



ANALYSING KNOWLEDGE SHARING INTENSITY USING ORGANISATIONAL NETWORK ANALYSIS IN HIGHER LEARNING INSTITUTIONS: A CASE OF THE UNIVERSITY OF KIGALI (UOK)

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Abstract:

Knowledge sharing has been distinguished as a key enabler in leveraging knowledge management in organizations. Leaving knowledge in tacit form may prevent organizations such as Higher Learning Institutions from competing as the Institutions risk losing tacit knowledge when an individual in possession of such knowledge becomes incapacitated, retires from their position, gets hired by their competitor or even dies. It is in this viewpoint that this research identified the knowledge sharing among the academic staff as the core process in achieving efficiency in the University of Kigali (UOK). This paper seeks to show the knowledge sharing patterns among the academic staff and the frequency with which the academic staff share knowledge. The results can provide information to the management in providing the infrastructure, activities or programmes as well as systems of rewards and recognition that can increase the intensity of knowledge sharing. A case study was conducted on all the fourteen (14) fulltime staff in the University Of Kigali (OUK). Since the number of the fulltime academic staff is small, this research used censuses to find the sample size. The questionnaire, as an instrument for data collection was distributed on all the 14 fulltime academic staff of the University Of Kigali and the results was analyzed using UNICET to find the frequency and intensity of knowledge sharing among the academic staffs in the University of Kigali (UOK). From the findings, it can be observed that the frequency with which the academic staff conducts knowledge sharing is low (in every few weeks). Therefore there is a need to understand the factors that contribute to low knowledge sharing intensity in Higher Learning Institutions such as the University of Kigali (UOK).

Keywords: *Higher Learning Institutions, Fulltime Academic Staff, Intensity of Knowledge Sharing, Social Network Analysis, Organisational Network Analysis.*

1.0 INTRODUCTION

Knowledge has always been a precious commodity within organizations and it can be defined as the

ability of people and organizations to understand and act effectively [23]. Knowledge not only helps both the individuals and organizations to cope with routine



situations, it also equips us to deal with new situations, anticipate outcomes, and improvise when needed [19]. Organizations that need to grow, compete, and function in an ever evolving environment, naturally do not leave the development of precious knowledge within the organization to chance. The exchange of information and knowledge among employees is a vital part of the field known as knowledge management [3]. To facilitate knowledge management the management of organizations will introduce incentives to promote innovation, learning, and effective knowledge sharing [19].

Sharing is a natural thing to do for everyone, but knowledge sharing within organizations is a complex matter. In order to advance the goals of an organization, individuals must move their knowledge to the level of groups or organization (Ipe, 2003). Knowledge exists at multiple levels, and even while individuals are only one level, their sharing is imperative to management and creation at all levels within the organization. Once knowledge has been moved to the organizational level it can be converted into economic value. The organization is not the only one to benefit, individuals sharing knowledge contributes to both individual and organizational learning.

Knowledge sharing relies on the willingness of individual professionals to share with others. Because people tend to hoard their knowledge, the transformation from individual to organizational knowledge is not easy. Organizations cannot force their employees to do so. The headquarters of an organization tried to control its subunits, but the more control it exercised, the less knowledge was being shared [17]. What organizations can do though is facilitate and encourage knowledge sharing. In order to do so, insight into what motivates professionals is needed [2].

Organizational performance today is primarily a result of the effectiveness of cross functional processes (Rummler & Brache, 1995). Leaders must accept the ambiguity of today's organizations (Parkhe, Wasserman, & Ralston, 2006; Weick, 1979) and find ways to visualize, explain, shape and align organizations around the mission, values, vision and strategy. Using structure to articulate the intent of the organization creates a challenge for leaders because it creates a perception of stability, and humans have a general need for certainty, routine and predictability. However, especially in knowledge-intensive organizations such as higher learning institutions,

people and information need to be brought together in adaptable and flexible ways (Charan, 1999; Cross & Parker, 2004; [13]. Conceptualizing organizations as social communities in which knowledge is structured, coordinated, and shared is central to understanding knowledge sharing behavior in organizations [11] Organizations are knit together by ties of a complex and diverse nature. Ties can differ according to whether they are based on friendship, work, or advice; and whether what flow through them are resources, information, knowledge or affection; whether they are face-to-face or electronic among others. The substance and type of ties in a network can have important implications for action [13].

