Knowledge transfer and retention challenges and service delivery in Nairobi City County Government (NCCG), Kenya

Eddie M. Obwaka[1], Tom Kwanya[2], Naomi Mwai[3]

The Technical University of Kenya

obwakaeddie@gmail.com

Abstract

This paper discusses the knowledge transfer and retention challenges that result in knowledge loss in Nairobi City County Government (NCCG) and how this affects service delivery by the county government. The NCCG provided the contextual insight to the study leading to this pape, which adopted a convergent parallel mixed methods research design. The target population comprised 12,363 Nairobi City County government workers, of which 746 were sampled. The researcher used a multi-stage (stratified, information-oriented purposive and random) sampling technique to get the actual respondents. Quantitative and qualitative data was E-collected using questionnaires and key informant interviews respectively. Quantitative data was analysed using statistical analysis using SPSS and presented by means of descriptive statistics, while qualitative data was analysed thematically using ATLAS.ti. The findings of the study indicate that NCCG staff experience the fear of job loss when knowledge is transferred; technophobia, especially for those who are unable to use emerging technologies; lack of sensitisation, and lack of user needs assessments as challenges for knowledge transfer and retention. The results of the study can be used by the NCCG and other county governments to identify hindrances to knowledge transfer and retention. This may lead to appropriate mitigations to make sure they leverage on knowledge they have.

Keywords: Knowledge retention, knowledge transfer, Nairobi City County government, service delivery, Kenya

1. Eddie Obwaka (corresponding author) is a lecturer in the Department of Information and Knowledge Management at the Technical University of Kenya, Kenya.
2. Tom Kwanya PhD is an associate professor and Director, School of Information and Communication Studies, Technical University of Kenya, Kenya.
3. Naomi Mwai PhD is a senior lecturer in the Department of Information and Knowledge Management at the Technical University of Kenya, Kenya.

Introduction

A major challenge facing organisations in the 21st century is the question of how to retain the knowledge and expertise acquired by employees at a time when there is less likelihood of career longevity in the workforce. Dychtwald, Erickson and Morison (2006) attest to the fact that skills, knowledge, experience, and relationships are lost every time knowledge workers resign, get suspended or retire. Replacing this job-related knowledge, skills, and abilities of departing employees is straightforward in some cases. However, it can be much more difficult to replace knowledge gained from extensive experience or elite expertise (Pobst, 2014). The value of knowledge has grown with the emergence of the information age and the knowledge economy, which have transformed knowledge into an asset and made it the basic economic resource (Beazley, Boenisch & Harden, 2002). When employees resign or retire, they often leave with valuable organisational, customer and project knowledge. Sutherland and Jordaan (2004) argue that the ability to retain organisational knowledge is a key characteristic of a successful organisation in the knowledge economy. Knowledge transfer is normally discussed in relation to the concept of “best practices transfer” (Lu, Mao & Wang, 2010). Parise, Cross, and Davenport (2006) defined knowledge transfer as the reproduction of internal practices that are performed in superior ways in the organisation. In this definition, “practice” is taken to be the routine use of knowledge. According to Carlie and Rebentisch (2003) knowledge transfer is an area of knowledge management concerned with the movement of knowledge across the boundaries created by specialised knowledge domains. In other words, it is the conveyance of knowledge from one place, person or ownership to another.

Knowledge retention is the capture of critical knowledge and expertise that is at risk of loss when employees leave an organisation (Dewah, 2012). Dewah further indicates that knowledge retention aims at retaining as much of the departing employees’ expertise and knowledge as possible. Levy (2011) states that, through knowledge retention, an expert’s most valuable knowledge become an organisational asset.

The pressure on the government to increase the number of policies related to knowledge management processes and service delivery has increased in the last few

years (OECD, 2001). Ismail and Yusof (2009) suggest that knowledge management can play an important role in increasing efficiency in decision making and public service delivery.

Contextual setting

This paper is based on a study which investigated knowledge transfer and retention strategies in Nairobi City county government. The aging workforce in the public utility industry is a well-known and documented phenomenon in the literature. Nairobi City County government, like many governance institutions around the world, is faced with a major generational change in its workforce. Established as City Council of Nairobi (CCN) in 1952, it was set to deliver services to the residents of Nairobi and maintain its City status. CCN derived its legal mandate from the Local Government Act (Cap 265) of the Laws of Kenya amongst other acts of Parliament that augment its diverse core functions and priorities (Mwenzwa & Misati, 2014). These priorities are contained in the various policy and planning documents such as the national development plans; Poverty Reduction Strategy Paper; Economic Recovery Strategy (ERS) for Wealth and Employment Creation; Kenya's Vision 2030; and Millennium Development Goals (MDG's) in the long term (Mwenzwa & Misati, 2014).

