

Enhancing knowledge retention in higher education: A case of the University of Zambia

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The purpose of this study was to investigate how knowledge retention may be enhanced at the University of Zambia (UNZA). A quantitative case study design employing a triangulation of data collection methods was used. Data were collected using interviews and questionnaires. Purposive sampling was used to determine participants for the interviews whilst stratified random sampling was employed to select the respondents for the questionnaire. The quantitative and qualitative data that was analysed using SPSS® indicates that UNZA lacked certain knowledge retention practices that might enable it to retain operational relevant knowledge. In view of the findings, the study recommends the adoption of a knowledge retention framework that could be embedded in UNZA's knowledge management policy.

Introduction

World economies are increasingly becoming knowledge-based (Association of Commonwealth Universities 2006; Loh *et al.* 2003; Maponya 2004). Knowledge is viewed as a strategic resource that offers a competitive advantage in organisations (Halawi, Aronson & McCarthy 2005). Although organisations have realised the value of knowledge, not many have actually started managing knowledge efficiently and effectively (Kruger & Snyman 2005). Managing knowledge for value creation in organisations is still a 'management concern' (Ngoc 2006). Despite the fact that other organisational operations such as 'marketing, finance, sales or even supply chain' are well mastered, road maps for effective management of knowledge are still being investigated (Perez-Soltero *et al.* 2006).

Managing knowledge entails knowledge identification, acquisition, development, sharing and distribution, utilization and retention (Probst, Raub & Romhardt 2000:30). Knowledge retention, which is the focus of this article, includes knowledge assessment, knowledge acquisition and knowledge transfer. The need to retain organisational knowledge is a well-known concern for most organisations including universities (UniSA 2007). It is widely recognised that the ability to retain organisational knowledge is a key characteristic for a successful organisation in the knowledge economy. The magnitude of the problem is apparent considering the volume of research efforts aimed at addressing knowledge retention within organisations (Davidson, Lepeak & Newman 2007).

Knowledge retention in universities

The core business of universities is to create, manage and transfer knowledge (Association of Commonwealth Universities 2006). However, according to Ratcliffe-Martin, Coakes and Sugden (2000) in Maponya (2004:8), universities fail to recognise the importance of knowledge as a strategic resource. As universities operate in the knowledge era they must focus on retaining their institutional knowledge both in the tacit and explicit format. For instance, the retention and management of knowledge enhances performance and may benefit universities by:

- facilitating better decision-making capabilities
- reducing 'product' development cycle time (i.e. curriculum development and research)
- improving academic and administrative services
- reducing costs
- preserving corporate memory
- combating staff turnover by facilitating knowledge capture and transfer (Kidwell, Vander Linde & Johnson 2000:31).

Corporate entities, including universities, are now initiating knowledge retention initiatives (Loh *et al.*, 2003; Kidwell, Vander Linde & Johnson 2000; MacGregor 2006). In the United Kingdom (UK), the University of Edinburgh is an example of an institution that has started knowledge retention initiatives (University of Edinburgh 2005). Threats of an aging workforce, shrinking talent pool and demographic changes partly explain the need for knowledge retention (DeLong

2008; MacGregor 2006; McQuade *et al.* 2007; Phaladi 2011). Similar knowledge retention-related problems also affect performance in many African universities (Association of Commonwealth Universities 2006).

Knowledge retention at the University of Zambia

The University of Zambia (UNZA) is no exception to the knowledge retention challenges mentioned which have been mentioned in the earlier section. A recent assessment by IOTA Consulting Services (2001) revealed the existence of the following operational problems related to knowledge retention:

- high staff turnover
- inability to retain experienced and qualified staff
- lack of explicit routines and procedure manuals
- lack of succession planning
- lack of sustained leadership
- ineffective information management.

The Bobby Bwalya Commission appointed in 1997 to investigate the operations of the university warned that:

without significant attention being paid to the retention, motivation and commitment of critical staff in the university, quality in the core functions of the university would be in jeopardy.

