staff attitude towards knowledge sharing, 39.0% (N=149) and 22.0% (N=84) of the staff respondents had very positive and positive attitude towards knowledge sharing, whereas, very negative and negative response accounted 1.8% (N=7) and 10.2% (N=39), respectively (Table 2). The overall mean score of staff attitude was 3.69, suggesting that academic staff agreed on the idea that knowledge sharing is important and valuable. The trust of academic staff among themselves and their university to share their knowledge was investigated, and the result showed that 57.3% (*N*=219) and 8.4% (*N*=32) had trust and strong trust in their colleagues and university,

with the overall mean score of 3.71 (Table 2). The result suggested that there was a trust among academic staff to share knowledge in their university.

In this study, motivation had two sub-variables and academic staff were asked whether they are motivated by themselves (intrinsic motivation) or/and by their university (extrinsic motivation) to share knowledge. The results showed that 3.9% (N=15) strongly agreed and 20.9% (N=80) agreed that the university was motivating and encouraging academic staff to share their knowledge. Regarding the extrinsic motivation, the majority 75.1% (N=287) of the respondents were disagree and neutral towards the extrinsic motivation provided by their university. As shown in Table 2, 24.3% (N=93) and 57.3% (N=219) of the respondents were strongly agree and agree that they are intrinsically motivated to share their knowledge. Generally, the majority 81.6% (N=312) of the respondents agreed that they are willing to share their knowledge (intrinsic motivation) with a mean score of 4.03 (Table 2). In addition, 32.20% (N=123) of the respondents were positive towards the opportunity provided for knowledge sharing. The management support to the academic staff for knowledge sharing was assessed, and about 55.2% (N=211) of the respondents were neutral to the support provided by the university management for knowledge sharing (Table 2). The mean scores of opportunity and management support were 3.01 and 2.93, respectively, indicating that the opportunity and the management support for knowledge sharing were poor in both universities.

The relationship between knowledge sharing factors

The relationship among the six knowledge-sharing factors (knowledge sharing culture, staff attitude, motivation, opportunity, trust, and management support) was tested by Pearson Correlation analysis. As presented in Table 3, there were significant positive correlations between all the factors of knowledge sharing ($p< 0.01$), despite the degree of association was different. An optimum degree of correlation was noted between intrinsic motivation and trust (r=0.51), extrinsic motivation and opportunity (r=0.48), and opportunity and management (r=0.50) (Table 3). On the other hand, knowledge sharing culture and management support (r=0.21), staff attitude and opportunity (r=0.24), staff attitude and extrinsic motivation (r=0.24), and intrinsic motivation and management support (r=0.24) showed weak association.

Table 3.
Correlation of knowledge sharing variables (n=382)

Variables	1	2	3	4	5	6	7
Knowledge sharing culture	1						
Staff attitude	.32**	1					
Trust	.41**	.46**	1				
Intrinsic	.38**	.45**	.51**	1			
Extrinsic	.25**	.24**	.33**	.18**	1		
Opportunity	.33**	.24**	.37**	.19**	.48**	1	
Management	.21**	.32**	.38**	.24**	.35**	.50**	1

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

Ways Of Knowledge Sharing Used by Academic Staff

In this study, we also explored the common ways used for knowledge sharing in both universities. The ways of knowledge sharing and the time intervals used to assess the frequency are listed in Table 4. In both universities, informal chat and phone call with 37.2% (n=142) and 35.3% (n=135), respectively were the common daily used ways of knowledge sharing among academic staff, followed by email with 34.6% (n=132). In the contrary, Wiki with 86.4% (n=330), Blog with 86.1% (n=329), Video conference with 83.8% (n=320), LinkedIn with 67.0% (n=256), and Web with 55.0% (n=210) were the most unused ways of knowledge sharing among academic staff in both universities (Table 4).