With the Kenya Constitution of 2010 framework, the Nairobi City County government has been established under the Urban Areas and Cities Act of 2011. Nairobi City County is mandated to provide and manage basic social and physical infrastructure services to the residents of Nairobi. These services include basic education, housing, health, water and sewerage, refuse and garbage collection, planning and development control, urban public transport and fire services among others (Olima, 2013). The county has several departments, each with well-defined roles, and has been collapsed to ten (10) sectors. According to Phaladi (2011), many of its scientists, technicians, artisans or engineers, who were born between 1946 and 1964, are occupying mission-critical specialist and managerial positions in the organisational structure, and are retiring within the next 5 to 10 years. This large wave of retirements will threaten long-term survival of the County.

When employees leave, intellectual capital is lost. This makes it difficult for public institutions to sustain their past performance levels. When an institution faces extensive loss in its workforce, it has lesser control over potential knowledge loss unlike situations where it can influence the worker to remain. Whenever experts and workers retire or resign, their knowledge, skills, experience, judgment and professional networks walk out of the door with them (Phaladi, 2011). In the recent past, Nairobi County government has had high staff turnover due to retrenchment of workers, suspension or dismissal, resignations and retirement of experts. In 2018 alone, 731 employees retired (Mwaura, 2018). More alarming is a report by Mwaura (2018) that only 15 of Nairobi County government employees are under 30 years of age. He further stated that approximately 60% of Nairobi City County government employees are aged and due for retirement. Harvey (2012) points to the fact that examples of successful strategies in the field of knowledge transfer and retention are scarce. Burmeister and Deller (2016) claim that the nature and antecedents of the knowledge transfer and retention process are not yet well understood and the need for additional research is pressing. Based on this, the theme is of relevance for further research. Thus, this study contributes to the bridging of the gap by investigating the challenges hampering knowledge transfer and retention at Nairobi City County government as well as their effect on service delivery in the County.

Purpose of the study

The aim of this research was to explore knowledge transfer and retention challenges and how these affect service delivery by the county government in Nairobi and propose appropriate mitigation measures. Specific objectives of the study were:

- To establish knowledge transfer and retention challenges in Nairobi City County Government.
- To establish the relationship between knowledge transfer and retention challenges and service delivery in Nairobi City County Government.

Literature review

The empirical and theoretical literature reviewed in this section addresses the research questions already defined above in the sections that follow.

Knowledge transfer and retention challenges

Cahir, McNeill, Bosanquet and Jacenyik-Trawöger (2014) claim that the challenges of knowledge transfer and retention are driven by two forces that are shaping today's workforce, namely, an ageing population and the increasing complexity of knowledge needed in technologically advanced societies. These two forces together cause an acute skills shortage. The challenge facing many organisations, both private and public, is not only the loss of some of their most experienced employees, but also the fact that many of these knowledge workers and managers are taking with them new types of critical expertise and experiential knowledge that did not exist a generation ago (Timonen & Ylitalo, 2013). In the new economy, organisations are facing not only a labour shortage but also a knowledge shortage. DeLong and Johnson (2005) emphasise the fact that the problem for management is not only one of a head-count; it is a question of retaining sophisticated, context-dependent knowledge possessed by an employee who is leaving.

Nidhra *et al*. (2013), in their research on knowledge transfer challenges and mitigation strategies in global software development, established that the biggest challenges of knowledge transfer to an institution are changes in staff. They state that the situation leads to the loss of tacit knowledge by the organisation. They further indicate that when staff members are changed in the middle of a project, it results in additional delays and conflicts in the development process.

Kroll, Mäkiö and Assaad's (2016) study established the following challenges to knowledge transfer: knowledge transfer and retention process mismatches; differing technical knowledge and domain vocabularies; incompatible knowledge environments, as well as differences in expertise, infrastructure, tools and methodologies of knowledge retention and transfer.

Tuitoek (2014) in her study of the transfer of tacit knowledge among staff at the Kenya National Library Service, Nairobi, identified the following challenges to knowledge transfer and retention:

Knowledge hoarding: People will hoard their knowledge if they think sharing it will result in punishment. Fear of competitors stealing their ideas also leads to knowledge hoarding.

Generational gap: Generational gap can be defined as the difference in the values and attitudes between one generation and another, especially between younger persons and their parents.

Hierarchical structures: In more hierarchical organisations, managers have control over information and knowledge flow and may desire to restrict access to critical information by lower-level employees. This could lead to significant organisational barriers to knowledge sharing.