(cited in IOTA Consultancy Services 2001:5)

Knowledge attrition through retirements and resignations result in the loss of tacit knowledge in any organisation which leads to lost potential for innovation and growth, decreased operational efficiency and effectiveness, and increased costs which in turn affect organisational performance (DeLong 2008; Purdum 2006; Sutherland & Jordaan 2004). In addition, employee mobility which is one of the trends observed in workers, including higher-education employees, in the knowledge economy is worrisome (Stovel & Bontis 2002; Sutherland & Jordaan 2004). Knowledge needs to be retained in organisations to support service delivery. In order to provide effective and efficient services, UNZA (2001) recognises that:

in the era of information society and knowledge based economy...the world of work is being radically redefined, and the university has an obligation to respond to the challenges that this entails.

(UNZA 2001:11)

Although the importance of knowledge retention and management is addressed in the strategic plan of the university, our experience at UNZA clearly shows that very little effort is being made by the management to put in place procedures and processes that will ensure knowledge retention for the operational benefit of the university (UNZA 2001:11). For instance, there are no guidelines for managing knowledge in general and knowledge retention in particular.

Universities, like many other learning organisations have difficulty retaining knowledge (Jarrar 2002; Smith 2007). Managing knowledge systematically is fundamental to

knowledge retention. Knowledge management (KM) techniques such as knowledge assessment, knowledge acquisition and knowledge transfer provide a useful framework for understanding knowledge retention processes in organisations (Tennessee Valley Authority 2005). The knowledge retention framework suggested by the Tennessee Valley Authority (2005) was instructive when investigating knowledge retention at UNZA.

The literature shows that drivers for knowledge loss in organisations include changing workforce demographics, employee turnover and mobility, and lack of documentation (Padilla 2006; Stovel & Bontis 2002). Failure to address these challenges leads to loss of operational relevant knowledge (Kruse 2003; McQuade *et al.* 2007; Padilla 2006; Scalzo 2006; Stovel & Bontis 2002). Based on this understanding, this research sought to find out if UNZA faced knowledge retention challenges with a view to developing a knowledge management framework to enhance knowledge retention at UNZA. The research questions that guided the study were the following:

- What tools of knowledge assessment are used at UNZA?
- What methods of knowledge acquisition are employed at UNZA?
- Which techniques of knowledge transfer are used at UNZA?
- What is being done regarding knowledge retention at UNZA?

Methodology

A case study design employing a triangulation of data collection instruments was used in this research. Case studies were used to study different knowledge management issues (Basu & Sengupta 2007; Nguyen, Smyth & Gable 2004; Tellis 1997). The data collection methods employed in this study were document review and a survey based on interviews as well as questionnaires. Thirteen senior management staff that were deemed to be relevant to the study were purposively selected for the interviews, whilst a questionnaire was used to collect data from a stratified random sample of 205 academics obtained from a database at the computer centre. One hundred and twenty-four, that is, 60% of the surveyed academics responded to the questionnaires that were sent out at the end of 2009.

Following the coding, the collected questionnaires were first checked for errors in responses as well as identifying unanswered questions before being entered into the SPSS® software. Within the survey, the open-ended questions involving qualitative data were content analysed and categorised. Data analysis was carried out after data entry for both closed and open-ended questions was complete. The Microsoft Word® computer package was used to transcribe the interview sessions. Content analysis was then applied where the researchers read all the thirteen transcripts in order to identify themes.

Results and discussions

The findings are presented in four major areas, namely, (1) knowledge assessment practices, (2) knowledge acquisition strategies, (3) knowledge transfer techniques and (4) knowledge retention processes at UNZA. The responses of the academics were similar to those of senior management. For that reason the results are lumped together in the discussion of the findings. The exceptions to the rule are a few cases where the findings from the interviews did not necessarily corroborate data from the completed questionnaires.