Organisational Network Analysis (ONA)

Typically, formal relationships are documented with job descriptions and organizational charts. Every organization also has its informal networks – people who know each other and help each other regardless of rank, function, job title, etc. (Greenburgh, 1983). [9] differentiates between prescribed networks and emergent networks in organizations. He defined prescribed networks as those that are composed of a set of formally specified relationships between superiors and subordinates and among functionally differentiated groups that must interact to accomplish an organizationally defined task. Emergent networks, on the other hand, involve informal, discretionary patterns of interaction where the content of the relationship may be work related, social, or a combination of both. The emergent network, Galaskiewicz (1979) explains, “develops out of the purposive action of social actors who seek to realize their self interest, and depending on their abilities and interest, will negotiate routinized patterns of relationships that enhance their interests”.

Research on knowledge sharing within organizations has showed that 73% of people share their knowledge actively and regularly. Only 30% moves knowledge outside the small personal network [10]. With two third of professionals keeping their knowledge close by, and a quarter not actively sharing any knowledge at all, the learning organization seems a bit cripple. Lew Platt, former CEO of Hewlett Packard, once said: “If HP knew what HP knows, we would be three times as profitable.” The shared awareness among individuals about who knows what – that is lacking at HP and probably other organizations – is called transactive memory. Jackson and Klobas (2010) developed a set of questions that measure the transactive memory of an organization. Another



dimension of knowledge sharing is about the people that do the sharing. With whom do professionals exchange information and knowledge? As mentioned before, 70% keeps knowledge within a small circle. This however leads to redundancy in ideas, for people that work closely together tend to think alike. [6] has argued that relationships between members of different groups bring forth a diversity of ideas, because people will connect different thoughts. He called this 'the strength of weak ties'. The sort of knowledge shared can be explicit and transmittable in formal language (Lee, 2001). Especially operational or routine knowledge is concrete and can easily be communicated [23]. Tacit knowledge on the other hand is context-specific and personal, and therefore difficult to formalize and communicate (Lee, 2001). So there we are, the scholars and professionals in the field of knowledge sharing are faced with the challenge to get people to share all kinds of knowledge with a wide circle and to find useful knowledge with the right people at the right place.

1.1 Knowledge Sharing in Higher Learning Institutions (HLIs)

Higher Learning Institutions (HLIs) are bestowed with an important responsibility of managing knowledge production, distribution and apply the knowledge acquired to efficiently respond to the constantly changing environment. Therefore, HLIs are not only required to create knowledge quickly but also acquire and apply it swiftly in order to gain the competitive edge (Syed-Ikhsan and Rowland, 2004; Yang, 2007) hence making knowledge sharing an inevitably important task for members of Higher Learning Institutions (HLIs) in knowledge management. Unfortunately, studies in knowledge sharing (KS) among the academic staff in the knowledge-based institution such as Higher Learning Institutions (HLIs) are minimal in number [4]. The dearth of research on knowledge management is more pronounced in Higher Learning Institutions (HLIs) of developing nations, where there is a low level of research output. A World Bank report [15] shows that in the year 2005, only 3563 (2.7%) of the scientific publications from around the world are from Sub-Saharan Africa (2009:56). Increasing student enrollment, however, has placed huge teaching demands on academics, in terms of person-hours they spend in teaching. Moreover, lack of understanding of how best to share knowledge, has

adversely affected faculty's tendency to engage in knowledge sharing activities; as a result of which professors are now more inclined to give service to the overwhelming student population, when possible by earning additional income from teaching extra hours [1] Generally, research output in terms of publications (books, reviewed journals), engagement in research projects, and the culture and competence to create and hold venues for intellectual debate and discussions has not generally flourished [1] in developing nations such as Rwanda and these can be attributed to lack of understanding on the factors that affect knowledge sharing among the employees. On the whole, the poor incentive system for research, the inadequate orientation for problem-based research collaboration, the preferred engagement of the academics for teaching rather than research and the general weak knowledge infrastructure [16] that supports scientific exploration are attributed as major limitations of the system that constrain the conduct of research as has been reported by the World Bank tertiary education report on Sub-Saharan countries (2009).

Strengths of ties in knowledge sharing

Dimensions of strength [6], a pioneering student of social networks, stated that weak ties are efficient for knowledge sharing because they provide access to novel information and people that would otherwise be disconnected from the group seeking knowledge. Strong ties or relationships he thought hindered new information and new enterprise knowledge because such relationships are comprised of small groups of actors who already know what everyone knows. Subsequent research has generally supported Granovetter's theory, but switched the emphasis to the effective character of strong ties [12]. The strength of an interpersonal connection was found to affect how easily knowledge is shared [18][7] Other research found that employees who communicate with each other frequently or who have a strong emotional attachment are more likely to share knowledge than those who communicate infrequently or who are not emotionally attached. This study will use Social Network Analysis (SNA) tool called Unicet to measure the association between the strength of different types of ties with the intensity of knowledge sharing behavior. Social Network Analysis (SNA) is an approach, process and set of tools that reveals networks and patterns of relationships between individuals or entities (Cross,