Competitiveness and job insecurity: When people acquire new knowledge, they believe that it is the key to their success and are likely to guard instead of sharing it. Many employees do not want to share the expertise they get through many years of hard work due to competition. These employees feel that if they can solve problems they will be valued and will also maintain self-respect.

Organisation's culture: Culture is rooted in the core values of an organisation. Therefore, in an organisation with a knowledge-sharing culture, people share ideas and insights because they see it as natural rather than something they are forced to do.

Physical barriers: Physical barriers refer to a large number of physical factors ranging from noise and bodily movements to ill-health of either or both participants in a communication process (Kohl & Cook, 2013). Physical barriers are obstacles such as the lack of a conducive environment, geographical distances, staff shortage, noise, lack of time for interaction and physical disabilities.

Attitudinal challenges: Attitudes consist of the beliefs and feelings people have about specific ideas, situations and people, which influence their behaviour.

Relationship between knowledge transfer and retention challenges and service delivery

The county government strives to deliver services that are as effective as possible, especially the basic services. By providing these services, the county governments are able to cater for infrastructure, cost of living and a business-friendly environment. However, Héliot and Riley (2010) argue that nowadays the public has been sceptical about services rendered in the public service especially county government officers and politicians who run such public institutions. This distrust is based on the exclusion and lack of knowledge by the public on the inner and core functions of the county governments. The public is rarely involved in matters regarding the formulation of policies and how the policies are implemented. This can be due to the culture of secrecy within government organisations. This may explain the origin of the Swahili word “sirikali” used to describe the government. The word can be loosely translated as “top secret” (Ondari-Okemwa & Smith, 2009). Héliot and Riley (2010), however, explain that the practices of knowledge transfer can be used as a way of developing new faith in organisations. There are benefits of utilising visual techniques in knowledge retention for the coordination, simplification, highlighting, and navigating the complex web of knowledge that institutions possess (Wexler, 2001). Wexler points out that knowledge retention can be used to capture the skills and experiences of experts in the organisation. Knowledge retention programmes in government can provide an overview of skills that employees possess. According to Ondari-Okemwa and Smith (2009), the Government of Kenya is yet to integrate knowledge transfer and retention into solving major issues arising in service delivery.

Finally, the literature review reveals that challenges to knowledge transfer and retention do exist. Based on the literature, it is clear that organisations are facing challenges in the transfer and retention of knowledge such as: knowledge transfer and retention process mismatches; differing technical knowledge and domain vocabularies; incompatible knowledge environments; as well as differences in

expertise, infrastructure, tools and methodologies of knowledge retention and transfer. It is evident from the literature that the key success factor for service delivery is to transfer and retain knowledge.

Methodology of the study

This study used a mixed methods research design. According to Creswell and Poth (2017), mixed methods research encompasses gathering, evaluating, and deducing quantifiable and qualitative data in a solitary study or in a chain of studies that explore the same underlying occurrence. This research specifically adopted a convergent parallel mixed methods research design. The author *collected and analysed both qualitative and quantitative data independently and concurrently.* The target population of this study consisted of 12,363 employees of the Nairobi City County Government. The research adopted a multi-stage sampling technique. The first sampling was obtained through stratified sampling. The strata were top-level management, middle-level management and lower-level employees. From the strata, the authors conducted the second stage of sampling to determine the actual respondents. The authors used information-oriented purposive sampling to get a sample from top-level management. Thereafter, a simple random sampling technique was used to get the actual respondents from the middle-level management and lower-level management. The sample size for the study was seven hundred and forty-six (746). Of these, 40 were from top-level management, 322 from middle-level management and 384 were from lower-level employees. The sample for top-level management was forty (40) directors of all the departments in the county government. The sample size for middle-level management and lower-level employees was arrived at by the use of the Tara Yamane 1973 formula. The actual sample size for middle-level management and lower employees was seven hundred and six (706). Primary data was collected through structured questionnaires and interviews. Structured questionnaires were administered to middle-level management and lower cadre employees while interviews were conducted with top-level management. Quantitative data was analysed using statistical analysis with the aid of SPSS and

presented using descriptive statistics, while qualitative data was analysed thematically using ATLAS.ti.

Findings of the study

This section provides the findings on knowledge transfer and retention challenges in the Nairobi City County Government and the relationship between knowledge transfer and retention challenges and service delivery.

The research involved a total sample size of 746. The research response rate per category is shown in Table 1. The overall response rate from the interviews and questionnaires was 587 (78%). Of the 322 questionnaires administered to middle-level management, 263 (81.68%) were duly filled in and returned, while of 384 administered to junior-level employees, 300 (78.13%) were duly filled in and returned. Of the 40 interviews scheduled with the top-level management of Nairobi City County Government, only 24(60%) were actually conducted.