Table 4.
Ways of knowledge sharing

Tools		Never	Semester	Once a Month	2- 3 times a Month	Once a week	2-3 times a Week	Daily	Total
SMS	n	114	29	40	56	27	58	58	382
	%	29.8	7.6	10.5	14.7	7.1	15.2	15.2	100.0
Email	n	20	26	28	52	40	84	132	382
	%	5.2	6.8	7.3	13.6	10.5	22.0	34.6	100.0
Phone Call	n	60	16	23	34	43	71	135	382
	%	15.7	4.2	6.0	8.9	11.3	18.6	35.3	100.0
Facebook	n	189	18	22	25	23	40	65	382
	%	49.5	4.7	5.8	6.5	6.0	10.5	17.0	100.0
Conference	n	89	225	49	8	8	2	1	382
	%	23.3	58.9	12.8	2.1	2.1	0.5	0.3	100.0
Web	n	210	30	28	23	18	19	54	382
	%	55.0	7.9	7.3	6.0	4.7	5.0	14.1	100.0
Training	n	81	235	41	15	3	6	1	382
	%	21.2	61.5	10.7	3.9	0.8	1.6	0.3	100.0
Conversatio	n	127	61	63	24	15	29	63	382
nal Sessions	%	33.2	16.0	16.5	6.3	3.9	7.6	16.5	100.0
Formal	n	67	127	90	54	24	12	8	382
Meeting	%	17.5	33.2	23.6	14.1	6.3	3.1	2.1	100.0
Informal	n	85	9	38	39	29	40	142	382
Chat	%	22.3	2.4	9.9	10.2	7.6	10.5	37.2	100.0
Video	n	320	26	17	11	3	1	4	382
Conference	%	83.8	6.8	4.5	2.9	0.8	0.3	1.0	100.0
Blog	n	329	19	10	6	3	8	7	382
	%	86.1	5.0	2.6	1.6	0.8	2.1	1.8	100.0
LinkedIn	n	256	31	27	19	12	12	25	382
	%	67.0	8.1	7.1	5.0	3.1	3.1	6.5	100.0
Wiki	n	330	11	10	4	6	8	13	382
	%	86.4	2.9	2.6	1.0	1.6	2.1	3.4	100.0
Lecture and	n	81	149	59	19	18	34	22	382
Presentation	%	21.2	39.0	15.4	5.0	4.7	8.9	5.8	100.0

As 58.9% academic staff responded, conferences were conducted per semester for knowledge sharing, while training was the most used way of knowledge sharing per semester with 61.5% respondents. Among the three main ways of communication including speaking, writing and IT, speaking was found to be the most prominent way than IT and writing in this study. In addition, the managers of both universities responded that annual seminars and workshops were conducted at the whole university level for knowledge sharing. Managers from AAU mentioned that conferences were conducted only once or twice a year because of budget problem. Similarly, managers from AASTU stated that seminars were prepared when needed without a set time table. The managers of both universities pointed that there is no technology-based knowledge sharing practice. Generally, the study found that there was no well-defined and organized technological method for knowledge sharing in both universities due to internet problem. According to the managers, the most common way of knowledge sharing was speaking/ face to face discussion. Writing and IT were the second and third ways of knowledge sharing used in both universities.

Results from the interview

In this study we assessed managers understanding of the concept of KS, the practice of KS in their university, the management support provided to the academic staff, facilities and opportunities to share, rewarding system and ways of knowledge sharing through a semi-structured interview.

Managers understanding of the concept of knowledge sharing

Although managers have different understanding and perception about knowledge sharing, most of them had awareness about the concept of knowledge sharing. Most managers defined KS as the exchange of information and experience that enhances their knowledge level. For the question 'what is knowledge sharing and knowledge sharing culture in your understanding?' one manager from AAU participant responded as follows:

'Knowledge sharing in our university practice by teachers always by update themselves, share what they know to their students, and also especially in our department beside teaching we involve in societal work like designing, construction. Also, they share with their student what they learn from their societal work or experience.'

Manager from AASTU responded that:

'Indeed it is difficult to say that there is KS in this University. For KS to be said exist, one of the platforms is seminar, Seminars were organized and other seminars were announced on the seminars. On the seminars instructors and interested individuals participate. There was no other kind of methods through which Knowledge is shared in this University. But there were few groups conducting research in a team if this is considered as KS.'