Borgatti, Parker, 2002). When used to examine organizational relationships and patterns, it is often called Organizational Network Analysis (ONA). ONA reveals the acknowledged or perceived relationships among individuals, teams, departments, divisions and organizations, as compared to the expected relationships prescribed or predicted by strategic intent, organization charts, job roles, workflow interdependencies, clients, demographics, time, place, process or functional boundaries (Galbraith, 2001; Mintzberg, 1979). ONA visualizations display patterns of relationships, and may discover unexpected networks, explain conflicts or behaviors, diagnose opportunities for interventions, outline specific developmental needs or reveal the de facto design of the organization. Recent studies have used either frequency of interaction or closeness of ties as surrogates for tie strength [5] or the average of the two indicators of closeness and frequency for measuring tie strength [7][8][14].

2.0 METHODOLOGY

3.0 RESULTS

3.1 Demographic

In this study, the demographic profile is indicative of respondents’ age, education level, gender and professional experience. Finding shows that majority

In order to achieve the specific objectives of this study, this research is a case study carried on the University Of Kigali because it is a relatively new institution of Higher Learning that is developing its work culture. The population of the university at the time of the study was 37 personnel. The study however targeted teaching staff with fulltime contract and since the number of the respondents was only fourteen fulltime academic staff, the research used sensors in determining the sample size. This research used questionnaire for data collection because all respondents have the ability to read and write and the study required that they fill the instruments on their own convenience.

The questions on the questionnaire were divided into two sections. The first section captured the demographic data while the second section required the respondent to respond the question on how frequent the respondent will seek support from the other actors using a likert scale: 4 = Every Day, 3 = Every Week, 2 = Every Few Weeks, 1= Every Few Months, and 0 = Rarely or NeverThe results were then prepared using excel spreadsheet before inserted into UCINET for interpretation the network diagrams were drawn using Netdraw software Application

respondents (100 percent) are aged between 25 and 46 years. Particularly, half of the respondents (50 percent) are aged between 25 and 35. The remaining half (50 percent) are aged between 36 and 46 years old as shown below graph

Figure 1. Age of Respondents

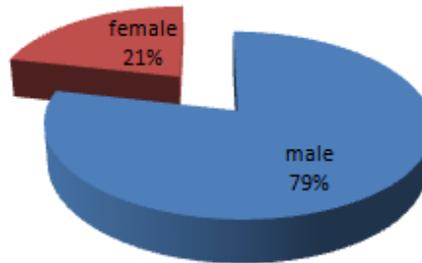


Source: Primary Data,(2014)

In addition, majority (78.6 percent) of the respondents are male with the remainder (21.4 percent) being female as shown in the figure below.

Figure 2. Gender of Respondents

Gender

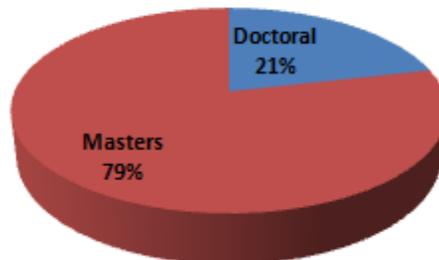


Source: Primary Data,(2014)

Majority (79 percent) of the academic staff have Graduate degree as the highest education level with the remaining (21 percent) has doctoral degree as the highest education level.

Figure 3. Highest Education Level of Respondents

Highest Education Level



Source: Primary Data, (2014)

The table below represents the professional experience in lecturing of the respondents. As observed in the table below, majority (72 percent) of the respondents have 8 years of experience and above. Specifically, 21 percent of the respondents have the professional experience of less than 3 years,

7 percent of the respondents have the experience of 4 to 7 years. 36 percent of the academic staff has the professional experience of 8 to 11 years and the remaining 36 percent of the academic staff have the professional experience of above 12 years.



Figure 3. Professional Experience of Respondents



Source: Primary Data, (2014)

When comparing the respondent age with the professional experience, it was observed that respondents aged between 25 years and 35 years have experience of less than 8 years. 42.9 percent have the experience of less than 3 years; the other 42.9 percent have experience of between 8 years and 11 years. The remaining 14.3 percent have an experience of

between 4 to 7 years. All the respondents aged between 36 years to 46 years old have an experience of 8 years and above. In particular, 28.6 percent of the respondents aged between 36 to 46 years have 8 to 11 years of experience. The remaining percentage 71.4 percent have an experience of 71.4 percent.