Table 1: Response rate

Category	Sample size	Number of responses	Response rate (%)
Top level Management	40	24	60
Middle Level Management	322	263	81.68
Junior Employees	384	300	78.13
Total	746	587	78

Challenges of knowledge transfer and retention for service delivery

The respondents were asked to indicate the major challenges they faced in transferring and retaining knowledge for service delivery in the Nairobi City County government. The codes that emerged from the questionnaires of the middle-level management and junior employees were: fear of job loss when knowledge is transferred, technophobia, especially for some who are unable to use social media and computers; inadequate funding; a lack of support from top management and

performance contracting. The codes below show the challenges faced on knowledge transfer and retention for service delivery:

- Job loss: 316 times in 302 primary documents
- Performance: 31 times in 31 primary documents
- Technophobia: 487 times in 400 primary documents
- Inadequate funding: 410 times in 400 primary document
- Lack of support from top management: 141 times in 157 primary documents

From the findings, technophobia was the most highlighted challenge (487 times in 400 primary documents), then inadequate funding (410 times in 400 primary documents). The least-named challenge was performance (31 times in 31 primary documents). These responses are summarised in Figure 12. The figure shows the challenges of knowledge transfer and retention for service delivery by identifying 5 major codes and their respective relationships.

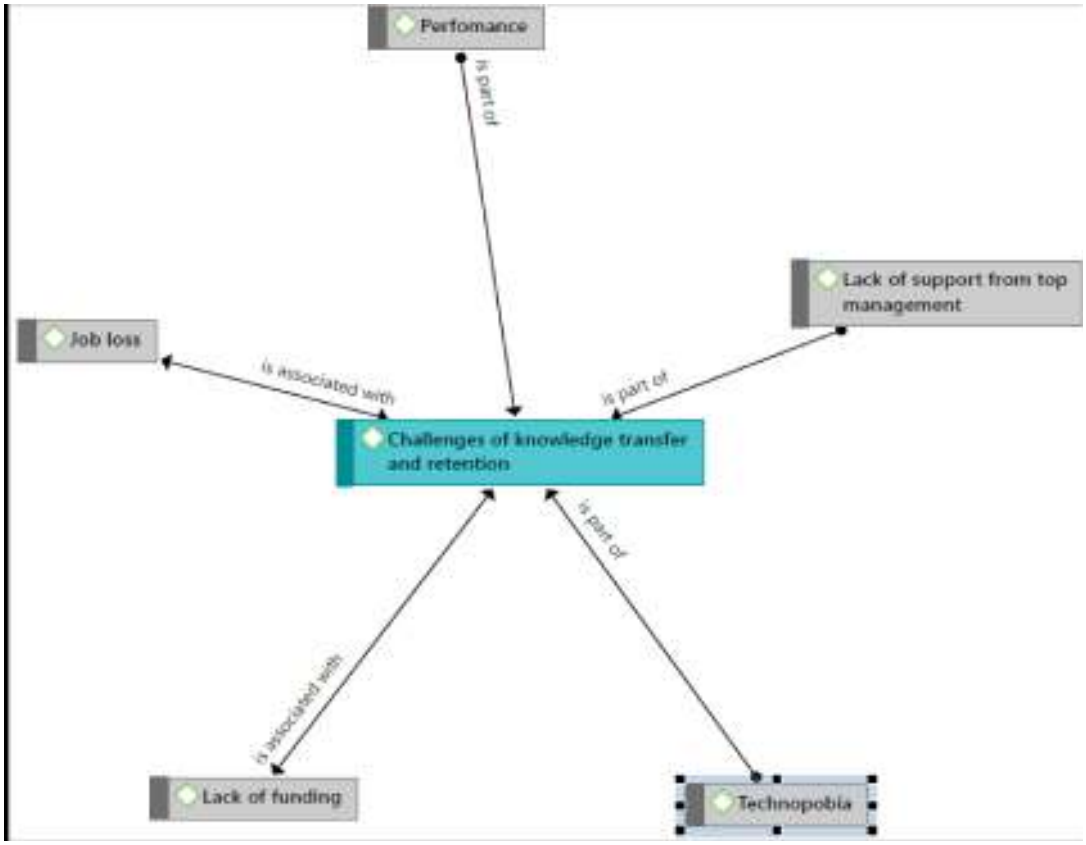

Figure 1: Challenges faced on knowledge transfer and retention for service delivery

Excerpts from interviews on challenges of knowledge transfer and retention for service delivery