For the question *'how do you practice knowledge sharing in your university?'* One of the manager from AASTU responded:

'In my understanding knowledge sharing practiced in my university highly informal (discussion among the teaching staff during the lunch and tea time) and formally when there were meetings.' One of the interviewee from AAU explained the situation in his university as "candle in a pot", he elucidated that the system has not made us to share our knowledge." Another manager said; "we don't expect the staff members in the level of a lecturer to share their knowledge, their main responsibility is teaching. At lecturer level they don't have anything to share."

According to the managers, usually academic staff work independently, there was no peer discussion, and thus knowledge sharing practice was limited. One of the managers explained that the reason for not sharing knowledge is related to the social culture of hiding knowledge. The manager described as

In our country people to hide what they know to keep their position of knowledge source. In addition, the traditional proverbs highly encouraged to be silent and hide your knowledge than sharing. For example, "**zimita werk new"** (means silence is gold) and "**zim aynekizim**" (means silence never spoil) were some of the proverbs which encourage knowledge hiding."

In addition, managers were asked about the attitude of academic staff for knowledge sharing, and they pointed out that the staff members do not consider KS as their responsibility beside teaching. In general, there was no clear and effective knowledge sharing platform set by the management and higher officials and there was no consistency or time frame that guides the academic staff to share their knowledge. Thus knowledge sharing practice depends on the awareness level of the manager.

Management Support for Enhancing Knowledge Sharing

The managers were asked about the way how they create opportunities and motivate academic staff to share their knowledge. They pointed that the management organizes and facilitates meetings, conferences, seminars and short-term trainings for academic staff to share their experience and knowledge widely. Particularly in AAU, managers support the staff through connecting and encouraging the academic staff to do projects with international collaboration. Moreover, they added that some departments create their own strategies such as doing researches in a team and encourage their academicians to make presentations and share their findings to the university's community. Regarding the motivation provided to academic staff by the managers, the result showed that the management motivates the academic staff through

monetary or/ and non-monetary rewards, but there was a slight difference between the two universities regarding the rewarding system. The managers from AAU mentioned that the university has a non-monetary rewards like certificate of appreciation, the university rewards those academic staff who publish their research in the reputable journal. In addition, managers also claim that the university covers the expenses of academic staff if they get a chance to present their paper in another place including abroad. Unlike AAU, the managers in AASTU described that there is no well-established rewarding system for knowledge sharing, especially monetary rewards. They added that the rewarding system is limited to verbal (verbal appreciation from the department heads), few certificates of appreciation, but there is no financial incentive to motivate academic staff to share their knowledge due to the shortage of budgets. Managers play a great role in motivating and encouraging academic staff to do their work effectively, however the motivation they provided on these selected universities were limited. According to the managers' response, there was no policy or written knowledge sharing process and knowledge sharing is conducted informally. The success and its effectiveness were highly based on the understanding of the manager towards the knowledge sharing process. All of them agreed that there is no written or preplanned knowledge sharing process in their institutions.

Facilities and their utilization for knowledge sharing

The managers of both universities were asked about the availability of facilities such as meeting rooms, computer laboratories, Internet (IT) and libraries, and their utilization for the purpose of knowledge sharing in their university. They mentioned that there is a lack of facilities such as staff offices, conference/meeting rooms, laboratory equipment and information technology system which facilities knowledge sharing. Poor internet connection was the main reason for not using IT system in both universities. Although the internet connection was poor, AAU has an online digital library to share and acquire knowledge. Managers also pointed that the major problem was lack of enough laboratories and equipment in both universities. In AAU, one manager mentioned that because of the lack of laboratory, two departments (clinical and mental psychology) are closed. In addition, most of the managers agreed that the available resources were not utilized to the extent expected in both universities. The problem-related with laboratory utilization was due to the lack of knowledge on how to use the new advanced equipment's. Generally, the two universities had limited infrastructures but the major problems were the facilitation and proper utilization of the available equipment's and the lack of a timely decision for budget allocation and maintenance.