Table 1. Comparison of Respondent's age with Professional Experience

Age (Years)		Professional Experience (Years)			
		less than 3	4 - 7	8 - 11	12 and above
25 - 35	% within age	42.9%	14.3%	42.9%	.0%
	% within Professional Experience	100.0%	100.0%	60.0%	.0%
36 - 46	% within age	.0%	.0%	28.6%	71.4%



	% within Professional Experience	.0%	.0%	40.0%	100.0%
	% within age	21.4%	7.1%	35.7%	35.7%
	% within Professional Experience	100.0%	100.0%	100.0%	100.0%

Source: Primary Data,(2014)

Age and Educational Level

Comparing respondent’s age with the highest educational level, respondents aged between 25 and 35 years have the highest education level of Graduate

degree. 42.9 percent of those respondents aged between 36 years to 46 years have the doctoral degree as the highest education level while the remaining 57.1 percent have Graduate Degree

Table 2. Comparison of Respondent's Age with Educational Level

Age		education level	
		Doctoral	Graduate
25 – 35	% within age	.0%	100.0%
	% within education level	.0%	63.6%
36 – 46	% within age	42.9%	57.1%
	% within education level	100.0%	36.4%
% within age		21.4%	78.6%
% within education level		100.0%	100.0%

Source: Primary Data, (2014)

3.2 Knowledge Sharing Behavior (KSB) in UOK

Knowledge Sharing Behavior (KSB) can be defined as the extent somebody actually does knowledge sharing (Kim and Bock, 2002).

3.2.1 Findings on Support

The table below shows the results on the actor’s degree of centrality on support.

Table 3. Summary of the results on the actor's degree of centrality on support

Actor	Out-Degree (frequency)	Out-Degree (percentage)	In-Degree (frequency)	In-Degree (percentage)	Between
1	10	76.92308	11	84.61538	8.612
2	2	15.38462	6	46.15385	0
3	0	0	6	46.15385	0
4	11	84.61538	10	76.92308	9.036
5	13	100	10	76.92308	8.012
6	7	53.84615	9	69.23077	0.643



7	0	0	10	76.92308	0
8	10	76.92308	8	61.53846	1.644
9	12	92.30769	5	38.46154	0.518
10	13	100	10	76.92308	8.012
11	5	38.46154	10	76.92308	0.286
12	13	100	5	38.46154	0.733
13	13	100	8	61.53846	3.362
14	7	53.84615	8	61.53846	0.143
Mean	8.286	63.73846	8.286	63.73846	2.929
Std Dev	4.858	37.36923	2.054	15.8	3.715

Source: Primary Data,(2014)

The Out-Degree: The number of actors the actor can approach for problem solving

The actor out-degree is the number of the actors the actor can approach for support in case he/she is faced with difficult situations at work. From the table above, it can be observed that actor 1, 4, 5, 8, 9, 10, 11, 12 and 13 have the higher out-degrees than the

The frequency with which the actor seek support from other actors at work

This study also analyzed the frequency with which the actor seeks support from other actors when facing

average network out-degree of 8.286 which is 63.7 percent meaning that they have strong out-degree ties. It can be observed that majority of the actors have a high out-degree therefore majority of actors can reach out other actors in the organization thus making them influential.

difficult situation at work. The results are displayed in the table below.

Table 4. Frequency with which the actor seeks support from other actors when faced with difficult situation at work

Actor	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Avg	2.6	0.53		1.76	2.23	1.84		1.84	2.69	2.92	0.76	1.92	2.76	1.23
	15	8	0	9	1	6	0	6	2	3	9	3	9	1
SD	1.5	1.27				1.83			0.82	0.99				1.42
	46	8	0	1.31	1.31	3	0	1.35	1	7	1.12	0.73	1.31	3

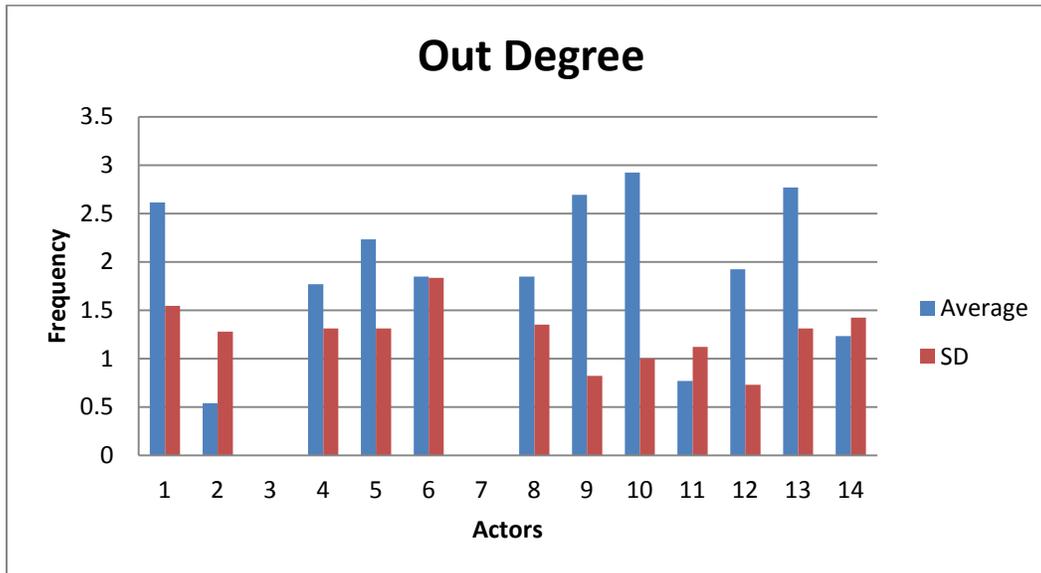
Source: Primary Data,(2014)