The majority of the top management, 18 (75%), stated that the challenges of knowledge transfer are mostly related to performance contracting, because some employees have a fear that knowledge that is shared will be used by the other person for a competitive advantage. Also, they indicated that this could be linked to the fear of job loss. They also indicated that there are inadequate funds to help in setting up infrastructure for knowledge retention. The minority, 6 (25%), indicated that their organisations catered for most of the items where staffs are now trained and do job rotation to assist in knowledge retention. They also indicated that there are policies being put in place to assist in knowledge retention, especially when the employees are retiring. The following are excerpts from the respondents on the challenges of knowledge transfer and retention at NCCG:

> *The resistance by the staff when transferring knowledge may be attributed to the fear of job losses and the fear of monitoring staff performance."*
>
> *"When we introduced knowledge transfer and retention strategies at the inception, there was staff resistance to change. This could have been due to technophobia. The staff frequently forgot their passwords and there was fear of entering wrong data into systems and technology devices. This was due lack of sensitization.*

Lack of user needs assessment analysis to ascertain the users' requirements contributed negatively to knowledge retention here

Correlation analysis of challenges of knowledge transfer and retention on service delivery

From the questionnaire the middle-level and lower-level employees were asked to rate the challenges of knowledge transfer and retention. A correlation analysis of the data was computed using SPSS version 25. The variables for challenges inherent in knowledge transfer and retention (knowledge hoarding, lack of trust, lack of motivation, inappropriate communication channels, fear of job loss, lack of knowledge on subject and technophobia) were computed and combined using the SPSS version

25 to form the independent variable. This was then subjected to a Pearson correlation analysis to show their relationship with service delivery. Table 2 shows the correlation analysis.

Table 2 indicates that accessibility, timeliness, quality, accountability, efficiency, and cost of service had a correlation coefficient of r= .647*, r=. 776**, r=.678**, r=.605**, r=.576**, and r=.251* respectively. The significance level is also 0.000, 0.000, 0.000, 0.000, 0.000 and 0.009 respectively. Further interpretation of the findings is given in Table 3. .

Table 2: correlation analysis of challenges of knowledge transfer and retention on service delivery

		Accessibility	Timeliness	Quality	Accountability	Efficiency	Cost of the service	Challenges of knowledge transfer and retention
Accessibility	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	536						
Timeliness	Pearson Correlation	.782**	1					
	Sig. (2-tailed)	.000						
	N	536	536					
Quality	Pearson Correlation	.652**	.867**	1				
	Sig. (2-tailed)	.000	.000					
	N	536	536	536				
Accountability	Pearson Correlation	.826**	.802**	.945**	1			
	Sig. (2-tailed)	.000	.000	.000				
	N	536	536	536	536			
Efficiency	Pearson Correlation	.605**	.797**	.755**	.658**	1		
	Sig. (2-tailed)	.000	.000	.000	.000			
	N	536	536	536	536	536		
Cost of the service	Pearson Correlation	.069	.274	.569**	.507**	.183	1	
	Sig. (2-tailed)	.547	.162	.002	.002	.367		
	N	536	536	536	536	536	536	
Challenges of knowledge transfer and retention	Pearson Correlation	.647**	.776**	.678**	.605**	.576**	.251	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.009	
	N	536	536	536	536	536	536	536

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 3: Interpretation of the correlation of challenges of knowledge transfer and retention on service delivery		
Variable	Correlation results	Interpretation
Relationship between accessibility and challenges of knowledge transfer and retention	R = .647** , sig =.000	Strong positive, strongly significant relationship
Relationship between timeliness and challenges of knowledge transfer and retention	R = .776**, sig = .000	Strong positive, strongly significant relationship
Relationship between quality and challenges of knowledge transfer and retention	R = .678**, sig = .000	Strong positive, strongly significant relationship
Relationship between accountability and challenges of knowledge transfer and retention	R = .605**, sig .000	Strong positive, strongly significant relationship
Relationship between efficiency and challenges of knowledge transfer and retention	R = .576**, sig .000	Strong positive, strongly significant relationship
Relationship between cost of the service and challenges of knowledge transfer and retention	R = .251, sig .009	weak positive, and strongly significant relationship

Regression analysis for challenges of knowledge transfer and retention on service delivery

The authors used SPSS version 25 to code, enter and compute multiple regression so as to establish the causal effect of one variable on the other. R-square (R^2) is a statistical term used to express how good one term is at predicting another. If R^2 is 1.0 then given the value of one term, you can perfectly predict the value of another term. If R^2 is 0.0, then knowing one term does not help to know the other term at all. More generally, a higher value of R^2 means that you can better predict one term from another. The rule of thumb is that usually an R^2 of more than 50% is considered as significant. The regression analysis for the challenges of knowledge transfer and retention on service delivery was 0.545, representing 54.5%. This implies that the independent variables had an influence on the dependent variables at NCCG. Table 4 shows the regression analysis results.