Knowledge assessment practices at the University of Zambia

Knowledge assessment is an initial stage in any knowledge management programme (Paramasivan 2003). It aims at understanding, establishing and ascertaining an organisation's capabilities and competencies in relation to tacit and explicit knowledge assets (Henczel 2000). Knowledge assessment is a well-known tool that serves as a source for operational knowledge, especially in organisations faced with knowledge loss challenges (Rothwell 2004). Authorities such as Henczel (2000), Hylton (2002) and Paramasivan (2003) argue that the lack of knowledge assessment as a knowledge retention tool undermines operational performance, as it would be difficult for an organisation to uncover and ascertain its operational strengths and weaknesses with regard to vital operational knowledge. Knowledge assessment practices include organisational capabilities assessment, workforce planning and knowledge auditing.

Organisational capabilities assessment

Organisational capability assessment involves the identification of documented operational processes, policies, work manuals and procedures (Consultas 2007; Rothwell 2004). The availability of documented operational processes, policies, work manuals or procedures serve as a source of operational knowledge for all, and especially for new individuals who may replace lost experienced and knowledgeable staff (Rothwell 2004).

In view of the aforementioned and in recognition of the variety of tasks carried out at UNZA, this study in both the survey and interviews looked for available documented processes, policies, work manuals and procedures (explicit knowledge assets). In the survey results, 17 (13.7%) respondents mentioned the availability of teaching practice manuals. Mention of manuals for functions such as consultancy, recruitment and training of staff was limited. Thus, the survey findings revealed that of the known documented processes, policies, work manuals and procedures, none of them covered core academic functions such as curriculum development, research and academic citizenship.

On the other hand, the results obtained through interviews indicated that work tasks at UNZA were not documented. However, there were some written general processes, policies and procedures, such as the following:

- some written policies, procedures and regulations covering some teaching tasks such as syllabuses, time table and assessment criteria for examinations
- a written but not yet wholly implemented policy on consultancy
- a written draft research policy that provides a general framework for conducting research
- some policies and procedures on some of the human resources functions such as training, recruitment and promotion of academic staff.

Considering the number of specialised units and tasks available at UNZA, the existing documented processes, policies, work manuals and procedures were not sufficiently representative of what could, potentially, be documented. Although a training policy was available, there was no comprehensive policy on recruitment or procedures on other human resources functions such as industrial relations, safety and health, and performance appraisal.

The researchers observed that whilst there were documented syllabuses, timetables and assessment criteria for examinations representing the core function of teaching, the actual teaching as a task was not documented. For instance, there was no documentation that defined teaching and its role at UNZA. Documentation on the student-lecturer relationship was also absent. In addition, there was no documentation that defined consultancy as a task at UNZA, that is, how to manage it and the value it added to knowledge creation at various levels.

The findings from the survey and interviews show that there is a paucity of documented processes, policies, work manuals and procedures at UNZA. The findings suggest that UNZA hardly knows its operational capability because of the limited documentation available on how work gets carried out in the various operations carried out at the institution. This in turn implies that there is no mechanism in place that provides a platform according to which operational knowledge within UNZA can be acquired, retained and leveraged in order to sustain effective and efficient operations.

The fact that 82 (66.1%) of the survey respondents agreed that it was important for UNZA to have documented processes, policies, work manuals and procedures for operations demonstrates the extent to which the respondents valued the need for documenting policies and processes. This affirmation on the importance of documented processes, policies, work manuals and procedures is in line with the advocacy for the creation of knowledge repositories for operational benefit by Kruse (2003) and Rothwell (2004).

Workforce planning

Workforce planning involves the management of an organisation's tacit knowledge base by ensuring the availability of employees with relevant experience, skills and knowledge at all times (American Public Power Association 2005). The findings on the assessment of tacit knowledge through workforce planning were obtained

through interviews with heads of units and UNZA management. According to the findings, it was clear that workforce planning was not a formal recognised practice as only a few units undertook some uncoordinated workforce planning. The implication of this finding therefore is that UNZA currently does not have a system for identifying the tacit knowledge requirements for the effective and efficient undertaking of its operations.