According to the table 4 above, actor 2 whose average is 0.538 rarely or never approaches other actors for support whenever he/she encounters a difficult situation at work. Actor 11 and 14 whose average is 0.769 and 1.231 respectively approaches other actors every few months for support when they encounter a difficult situation at work. Actor 4, 5, 6,

8 and 12 whose averages are 1.769, 2.23, 1.846, 1.846, and 1.923 respectively approach other actors every few weeks for support when they encounter a difficult situation at work. Finally, actors 1, 9, 10 and 13 whose averages are 2.615, 2.692, 2.923 and 2.769 approach other actors every week for support when they encounter difficult situation at work.



Figure 4. Frequency with which the actor seeks support from other actors when faced with difficult situation at work



Source: Primary Data, (2014)

The In-Degree: The number of actors the actor can approach for problem solving

If an actor receives many ties (in-degrees), they are often said to be prominent, or to have high prestige. From the table 1 above, it can be observed that actor 1, 4, 5, 6, 7, 10 and 11 have in degrees above the average (8.286) and a percentage of 63.7 percent. Actor 1 whose in-degree percentage is 84.6 percent is the most sought after actor followed by actor 4, 5, 7, 10 and 11 all whose in-degree percentage is 76.9 percent and finally actor 6 whose in-degree percentage is 69.2.

The frequency with which the actor is sought after for support by other actors at work

The table below shows the extent to which other actors seek support from the actor in the study. It can

be observed that actor 9 and 12 whose average is 0.615 and 0.692 are rarely or never approached for support by the other actors when other actors are faced with the difficult situation at work. Actors 2, 3, 7, 8 and 13 whose averages are 0.846, 0.769, 1.308, 1.385 and 1.462 are in every few months approached by other actors for support whenever the other actors are faced with difficult situation at work. Actors 6, 10 and 11 whose averages are 2.077, 2 and 2.077 respectively are approached in every few weeks by other actors for support whenever the other actors are faced with the difficult situation at work. Finally, actors 1, 4 and 5 whose averages are 3.154, 2.462 and 2.615 respectively are in every week approached by other actors for support whenever other actors are faced with the difficult situation at work.

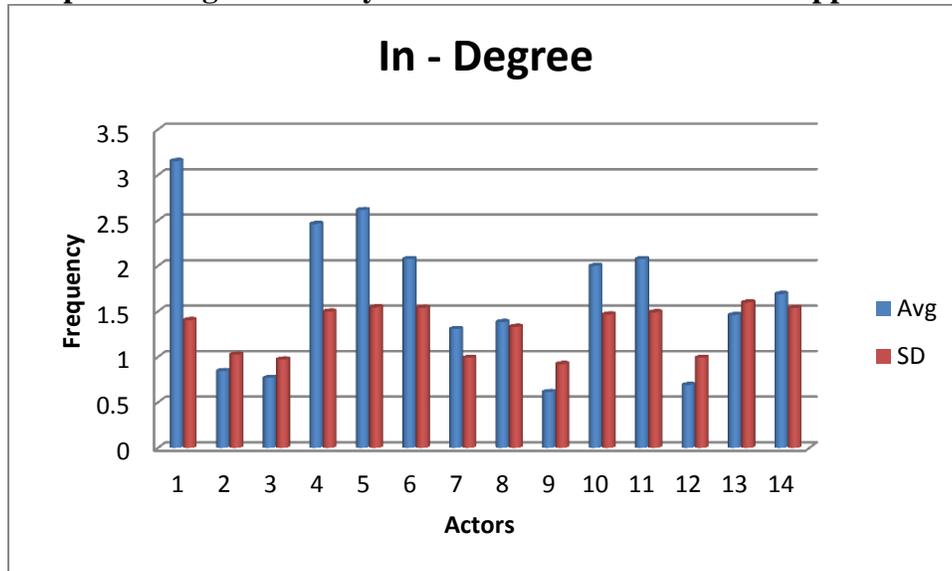
Table 5. Frequency with which other actors seek support from the actor