Results from observation

An observation was conducted in both universities to assess the availabilities of facilities for knowledge sharing and to cross check with the interview results. In AAU most of the buildings were old and not accessible for students and teachers who are physically disabled. In both universities, there were few conference rooms or Hall/ auditorium used for meetings. According to the observation, libraries and book stores were the fully equipped infrastructures in both universities. The availabilities of laboratories were different according to the departments. As our observation, there were many laboratories in both universities. However, most of them were not working currently because of different reasons such as lack of trained personnel who can operate the instruments, the instruments were broken and not fixed on time, and the shortage of laboratory instruments. Overall, the major finding from observation data was the limited availability of infrastructures for effective knowledge sharing. The infrastructure that support knowledge sharing through speaking such as meeting rooms, cafeterias, auditoriums, and teachers' offices were not enough. The infrastructures which support writing and IT ways of knowledge sharing were also limited in both universities. The poor internet connection hindered the academic staff from sharing their knowledge and accessing others knowledge.

The integration of quantitative and qualitative results

Triangulation analysis is important to validate and crosscheck qualitative and quantitative results. In this study, triangulation of the quantitative and qualitative data revealed some relationships and some differences between the responses of both survey results and interview results. The

quantitative results showed that most of the academic staff agreed that they have knowledge sharing culture and positive attitude towards knowledge sharing, and trust among themselves and their university to share knowledge. In contrary, most managers did not agree with this response, and they believed that knowledge sharing is not practiced to the fullest in both universities. This result leads us to the next research question 'How the university management supports academic staff to share their knowledge? The survey results showed that both the management support and opportunity to share were poor in both universities. Interestingly, this result was supported by the results from the interview. The managers stated that there is no set platforms and pre-planned ways to motivate the staff members to share their knowledge. The rewarding system was poor, but in AAU academic staff who publish articles, books or peer reviews could gain a monetary reward. On the other hand, management support could be facilitating infrastructure. The interview results revealed that, there are some infrastructure and resources to establish knowledge sharing environment. This result was also confirmed by observation. Observation in both universities showed that there were limited number of meeting rooms and unmaintained laboratories. The third research finding was about the most commonly used ways of knowledge sharing in both universities. The survey results showed that informal chat, phone call and email were the most prominent ways of communication, which was also in line with the interview results. The observation results also confirmed that because of the electrical and internet connection problem, it is difficult to use other ways of communication such as IT.

Discussion

Higher education institutions are the home for knowledge with the mission of creating, preserving, sharing and implementing knowledge for the benefit of the society and humanity (Firly, Dienni & Rizqi, 2013). The effectiveness of knowledge sharing depend on the concert work of various factors such as the collaboration of academic staff among themselves, management support and the availability of necessary infrastructures. In higher education institutions, knowledge sharing culture is the key factor to establish successful knowledge management program and is very useful for knowledge production, improvement and dissemination among academic staff (Cabrera & Cabrera, 2005; Riege, 2005; Suhaimee, Bakar & Alias, 2006). In this study, we explored the knowledge sharing culture among academic staff in the two higher education institutions in Addis Ababa, Ethiopia. Various knowledge sharing factors including knowledge sharing culture, staff attitude, trust, opportunity, motivation, and management support were examined through questionnaires. The result indicated that the majority 317 (83%) of academic staff responded that the knowledge sharing culture in their university could promote knowledge sharing, and they believed that their knowledge sharing practice could strengthen the ties and relationships with other members to achieve institutional goals. For this study, knowledge sharing culture refers to any activities used by academic staff for knowledge creation, dissemination and improvement. It is believed that knowledge sharing culture has positive impact to increase knowledge creation in higher education institutions. Meanwhile, the interviewed managers pointed out that there was little practice of KS among staff members in their university. The result from both academic staff and managers suggested that the knowledge sharing culture in their university was informal, without scientifically established platform. Generally, there was no customary way for knowledge sharing in both universities, therefore the managers and concerned bodies should work together to create a platform which will facilitate the process of knowledge sharing.

In the process of knowledge sharing, developing an attitude without requiring enthusiasm is the key factor for successful knowledge sharing (Hislop, 2003), and an individual's attitude is found to be an important predictor of knowledge sharing (Kim & Lee, 2006; Goh & Sandhu, 2013). In this study, the attitude of academic staff towards knowledge sharing was positive in both universities with 61% (N=233) of the respondents. The result is in line with the finding of Goh & Sandhu (2013) who found that academic staff had positive attitude towards knowledge sharing in public and private universities in Malaysia. Similar result was reported in Australian universities (Fink & Gugurajan, 2010). It has been reported that attitude towards knowledge sharing has an indirect effect on self-reported sharing behavior by positively influencing the willingness to share (Lin, 2007). In addition, Hsu & Chang (2014) mentioned that individuals will be unwilling to share knowledge due to lack of trust among each other. In this study, 12.04% (N=46) of the academic staff had negative attitude towards knowledge sharing. This may be because they believe that their acquired knowledge is valuable and necessary only for their personal development including career progression and job security (Islam, Jasimuddin & Hasan, 2015). The positive attitude of

academic staff towards knowledge sharing could be helpful for effective knowledge sharing process in their university.