Knowledge auditing

The third knowledge assessment tool that was investigated was knowledge auditing. According to Hylton (2002), knowledge auditing seeks to expose the available explicit and tacit knowledge resources of an organisation for operational benefit. Such exposure of knowledge resources usually culminates in knowledge inventories (Paramasivan 2003). According to the survey results, 62 (50%) respondents revealed that UNZA had no skills and competencies inventories whilst only 45 (36.3%) agreed that skills and competencies inventories were available at UNZA. Furthermore, 17 (13.7%) respondents did not have an opinion on the matter. With regard to the interview findings, only one interviewee claimed to have a skills and competencies inventory in his unit. These results, therefore, show that UNZA lacks skills and competencies inventories. This deficiency implies that it is difficult for UNZA to know the risks and opportunities associated with its current knowledge base (Hylton 2002; Paramasivan 2003).

Whilst many organisations are using documentation of work operations, workforce planning and knowledge auditing to assess organisational capabilities in ensuring effective and efficient operational performance (American Public Power Association 2005; Hylton 2002; Rothwell 2004; University of New England 2002), UNZA has no adequate knowledge assessment practices in place. It is thus difficult to retain operational knowledge in order to sustain performance in various operations at UNZA (Hylton 2002; Paramasivan 2003; Rothwell 2004).

Knowledge acquisition practices at the University of Zambia

Knowledge acquisition refers to the practices used by an organisation to possess knowledge (DeLong 2008; Man 2006). Knowledge acquisition practices include recruitment, training and development, brainstorming, expert systems, subject matter experts and after-action reviews (McCall 2006; Tsai & Lee 2006). With this understanding in mind, both the survey and interview data collection methods identified various knowledge acquisition practices existing at UNZA.

Recruitment

Recruitment as a knowledge acquisition technique involves the determination of an organisation's knowledge requirements and employing individuals deemed to possess such knowledge (DeLong 2008). The findings on the acquisition of tacit knowledge through recruitment of

individuals with the requisite knowledge were obtained through interviews. Two interviewees indicated that before recruitment was carried out, a needs assessment aimed at establishing gaps in the knowledge and skills of the staff was conducted. Pursuing recruitment in this manner has been recommended as a best practice (DeLong 2008). However, all the interviewees expressed concern over the freeze on recruitment and unfilled vacancies. Considering that 80% – 90% of corporate knowledge is tacit-based (Hylton 2002), this concern implies that UNZA's knowledge base is incomplete and it is therefore difficult to accomplish operations effectively and efficiently in the absence of the required operational knowledge.

Training and development

Training and development equips employees with relevant operational knowledge beneficial to organisational operations (Rowold 2007; Vermeulen 2002). The survey findings revealed that less than half of the academics (50 respondents or 40.3%) were professionally trained in the academic tasks of teaching, research (56 respondents or 45.2%), curriculum development (29 respondents or 23.4%), academic citizenship (28 respondents or 22.6%) and consultancy (23 respondents or 18.5%). As a result of these deficiencies, there was an overwhelming need for training in functions, policies and procedures of the university (111 respondents or 89.5%), teaching methodology (113 respondents or 91.1%), research methodology (110 respondents or 88.7%), curriculum development (107 respondents or 86.3%), and in school or departmental administration and management (93 respondents or 75%).

On the other hand, almost all the interviewees claimed to facilitate knowledge acquisition through training, although most of it was not operationally specific. For instance, core tasks such as teaching were not amongst those being undertaken. Thus, the results indicate that training and development aimed at the acquisition of job specific knowledge at UNZA was inadequate. The lack of training and development presupposes ineffective and inefficient performance in organisational operations (Vermeulen 2002).

Brainstorming

Brainstorming as a knowledge acquisition technique involves the generation of ideas by a group of people aiming at finding solutions for a given problem (Liou 1990). According to the survey findings, 76 (61.3%) respondents agreed that brainstorming was used at UNZA. Similar findings were established from the interviewees as most of them reported that most decisions in their units were achieved through consensus in meetings.

Subject matter experts

Subject matter experts are individuals considered knowledgeable in a given subject area (IBM Business Consulting Services 2003). According to the survey results, 101 (81.5%) respondents agreed that UNZA used subject matter experts as a tool for knowledge acquisition. The

interview findings also firmly confirmed that subject matter experts constituted many of the operational committees at UNZA. This finding, therefore, indicates that in making operational decisions, UNZA placed value on subject matter experts as facilitators of knowledge acquisition.