Table 4: regression analysis of challenges of knowledge transfer and retention on service delivery

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig.
1	691[a]	.545	.5288	.50834	.000
a. Predictors: (Constant), challenges of knowledge transfer and retention					

Table 4 indicates that challenges of knowledge transfer and retention greatly influence the service delivery offered by NCCG by 54.5%.

Discussion of the findings

The objective of the study was to identify the challenges of knowledge transfer and retention and their effect on service delivery. The respondents were asked to indicate the major challenges they faced in transferring and retaining knowledge for service delivery at Nairobi City County Government. The findings indicated:

Fear of job loss when knowledge is transferred or retained.

Most of the respondents (316 times in 302 primary documents) identified the fear of job losses as one of the challenges affecting knowledge transfer and retention. The findings were further linked to a correlation with service efficiency, which gave a strong, positive relationship (.576). This shows that fear of job loss affects knowledge transfer and retention which in the end affect the productivity of employees. This was in agreement with Weir and Hutchings (2005), who indicated that in most institutions, individuals fear t losing their jobs. When fear is present, people do not contribute to transferring critical information and would be suspicious regarding their institutions' true intentions. A study by Usoro *et al.* (2007) examined the role of fear of job loss within virtual communities of practice and found that people who experience fear of losing their jobs in the context of knowledge transferral are afraid that the information they provide might be inaccurate or that their contribution might be unimportant. Studies have shown that trust plays a pivotal role in knowledge transfer. Trust among co-workers is an important cultural element for successful knowledge management (Issa & Haddad, 2008). Similarly, Snowden (2000) regards trust as a fundamental

aspect of knowledge sharing and one of the most crucial requirements for knowledge transfer. This is also in agreement with the correlation of the findings with the quality of service at NCCG, which indicated a strong, positive and significant relationship (.678). The fear of job losses led to a lack of knowledge transfer and retention, which further affects the quality of service because employees are not willing to share what they know or to document it.

Technophobia

Most of the respondents (487 times in the questionnaires) indicated that they were unable to use social media and information technology (IT) in their daily work. This shows that NCCG service delivery is affected by the challenges of knowledge transfer and retention. According to Zawawi *et al*. (2011), a lack of integration of IT systems/ processes; technical support; maintenance of integrated IT systems; people's reluctance to use IT systems and the lack of training are the main barriers in knowledge transfer. Organisations have been taking steps to combat the loss of knowledge by investing in technologies that help facilitate knowledge transfer and retention, but not in NCCG. This was also evident from the correlation analysis which indicates a strong and positive relationship between challenges of knowledge transfer and retention and the accessibility of services (.647). The fear of technology makes employees experiencing a challenge in sharing knowledge, especially in this digital era. Also, it makes it hard for people to document their knowledge, hence accessibility is affected.

Performance contracting

The respondents indicated that the performance contracting is used to measure their outcome (s31 times in 31 primary documents). This was also evident from the correlation that indicated a strong positive and strong relationship between the challenges and accountability of service (.605). The employees are accountable for any work they do, which is stipulated in in their performance contract. This affects the knowledge transfer and retention because no one wants to share what they do in order to remain competitive. Liebowitz and Yan (2004) showed that it is more difficult to transfer knowledge in public sector organisations because most people believe that

their knowledge would become obsolete once they transfer it. Others associate knowledge with power and their promotion opportunities, and as such they cannot share it.

Lack of support

A striking finding was related to the lack of support (235 times in 243 primary documents), especially in terms of reward systems and infrastructure facilities. This was linked to the correlation between challenges and timelines of service which gave a positive and strong relationship (776). Asrar-ul-Haq and Anwar (2016) pertinently said that the presence of rewards and motivation facilitates knowledge sharing and transfer, while the absence of rewards and motivation hinders the sharing and transfer of knowledge. Thus, when individuals are not motivated to transfer knowledge and there is no reward for them, they tend to hide the knowledge they possess and do not reveal or share it with others.

The study established that the retention of highly skilled and experienced staff was not a priority in the NCCG as some were fired or resigned due to political difference. This means that critical knowledge seeped away from NCCG through resignations. Brown and Duguid (2001) referred to this external unwanted movement of knowledge as knowledge leakage. This is in addition to knowledge that NCCG loses through retirements and death. Dewah (2012) noted that the performance gap left by experts compromises the quality of services in the organisations. Halawi, Aronson, and McCarthy (2005) extrapolate that when employees leave, municipalities lose valuable knowledge that needs to be managed, since it has been reported to be the most critical asset in an organisation.

The findings of this study suggest that there is a gap in knowledge transfer and retention in Nairobi City County Government. Nevertheless, there is a positive relationship between service delivery variables and challenges of knowledge transfer and retention.