Actor	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Avg	3.2	0.8	0.8	2.5	2.6	2.1	1.3	1.4	0.6	2	2.1	0.7	1.5	1.7
SD	1.4	1.0	1	1.5	1.5	1.5	1	1.3	1	1.5	1.5	1	1.6	1.5

Source: Primary Data,(2014)



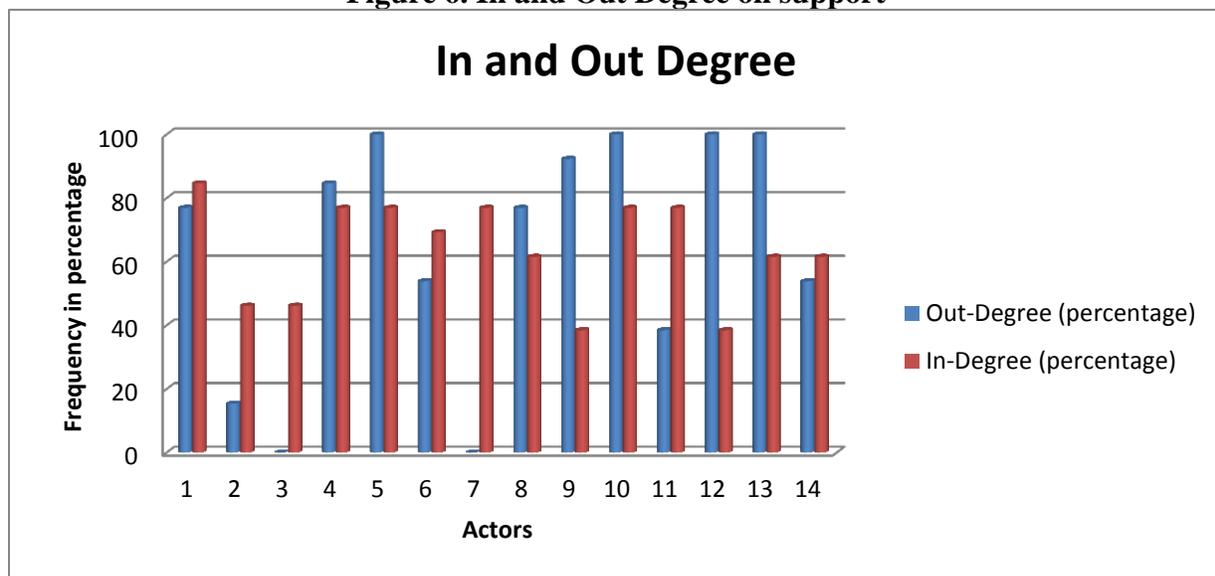
Figure 5. Graph showing a summary with which other actors seek support from the actor



Source: Primary Data,(2014)

The figure below provides a summary on the actor’s in-degree and out-degree based on the findings in table 1.

Figure 6. In and Out Degree on support



Source: Primary Data, (2014)

Looking at the thickness (the strength) of the links in the figure above it can be observed that actor 3, 12 and 7 do not frequently approach other actors for support whenever they are faced with a difficult situation at work. However, this can be attributed to the fact that actor 3 and 7 did not participate in the

research and since they are the academic staff they must be included.

Betweenness

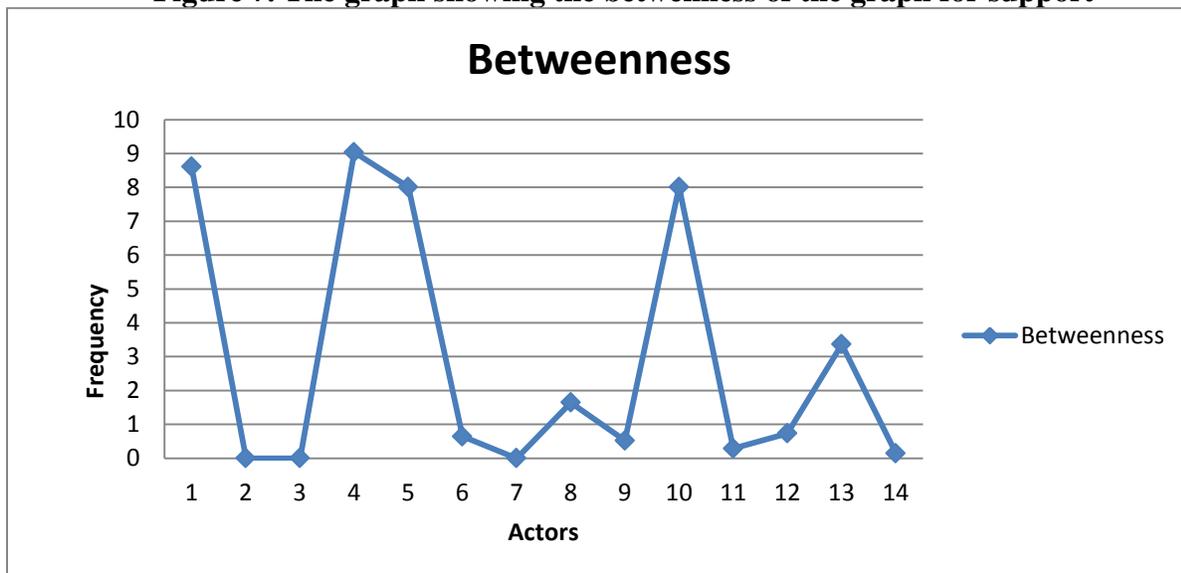
Betweenness centrality views an actor as being in a favored position to the extent that the actor falls on the geodesic paths between other pairs of actors in