Expert systems or knowledge bases

Expert systems or knowledge bases are computer-based repositories of explicit knowledge (IBM Business Consulting Services 2003). According to the survey findings, 86 (69.4%) respondents indicated that expert systems or knowledge bases were not in use at UNZA. Similarly, all interviewees stated that UNZA had no expert systems or knowledge bases. Based on these findings, one can conclude that UNZA does not use expert systems or knowledge bases for knowledge acquisition.

After-action reviews

The last knowledge acquisition technique considered in this study was after-action reviews. According to IBM Business Consulting Services (2003), the after-action review is an operational practice in which improvements on operations are made by making deliberate efforts to re-evaluate them. The survey findings indicate that the practice was not prevalent as only 17 (13.7%) respondents reported that after-action reviews were used very often, whilst 51 (41.1%) respondents indicated that after-action reviews were only used sometimes. All interviewees mentioned that their operations were reviewed at different forums such as the Board of Studies for academic units. Given these findings, one may conclude that after-action reviews as a knowledge acquisition practice are fairly common at UNZA.

Given the aforementioned discussion, it appears that UNZA is currently doing well in terms of knowledge acquisition practices such as brainstorming and subject matter experts. However, critical knowledge acquisition practices such as after-action reviews, recruitment and training, and development were generally not being implemented. Coupled with the nonavailability of knowledge bases or repositories, which employees could refer to when performing a given task this means that more is required to improve UNZA's capacity to acquire relevant operational knowledge if efficient and effective performance is to be achieved in operations.

Knowledge transfer practices at the University of Zambia

Knowledge transfer has been defined as an activity that facilitates knowledge flows in organisations (Bou-Llusar & Segarra-Cipres 2006). Knowledge acquisition is a tool for problem-solving and operational enhancement (McCall 2006). Such knowledge flows may involve interactions of individuals or making references to codified knowledge (Lochhead & Stephens 2004). Knowledge transfer practices include succession planning, communities of practice, knowledge repositories, mentoring, coaching, phased retirement, job rotation, storytelling and orientation (Butler & Roch-Tarry 2002; Gale 2007; Stovel & Bontis 2002).

Succession planning

As a common knowledge transfer technique, succession planning involves deliberate facilitation of knowledge flow amongst staff in order to avoid knowledge loss through attrition challenges (Butler & Roch-Tarry 2002). The survey findings show that 34 (27.4%) respondents indicated that succession planning was in existence at UNZA. However, interviewees indicated that succession planning, as a formal knowledge transfer technique did not exist. Given the importance placed on succession planning (Stovel & Bontis 2002), the findings clearly indicate that succession planning, as a knowledge transfer technique is underdeveloped.

Communities of practice

Communities of practice are formal or informal groupings of employees whose common goal is to share operational knowledge (Mngadi & Ngulube 2009). According to the survey findings, only 12 (9.7%) respondents agreed that communities of practice existed at UNZA. However, a crosscheck question that provided statements that defined communities of practice revealed that 62 (50%) respondents belonged to an informal grouping where they shared operational knowledge, whilst 60 (48.4%) were members of a formal grouping that shared operational knowledge. These survey findings were confirmed by the interview findings in which most interviewees indicated that many meetings were held in which various operational matters were discussed. Given these findings, one can safely argue that employees at UNZA shared knowledge amongst themselves at a large scale during the meetings. DeLong (2008), and Ngulube and Mngadi (2007) reached the same conclusion in their studies.

Knowledge repositories through documentation

Documenting relevant operational knowledge has been advocated in order to mitigate attrition challenges and aid in the learning period for new employees (IBM Consulting Services 2003). In this research the survey findings indicate that 39 (31.5%) respondents agreed that UNZA had knowledge repositories. Only 36 (29%) agreed that their schools or departments had operational policies, procedures, or work manuals located in a central place where each member of staff could easily access them. The interview results also show that UNZA lacked knowledge repositories. Given these results, it is clear that UNZA has insufficient knowledge repositories in which operational documentations are kept. The finding concurs with Padilla's (2006) assertion that most organisations do not document their operational relevant knowledge. Thus, UNZA's operational memory is inadequately documented.