Conclusions

From the findings of the study the authors conclude that NCCG faces challenges in terms of knowledge transfer and retention for service delivery. The challenges include: a fear of job loss when knowledge is transferred, technophobia, especially for some who are unable to use social media, a lack of funding, lack of support, fear of job loss and performance contracting. These challenges greatly affect service delivery with a correlation of positive and significant relationships in all the variables of service delivery (accessibility, r= .647*, timelines, r= 776**, quality, r=.678**, accountability, r=.605**, efficiency, r=.576**, and cost of service r=.251*). This means all the variables used to measure service delivery demonstrated a positive correlation. This indicates that knowledge transfer and retention challenges greatly, negatively affect service delivery.

The authors recommend the following to address the challenges of knowledge transfer and retention at NCCG.

- **Training**. The staff indicated that some of them were technophobic. One of the ways to deal with this is to train them in information communication and technology to build their confidence. They will know that through technology, it is easier to share knowledge and protect their privacy. ICT plays a major role in ensuring that knowledge sharing works. The absence of a good system could hinder and demotivate eager knowledge champions.
- Build knowledge transfer into the organisation's DNA. Some managers have integrated knowledge transfer into the fabric of the organisation through processes that explicitly require giving clear attention to sharing expertise. This is done so that each employee knows that even if they share knowledge their performance will not dwindle but be better because of the sharing of best practices and failure stories.
- **Having organisational rewards**. Rewards encourage the staff to share knowledge and there is not a doubt that reward could be an initiating factor to more knowledge sharing and knowledge implementation.

Due to limited time, only one county government was used in this study .Since the study was undertaken in Nairobi City, further studies of this nature could be

conducted in the forty six remaining counties. These could be used to develop a roadmap of how to tackle knowledge transfer and retention challenges. It can be stated that this study has unearthed useful evidence to assist the county government in its knowledge transfers, retention and service delivery endeavours.

References

Asrar-ul-Haq, M. & Anwar, S. (2016). A systematic review of knowledge management and knowledge sharing: Trends, issues, and challenges. *Cogent Business & Management*, *3*(1), 1127744.

Beazley, H., Boenisch, J. & Harden, D. (2002). *Continuity management: preserving corporate knowledge and productivity when employees leave*. Hoboken, NJ: John Wiley & Sons,

Brown, J. S., & Duguid, P. (2001). Knowledge and organization: A social-practice perspective. *Organization science*, *12*(2), 198-213

Burmeister, A., & Deller, J. (2016). Knowledge retention from older and retiring workers: what do we know, and where do we go from here?. *Work, Aging and Retirement*, 2(2), 87-104.

Cahir, J., McNeill, M., Bosanquet, A. & Jacenyik-Trawöger, C. (2014). Walking out the door: casualisation and implementing Moodle. *International Journal of Educational Management*, 28(1), 5-14.

Carlie, P. & Rebentisch, E. (2003). Into the black box: Knowledge management: informing decisions to realise good governance. *Management Science*, 49: 1180-1195.

Creswell, J. W. & Poth, C. N. (2017). *Qualitative inquiry and research design: Choosing among five approaches. .* Thousand Oaks. CA: Sage publications.

DeLong, D., & Johnson. (2005). *Lost Knowledge: Confronting the Threat of an Aging Workforce.*, New York, Oxford University Press.

Dewah, P. (2012). *Knowledge retention strategies in selected southern African public broadcasting corporations* (Doctoral dissertation, University of Fort Hare. 2012).

Dychtwald, K., Erickson, T.J., & Morison, R. (2006). *Workforce crisis: How to beat the coming shortage of skills and talent*. Brighton, Harvard Business Press.

Halawi, L. A., Aronson, J. E., & McCarthy, R. V. (2005). Resource-based view of knowledge management for competitive advantage. *The electronic journal of knowledge management*, *3*(2), 75.

Harvey, J. F. (2012). Managing organizational memory with intergenerational knowledge transfer. *Journal of Knowledge Management,* 16(3), 400-417.

Ismail, M. B., & Yusof, Z. M. (2009). The relationship between knowledge sharing, employee performance and service delivery in public sector organizations: a theoretical framework. *Public Sector ICT Management Review*, 3(1), 37-45.

Issa, R. R., & Haddad, J. (2008). Perceptions of the impacts of organizational culture and information technology on knowledge sharing in construction. *Construction Innovation*, *8*(3), 182-201.

Kohl, H. W., & Cook, H. D. (2013). Physical Activity and Physical Education: Relationship to Growth. *Development, and Health*. In *Educating the student body: Taking physical activity and physical education to school*. National Academies Press (US).