the network. That is, the more people depend on an actor A to make connections with other actors, the more power the actor A has. If, however, two actors are connected by more than one geodesic path, and actor A is not on all of them, Actor A lose some power. Using the computer, it is quite easy to locate the geodesic paths between all pairs of actors, and to count up how frequently each actor falls in each of these pathways. From the table 1 above, it can be observed that there is a lot of variation in actor betweenness (from 0 (zero) to 9.036), and that there is quite a bit of variation (std. dev. = 3.175 relative to a mean betweenness of 2.929). Despite this, the overall network centralization is relatively low. This makes sense, because we know that fully one half of

all connections can be made in this network without the aid of any intermediary -- hence there cannot be a lot of "betweenness." In the sense of structural constraint, there is not a lot of "power" in this network. Actor 1, 4, 5 and 10 appear to be relatively a good bit more powerful than others by this measure. Clearly, there is a structural basis for these actors to perceive that they are "different" from others in the population. Indeed, it would not be surprising if these four actors saw themselves as the movers-and-shakers, and the deal-makers that made things happen. In this sense, even though there is not very much betweenness power in the system, it could be important for group formation and stratification.

Figure 7. The graph showing the betweenness of the graph for support

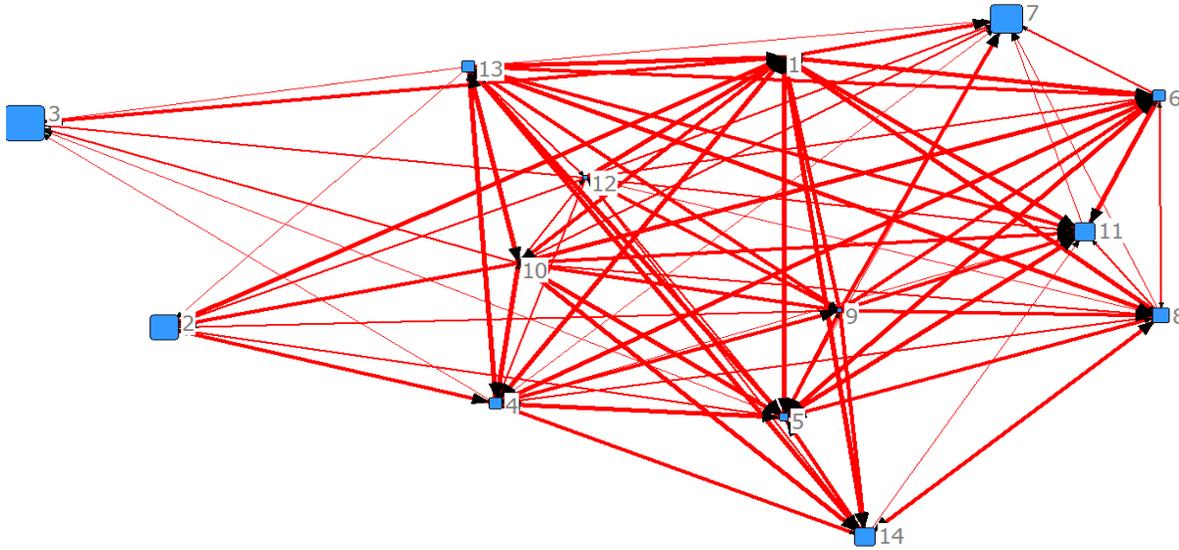


Source: Primary Data,(2014)

Network cohesion

The figure below provides a visual summary of table 1 discussed above.

Figure 8. Graph on support



Source: Primary Data, (2014)

The table below provides the summary on the network cohesion. The analysis was done using Ucinet.