Trust is a key component for the success of knowledge sharing (Fathi, Eze & Goh, 2011). In universities, academicians are keen to share their knowledge if they trust each other, thus trust has a huge impact on individuals to share knowledge as well as to create a healthier working environment among academic staff. In the present study, the trust of academic staff to each other and to their university was investigated and the result showed that the majority of the respondents 65.71% (N=251) had trust to their colleagues and university. The existence of trust among staff members could strengthen the relationships. According to a previous study, trust had a positive link in developing knowledge sharing intentions and innovating capacity of the university (Igbal et al., 2011). Likewise, in this study, trust was the most determinant factor for effective knowledge sharing in both universities and also affects other knowledge sharing variables. Motivation which is created from the union of external and internal pressures, is an inherent drive to share knowledge with others (Chang & Chuang, 2011). There are two classes of motivation (extrinsic and intrinsic) and have been studied in previous researches (Teo, Lim & Lai, 1999; Vallerand, 2000). Intrinsic motivation is when employees or staff are motivated internally by themselves while extrinsic motivation is when staff are motivated based on the external factors or for other reasons. In this study motivation was divided into two classes as intrinsic and extrinsic motivation. The result revealed that, about 81.6% (N=312) of the academic staff were intrinsically motivated, while 24.8% respondents were extrinsically motivated to share their knowledge. Surprisingly, the majority of the academic staff 75.1% (N=287) were disagree with the motivation provided by their institution. In this study, staff respondents were motivated intrinsically than extrinsically and there was a significant difference between them, indicating that the major reason for knowledge sharing is their willingness and intrinsic motivation. By contrast, the extrinsic motivation which required reward and encouragement was poor.

The managers of both universities confirmed that there was no well-organized, promotion and rewarding system for knowledge sharing. Nevertheless, Mcnichols (2010) stated that people who share and exchange information must be perceived genuinely through extraneous and inherent prizes. Comparatively, managers from AAU mentioned that the university has a rewarding system for those academic staff who publish their research, but it is limited to academic staff who publish research paper. However, AASTU managers explained that there was no remunerating framework for academic staff who share knowledge, this could negatively influence knowledge sharing process. A previous study deduced that KS cannot occur without some sort of rewarding mechanism (Andreeva & Kianto, 2012). Moreover, studies have suggested that universities should use motivation as an approach to support academic staff to share knowledge. Incentives are essential for the encouragement of knowledge sharing (Yang & Ching, 2000), and the lack of incentives was the most important barrier for knowledge creation and sharing (Wang & Noe, 2010). Likewise, Singh & Kant (2008) pointed out that the absence of inspiration and reward system debilitates individuals to make, offer, and utilize knowledge. In this study, academic staff were more motivated intrinsically than extrinsically in both universities, this may be due to the strong trust of academic staff to eachother. University managers should extrinsically motivate academic staff through rewarding and this will enhance the knowledge sharing practice of universities.

Opportunities for knowledge sharing in an organization can be either formal or informal. The formal opportunities include systems, tools, planned projects and training that can facilitate knowledge sharing (Ipe, 2003). In this study, like other knowledge sharing variables, the opportunity created for knowledge sharing was assessed. The result indicated that 32.2% of the academic staff respondents agreed with the opportunity created in their university for knowledge sharing. Meanwhile, 29.06% of the respondents did not believe in the opportunity created in their university. The result revealed that the opportunity given to knowledge sharing is very low in both universities. This may be attributed to the lack of facilities such as laboratories, equipment, conference halls and meeting rooms, poor internet connection in their university, which hinders knowledge sharing. In addition, the interview results from the managers confirmed that the opportunity given to the academic staff to share knowledge was limited. Among the opportunity, organizing seminars, conferences, training and teamwork's for academic staff are important for knowledge sharing as a formal way of knowledge sharing. But, in both universities, there was no permanent and scientifically acceptable platform for knowledge sharing, indicating the lack of enabling opportunity. Seminars and conferences were conducted without time frame. In addition, there were no well-organized technological and IT system due to internet problem. The managers also claim that the available facilities and equipment were not fully utilized because of the lack of

trained manpower on some advanced equipment. The result revealed that the opportunity given to knowledge sharing was very poor in both universities.