Mentorship (formal and informal)

Mentorship is one way in which knowledge in an organisation may be transferred. According to Beazley, Boenisch and Harden (2002), mentoring involves the pairing of an experienced staff member with a novice in order to help the novice acquire competencies required for operational benefit. The survey results indicate that 97 (78.2%) respondents

agreed that both formal and informal mentorship existed at UNZA. However, a further verification of this finding revealed that only 28 (22.6%) agreed with the statement that new employees in their departments were allocated a mentor. The interview results on the other hand revealed that no mentorship activities were in place except for the fact that each member of staff was encouraged to consult colleagues on various issues regarding operations. These findings therefore suggest that there might be some mentorship at UNZA, most of which would be informal. Such a situation shows a lack of commitment in ensuring that operational knowledge at UNZA is transferred amongst staff when compared to other universities that have formal mentorship programmes (University of Aberdeen 2006; University of Reading 2007).

Coaching

Related to mentorship, coaching involves the guiding and monitoring of a trainee's progress on training given in order to consolidate the trainee's operational relevant knowledge which enhances such a trainee's performance (University of Reading 2007). The survey results show that 78 (62.9%) respondents agreed that coaching existed at UNZA. However, the interview results indicate that no coaching is in place at UNZA. This finding is thus somewhat similar to the findings on mentorship, and as such one could argue that unofficial coaching of staff might be taking place. Thus, UNZA is missing an opportunity for transferring knowledge from experienced long-serving staff to young, new employees.

Phased retirement

Phased retirement is a range of employment arrangements that allow an employee who is approaching retirement, to continue working, usually with a reduced workload (Brainard 2002:1). In situations where the retirement of staff is identified as a driver for knowledge loss, phased retirement has been used to transfer knowledge amongst staff (Lochhead & Stephens 2004). This knowledge transfer technique is also common in universities (Gale 2007). A total of 75 (60.5%) respondents revealed that phased retirement existed at UNZA. This finding was further confirmed by 96 (77.4%) respondents who agreed that healthy eligible retirees at the age of 55 were often retained on contract conditions of service. However, not all support staff were retained on contract except for those identified to possess unique and exceptional skills and knowledge. These findings indicate that phased retirement is an existing practiced knowledge transfer technique at UNZA.

Orientation or induction

Orientation involves the initiation of staff to general and specific operational requirements in their roles (University of Reading 2007). With regard to the use of orientation as a knowledge transfer practice at UNZA, 49 (39.5%) respondents agreed that both general and specific orientation existed at UNZA. This finding is also in line with most interviewees who were of the opinion that no formal orientation programmes were organised for their staff, especially for academic members of staff. This finding contradicts the fact that staff orientation at UNZA is a formal requirement for all staff as reported by the interviewee vested with the responsibility.

Job rotation

Rotation of staff in different roles is one of the methods used to transfer relevant operational knowledge (UNESCWA 2003). Based on the survey results, 75 (60.5%) respondents agreed that job rotation, as a knowledge transfer practice existed at UNZA. The interview results revealed that only nonacademic staff practiced job rotation. Overall, these results point to the fact that job rotation is a knowledge transfer technique used at UNZA. These findings therefore show that through exposure to different roles, UNZA is able to transfer some operational knowledge.

Storytelling

Stories may be helpful in sharing knowledge. They provide employees with an opportunity to pass on their knowledge to others. No wonder, narratives that constitute operational knowledge have been considered as knowledge transfer tools (Prusak 2001). The survey results show that storytelling is not widely used as a knowledge transfer practice at UNZA considering that only 17 (13.7%) respondents agreed that it existed. The interview results also revealed that it was difficult to tell if stories formed part of the knowledge transfer tools used by staff in their operations. These findings imply that storytelling as a knowledge transfer tool is lacking at UNZA. As such, the lack of storytelling as a knowledge transfer technique shows that UNZA's capacity to expose tacit knowledge for operation benefit is inadequate.