Diameter	3
Breadth	0.254
compactness	0.746

Source: Primary Data, (2014)

Table 6. Table showing the summary of the graph

Measures	Support
Density	0.637
Average Degree	8.286
Connectness	0.857
Average Distance	1.263
Shortest Distance	0.454

4.0 DISCUSSIONS AND INTERPRETATION

From the above results in table 6, it can be observed that the network density is 0.637 which means that 63.7 percent of all possible arcs are present. Network density is the ratio of the number of edges in the network over the total number of possible edges between all pairs of nodes. However, it is worth mentioning that the density is inversely related to network size: the larger the social network, the lower the density because the number of possible lines increases rapidly with the number of vertices whereas the number of relations which each person can maintain is limited. However, Network density is not very useful because it depends on the size of the network and it is therefore advisable to look at the

number of relations in which each vertex is involved. Therefore, we can use the average degree of all vertices to measure the structural cohesion of a network: both the in degree and the out degrees. In the network above, the average degree both in degree and out degree is 8.286. Additionally, in the figure 6 above, connectness of the network is 0.857 that is 85.7 percent. this means that majority (85.7 percent) of actors can be reached by other actors. The average distance is 1.263 with the shortest distance between the two nodes being 0.454 and the the longest distance between any two nodes in a network (Network diameter) being 3 it is useful measure of the reach of the network (as opposed to looking only at the total number of vertices or edges). It also indicates how long it will take at most to reach any node in the network (sparser networks will generally



have greater diameters). The breadth of the network is 0.254 and the compactness of the network is 0.746. From this results, it can be observed that there are relatively strong ties in the network. However, the frequency with which the actors perform knowledge sharing is slightly low (in every few weeks). This might be attributed to the fact that knowledge shared by the actors is for official purposes and that is why it is actors with office responsibility who have very strong ties and therefore, actors share knowledge within the university structure. In his paper "The Strength of Weak Ties" [6] argued that, we all have strong ties with the ones closest to us, and weak ties with acquaintances. Individuals with hardly any weak ties operate in their own tightly knit group, are confined to the news and viewpoints within this group, and deprived of information from other parts of the social system. Van der Leij and Goyal of the University of Cambridge (2011) have applied it to

5.0 CONCLUSION

With today's knowledge intensive economy in which work of importance is accomplished by informal network, Higher Learning Institutions that focus on understanding the organization networks will be able to: Identifying and understanding the existing organization network patterns can yield substantial satisfaction and performance benefits; establish network relationships that are critical anchoring points for employees, whose loyalty and commitment may be more to sets of individuals in their network than to a given organization; identify and assess the health of strategically important networks within an organization making it possible to work with important groups to facilitate effective collaboration; assess the effects of decisions on the social fabric of the organization; identify issues currently hindering group performance and specific behaviors and organizational design elements requiring modification to improve group efficiency and effectiveness; identify and work with employees that are highly central in the organization. This is because employees become central for legitimate reasons such as flow demands or unique expertise that a person brings to bear. Alternatively, we also find people that are central and impacting an overall network's effectiveness by virtue of either becoming overburdened by their job or having a tendency to hoard information. Network diagrams can help

knowledge sharing among co-authors in the field of economics. Their research rejected the hypothesis that weak ties are more crucial than strong ties, the economists' networks showed a 'strength of strong ties' property. The removal of a weak tie caused less damage to the shortest path to knowledge than the removal of a strong tie did. The professionals in a large electronics company in a study by [7] experienced different consequences of having weak ties with other units; it speeded up their project when knowledge was not complex. Even though strong ties are useful, especially for sharing detailed information, weak ties seem to be essential for the spreading of knowledge. With only 30% of all professionals moving knowledge outside the small personal network [10] the strength of weak ties appears not to be used sufficiently within organizations.

determine who these people are and what might be done to both allow other connections and work to occur around them as well as protect the organization should these people decide to go elsewhere. Finally, it is just as important to use the network diagrams (or metrics) to identify peripheral people and find ways to improve their connection where appropriate. These people are often under-utilized by the group and are also frequently at the highest risk for turnover. Given the difficulty in attracting and retaining talented employees today, we have found it highly important to find ways to move people into the central part of the network more quickly. Yet despite their importance, these networks are rarely well-supported or even understood by the organizations in which they are embedded. Citing the growing significance of knowledge sharing and the importance of weak ties to the success of knowledge management and to organizational survival, several researches have called for further investigation of the factors that shape knowledge sharing behaviors in the organizational context. As knowledge sharing intention does not happen in vacuum, but is influenced by other factors. Research has consistently shown that, while social relationships cannot be mandated by management, they are strongly affected by elements under management control, such as hierarchical levels, horizontal departments, office location, project staffing, and so on.



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