Kroll, J., Mäkiö, J., & Assaad, M. (2016). Challenges and practices for effective knowledge transfer in globally distributed teams. In *Proc. Int. Joint Conf. Knowl. Discovery, Knowl. Eng. Knowl. Manage.* 156-164.

Levy, M. (2011). Knowledge retention: minimizing organizational business loss. *Journal of Knowledge Management*, *15*(4), 582-600.

Liebowitz, J., & Yan, C. (2004). Knowledge sharing proficiencies: the key to knowledge management. In *Handbook on Knowledge Management 1* (pp. 409-424). Springer, Berlin, Heidelberg.

Lu, I. Y., Mao, C. J., & Wang, C. H. (2010). Intrafirm technology and knowledge transfer: a best practice perspective. *International Journal of Technology Management*, 49(4), 338-356.

Mwaura, S. (2018), The standard Newspaper. Retrieved from from *https:// www.sde.co.ke/thenairobian/article/2000142784/only-15-nairobi-city-county-employees-workers-are-under-30-years*

Mwenzwa, E. M., & Misati, J. A. (2014). *Kenya's Social Development Proposals and Challenges: Review of Kenya Vision 2030 First Medium-Term Plan, 2008-2012*. Nairobi.

Nidhra, S., Yanamadala, M., Afzal, W., & Torkar, R. (2013). Knowledge transfer challenges and mitigation strategies in global software development—A systematic literature review and industrial validation. *International journal of information management*, 33(2), 333-355

OECD (2001), ''Knowledge management: learning-by-comparing experiences from private firms and public organisations'', Summary Record of the High Level Forum, 8-9 February, Copenhagen, PUMA/HRM(2001) 3, CERI/CD (2001) 2, pp. 1-28,Retrieved from *www.olis.oecd.org/olis/2001doc.nsf/ 43bb6130e5e86e5fc12569fa005d004c/ c1256985004c66e3c1256a5b00489d23/$FILE/JT00109192.PDF*

Olima, W. H. (2013). *Residents' Participation in Neighbourhood Management and Maintenance-Experiences and Lessons from Nairobi, Kenya*.293-305.

Parise, S., Cross, R., & Davenport, T. H. (2006). Strategies for preventing a knowledge-loss crisis. *MIT Sloan Management Review*, 47(4), 31.

Phaladi, M. P. (2011). *Knowledge transfer and retention: the case of a public water utility in South Africa*. (Doctoral dissertation, Stellenbosch: University of Stellenbosch).

Pobst, G. F. (2014). Meeting the challenge of knowledge worker shortages with strategic talent management. *American Journal of Management*, 14(1-2), 62–66.

Snowden, D. (2000). The social ecology of knowledge management. In *Knowledge horizons* (pp. 237-265). Butterworth-Heinemann.

Sutherland, M., & Jordaan, W. (2004). Factors affecting the retention of knowledge workers. *SA Journal of Human Resource Management*, 2(2), 55-64.

Timonen, H., & Ylitalo, J. (2013). Exploration of Knowledge Sharing Challenges in Value Networks: a Case Study in the Finnish Grocery Industry. *Electronic Journal of Knowledge Management*, *5*(4).

Tuitoek, C. C. (2014). *Transfer of tacit knowledge among staff at the Kenya National Library Service, Nairobi*. Eldoret, Moi University Press.

Usoro, A., Sharratt, M. W., Tsui, E., & Shekhar, S. (2007). Trust as an antecedent to knowledge sharing in virtual communities of practice. *Knowledge Management Research & Practice*, *5*(3), 199-212.

Weir, D., & Hutchings, K. (2005). Cultural embeddedness and contextual constraints: knowledge sharing in Chinese and Arab cultures. *Knowledge and Process management*, *12*(2), 89-98.

Yamane, T. (1973). *Statistics: An introductory analysis*. New York, NY.: Harper\& Row

Zawawi, A. A., Zakaria, Z., Kamarunzaman, N. Z., Noordin, N., Sawal, M. Z. H. M., Junos, N. M., & Najid, N. S. A. (2011). The study of barrier factors in knowledge sharing: A case study in public university. *Management Science and Engineering*, *5*(1), 59.

Wexler, M. N. (2001). The who, what and why of knowledge mapping. *Journal of knowledge management*, *5*(3), 249-264.

Ondari-Okemwa, E., & Smith, J. G. (2009). The role of knowledge management in enhancing government service-delivery in Kenya. *South African Journal of Libraries and Information Science*, *75*(1), 28-39.

Héliot, Y. & Riley, M. (2010). A study of indicators of willingness in the knowledge transfer process. *Journal of Management & Organization*, *16*(3), 399-410.