Management support is one of the most important factors influencing knowledge sharing by providing a working enviroment for staff to share knowledge (Vera & Crossan, 2004), and also play a considerable role in enhancing organizational knowledge (Gupta, 2008). In this study, greater than half of the academic staff respondents were neutral for the support provided by the university management to share their knowledge. The academic staff agreement towards the management support in promoting knowledge sharing was poor, indicating that the support provided by the managers was not enough to encourage academic staff to share their knowledge. The interviewed managers of both universities mentioned that the management is supporting staff members only by organizing and facilitating meetings, conferences, seminars and short-term training for academic staff to share their experience and knowledge widely, but they also agreed on the limitedness of the opportunities provided by the managers. It has been shown that management is responsible for encouraging interaction, communication among department heads in the university (Al-Hawamdeh, 2003), thus management support was recognized as a motivator or enabler of knowledge sharing (Cavaliere & Lombardi, 2015). In this study, managers pointed that the support to academic staff to share their knowledge was limited, seminars and conferences were organized when needed, and the rewarding system was poor. The result revealed that the management support to academic staff to share their knowledge was limited in both universities. It is reported that lack of top management support acts as a barrier to knowledge sharing and transfers (Mcnichols, 2010). Thus, university management should support academic staff to improve knowledge sharing in their university. Studies have shown that knowledge sharing is affected by various interconnected factors, with which each factor influencing one another in a nonlinear fashion. In this study, the association of these factors was investigated by correlation analysis. The result showed that all factors of knowledge sharing are positively correlated and associated with each other, which in turn affect knowledge sharing positively. But all the factors studied did not exert the same amount of influence on knowledge sharing. The stronger relationship was observed between trust and other variables. The result revealed that trust had a significant impact on knowledge sharing through affecting other important knowledge sharing variables.

Research Implications

The current study reviewed the previous relevant studies and theories to answer the research question. Based on the theoretical formulated model the data collected and the empirical data obtained. This study studied addressed how should the academic staff share their knowledge effectively, the challenges they face and coping actions. The study revealed the following research implications and opportunity for further research: The analysis and results conveyed a way to think how should the academic staff of the selected universities in Addis Ababa effectively share their knowledge. The response of the academic staff paved a way to insight their perspective towards the knowledge sharing in general and their institution knowledge sharing culture, staff attitude, trust, motivation, opportunity to share and management support in particular. Most of previous studies focused on technology-based ways of communication. However, the current study on the part of ways of communication, tried to show other ways too. In the other places, poor countries like Ethiopia, where technology yet not develop as a means of communication, future researchers might research other ways of communication that can also codified and store. Interviewing the managers provide a clear understanding about how the higher education institutions were administered and how much the benefit of knowledge sharing taken under consideration in Addis Ababa government universities. Based on the investigated challenges which hinder effective knowledge sharing among academic staff in Addis Ababa's government universities, coping measures suggested. For example, the managers should modify their organizational structure to more interactive and participatory one. To promote the knowledge sharing providing motivators like rewards is also important aspect, because individuals expect recognition for their good deeds. The future researchers apply the coping actions and can measure result.

Conclusion

This study demonstrated the knowledge sharing culture among academic staff of the two higher education institutions (AAU and AASTU) in Ethiopia. In these universities knowledge sharing is not clearly practiced and there is no well-established platform for knowledge sharing. The opportunities, management support and rewarding system for knowledge sharing were poor in both universities. Laboratories were not fully equipped and utilized. Trust among academic staff and intrinsic motivation were the main determinant factors for knowledge sharing. University management should create a suitable platform and rewarding system for effective knowledge sharing.

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