Knowledge retention at the University of Zambia

Both the survey and interview findings strongly established the existence of knowledge retention challenges such as retirements 73 (58.9%), resignations 80 (64.5%) and deaths 72 (58.9%). The interviewees also mentioned these knowledge loss challenges. The effects of these knowledge loss challenges include:

- disruption of services provided
- overworking available staff
- lack of effective and efficient operational continuity.

One hundred and nine (87.9%) of the surveyed respondents agreed that attrition challenges deprived UNZA of relevant operational knowledge whilst 69 (55.6%) of them held the view that UNZA had no knowledge preservation processes in place. The existing loss of operational knowledge and lack of knowledge preservation techniques at UNZA was also expressed by most interviewees.

The researchers also wished to verify whether UNZA required a knowledge retention policy. According to the survey findings, 111 (89.5%) respondents mentioned the need for a knowledge retention policy. The need to formulate knowledge retention policies is well documented (Kidwell, Vander Linde & Johnson 2003; UniSA 2007). Based on both the survey and interview findings, it could be argued that institutions of higher learning should have knowledge retention policies in order not to lose essential operational knowledge.

Recommendations and conclusions

At the beginning of the study, the researchers assumed that most organisations including UNZA were faced with the problem of knowledge loss and that proactive responses such as knowledge retention were required to handle the dilemma. The research findings established knowledge loss challenges arising from staff attrition challenges such as retirements and resignations. These knowledge retention challenges are regarded as a threat to operations (DeLong 2008; McQuade *et al.* 2007; Padilla 2006; Purdum 2006; Sutherland & Jordaan 2004).

The results show that a number of gaps existed in the current knowledge retention practices at UNZA. With regard to knowledge assessment as an integral dimension of knowledge retention, three techniques, namely organisational capabilities assessment, workforce planning and knowledge auditing, were investigated. The findings with regard to these techniques were not positive. It was clear that very few work processes and tasks were documented. Workforce planning was not practiced and skills and competency inventories were lacking.

With regard to the findings on knowledge acquisition as another knowledge retention strategy, the investigated practices revealed both positive and negative findings. Knowledge acquisition was supported in the form of generation of ideas, utilisation of expertise and reviews on operations. An observation made by the researchers was

that all these knowledge acquisition practices usually take place in the form of meetings. Meetings are forums in which operational decisions are usually made by experts (Turban, Mclean & Wetherbe 2003). At UNZA, a number of committees that handle operational matters were found to exist. Yet there was no wide support for training and development, and the use of expert knowledge bases as knowledge acquisition practices. According to the literature, knowledge acquisition cannot take place in a situation where staff is not trained in operational tasks and where repositories for operational knowledge are lacking (IBM Business Consulting Services 2003; Rowold 2007; Tsai & Lee 2006; Vermeulen 2002).

The participation of staff in various meetings, job rotation, phased retirements and the retention of employees beyond their retirement age were some of the methods used for knowledge transfer at UNZA. In contrast, formal succession planning, coaching, knowledge repositories, storytelling, orientation, general and job specific training and mentorship were lacking at UNZA. Referring to succession planning, Butler and Roch-Tarry (2002) argue that the failure to identify talent, skills and competencies undermine knowledge management efforts in an organisation. We propose that UNZA consider the formulation of a well-coordinated and integrated approach for retaining operationally relevant knowledge.

Based on the findings, we suggest the knowledge retention framework (KRF) presented in Figure 1. KRF depicted in

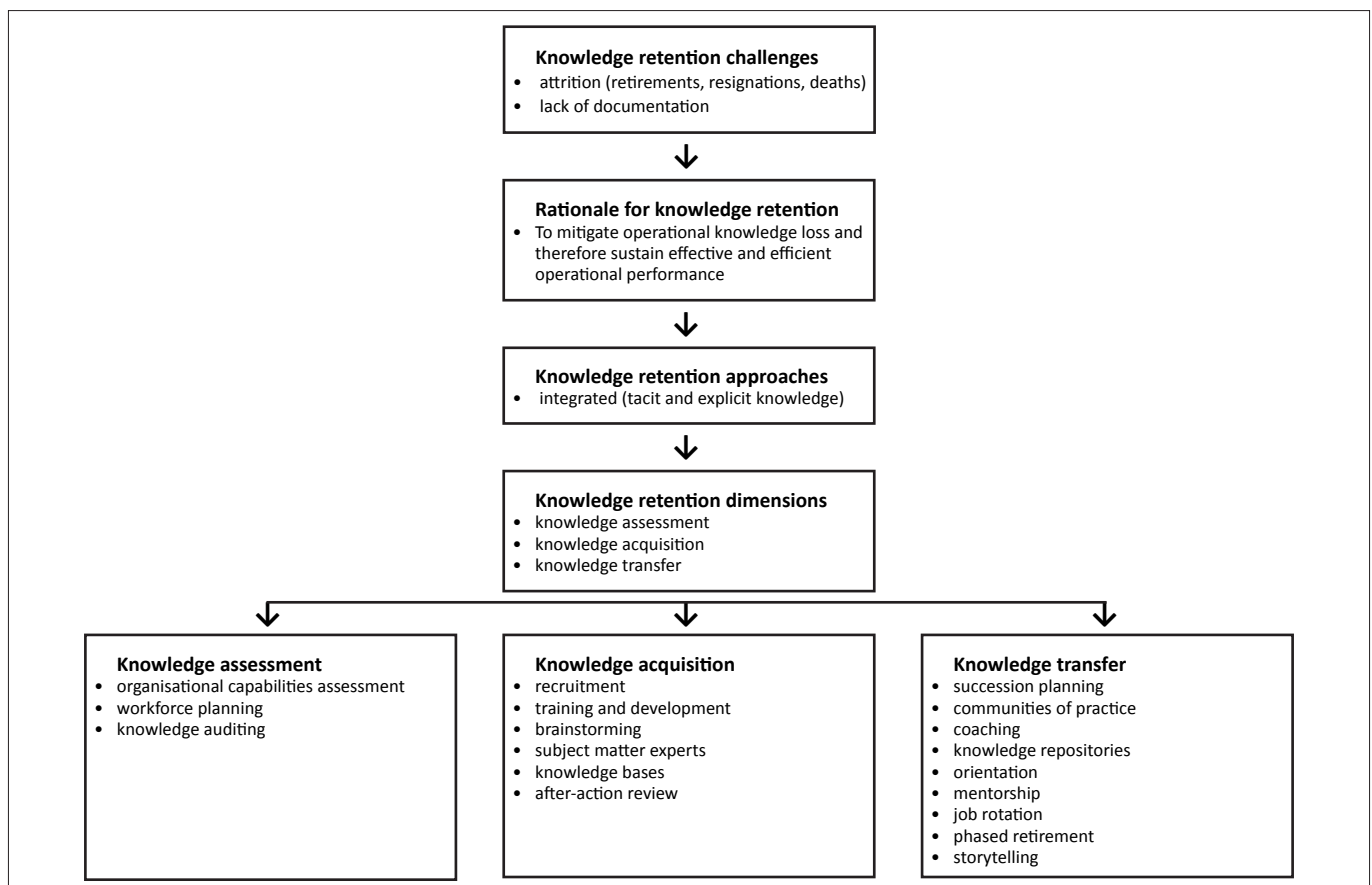


FIGURE 1: Proposed knowledge retention framework for the University of Zambia.

Figure 1 is based on the following:

- organisation's ability to identify knowledge retention challenges
- organisation's acknowledgement of a need and purpose for knowledge retention
- organisation's preparedness to integrate tacit and explicit knowledge
- organisation's understanding of the dimensions of knowledge retention which primarily encompasses knowledge assessment, acquisition and transfer.

Such a knowledge retention framework (as is shown in Figure 1) may help UNZA to enhance knowledge retention at the institution. If UNZA believes that such a framework would serve its interests, it should integrate the KRF into the institutional policies and the whole institution should take ownership of the policy, ideally under the guidance of a knowledge champion.

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