A Knowledge Audit in the Acquisitions Department of a university library[1].

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Abstract

Purpose: This paper discusses a knowledge audit conducted in the acquisitions department of the main library of University of Colombo, Sri Lanka. The purposes of conducting this knowledge audit was to provide evidence of all knowledge which have not been documented so far but currently available in the acquisitions department; to identify all knowledge required to perform the tasks related to acquisitions; to ascertain the gaps between the currently available knowledge and the knowledge actually required for the efficient functioning of the department and to provide empirical evidence to the management for future development activities.

Methodology: The methodology employed for the research consists of six stages; 1) Orientation and background study of the department 2) diagrammatising all the functions, processes and decision making instances related to the department. 3) Analysing each function, process and decision making instance to elaborate the sequential individual tasks performed to accomplish a given job. 4) Listing all tacit and explicit knowledge sources currently available in the department. 5) Visualisation of tacit departmental knowledge indicating the strengths and weaknesses and 6) Making recommendations to the management based on the findings. Participative observations, group discussions, in-depth interviews, and focus group meetings with the senior executive staff were employed as well as review of related documentation to collect the necessary data.

Findings: The knowledge audit led to six significant and original explicit outcomes; 1) the Process Map 2) the Task Analysis 3) Inventories of current tacit and explicit departmental knowledge 4) Knowledge Need Analysis (KNA) 5) the Knowledge Map and 6) Formal job descriptions and person specifications for all posts in the acquisitions department which were not available before.

Research Limitations: The necessary environment which facilitates the knowledge audit was absent because the concept is still new to the Sri Lankan library context. Any audit instruments or protocols built up in the library context were not available for the researcher. Hence the specific instruments had to be created with the support of the similar instruments developed in other countries. A second constraint was the absence of awareness of knowledge concept among

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the staff. Articulation of their knowledge was difficult due to lack of practice and the in-depth questionnaires used in other case studies to capture organisational knowledge could not be utilised in this context. Therefore capturing the tacit knowledge was a slow and tedious process with a considerable involvement of the researcher in eliciting information from them.

1. Introduction

The following section will introduce the concept knowledge audit together with its significance in an organisational environment. It will be followed by an introduction to the university library, the methodology used for the research and as brief review of related literature.

1.1 Knowledge Audit

A knowledge audit is a planning document which provides a structural overview of designated section of an organisation's knowledge as well as details of the qualitative and quantitative characteristics of the individual chunks of knowledge within that designated section. The document also identifies the knowledge repositories in which those chunks reside (Debenham and Clark 1994).

"The knowledge audit (K-Audit) is a systematic and scientific examination and evaluation of the **explicit and tacit** knowledge resources in the company. The K-Audit investigates and analyses the current knowledge environment and culminates, in a **diagnostic and prognostic report** on the current corporate 'knowledge health'. The report provides evidence as to whether corporate knowledge value potential is being maximised. In this respect the K-Audit measures the risk and opportunities faced by the organisation with respect to corporate knowledge" (Hylton 2002, p.1).

"Knowledge audit involves a complete analysis and investigation of the company in terms of what knowledge exists in the company, where it is, who owns it and how it is created" (Cheung et.al 2007, p. 141)

All the above authors agree that Knowledge Audit is a systematic analysis of an organisation's tacit and explicit knowledge and the end product is a document which indicates the current status of the organisational knowledge with respect to its creators, owners and locations. Gaps and overlaps are also revealed so that the organisation can use it for future developments.

Within the context of this paper knowledge audit is defined as a systematic study of the tacit and explicit knowledge available in the Acquisitions Department of the Main Library of the University of Colombo. The final product was expected to be a series of documents which provide the evidence of the current knowledge owners, specific types of tacit and explicit knowledge currently available in the department and the future requirements of knowledge. Finally it was expected to use the Knowledge Audit to identify the gaps in the departmental knowledge so that the specific needs can be addressed through management decisions.

1.2 Significance of Knowledge Audit

While several authors (Liebowitz 2000, Wexler 2001, Sharma and Chowdhury 2007) have discussed the benefits of knowledge audits Hylton (2002) has elaborated its tangible benefits thus;

1. It provides scientific evidence to determine if corporate knowledge value potential is being maximised.
2. It offers a formalised and evidence based accounting of knowledge that exists or is embedded in the company, and how that knowledge moves through the company.
3. Via the inventory it details 'what knowledge exists in the company and where it exists', which is crucial in determining corporate knowledge-wealth and value.
4. It helps to identify and unearth dormant and potential knowledge resources; in particular people based knowledge, so that this knowledge can be productively used.
5. It enables the mapping of internal and external knowledge flow and formal and informal communications networks. This facilitates the identification of inefficiencies reflected in duplication of efforts, knowledge gaps and knowledge-bottlenecks.
6. It helps the company to identify and chart the knowledge that is required to support its goals and the individual tasks and activities.
7. It allows for the measuring and assessing of the relative value of the knowledge entities as perceived by the initiators and users, i.e. the employees.
8. It offers valuable measurement and assessment of the effectiveness of corporate knowledge capabilities and competency outside of the company, in particular customers, partners and even competitors.
9. It can gauge how efficiently and effectively the organisation captures and use knowledge held by the company's external interests, such as customers and partners.
10. It allows hidden knowledge to become highly visible, knowledge assets to become more tangible, and therefore more measurable and accountable.
11. It facilitates more efficient and effective KM initiatives and programmes.
12. It produces independent and objective, evidence-based knowledge-value indicators, which can then be used to plan, implement and further measure the KM project's success in achieving its defined goals. (Hylton 2002, p.4)

In the research related to the acquisitions department the expected benefits of the knowledge audit were:

1. To provide evidence of all the tacit and explicit knowledge which have not been documented so far but currently available in the acquisitions department.
2. To identify all the tacit and explicit knowledge required to perform the tasks related to acquisitions.
3. To ascertain the gaps between the currently available knowledge and the knowledge actually required for the efficient functioning of the department.
4. To provide empirical evidence to the management for future development activities.

1.3 K-Audit process

Several authors have identified a variable number of stages in conducting a knowledge audit (Table 1), but close scrutiny of all these stages indicate that there are four key stages; 1) background study 2) in-depth investigation 3) building knowledge inventory and 4) drawing the knowledge map.

Table 1 - Processes of Knowledge Audit

1. Liebowitz (2000)	Identify what knowledge exists in the target area Identify what knowledge is missing in the target area Provide recommendations to the management regarding the status quo
2. Hylton (2002)	Knowledge Survey (collating, analysing and measuring corporate knowledge Knowledge Inventory (stock taking and measurement of tacit and explicit knowledge to determine the actual and potential knowledge wealth Knowledge Map (building and development of a corporate knowledge map of the structure and flow of knowledge.
3. Choy, Lee and Cheung, (2004)	Phase 1 – Pre-audit preparation (orientation and culture readiness survey) Phase 2 – Audit process (In-depth interviews) Phase 3 – Audit analysis (Knowledge Inventory, Knowledge Map and Social Network Analysis)
4. Cheung et.al (2005)	Phase 1 – Orientation and background study Phase 2 – KM readiness assessment Phase 3 – Survey and interview for evidence collection Phase 4 – Building knowledge Inventory Phase 5 – Knowledge Mapping Phase 6 – Audit results analysis Phase 7 – Knowledge audit reporting Phase 8 – Continuous based knowledge re-auditing
5. Perez-Soltero et.al. (2006).	Stage 1 – Acquire organisation information and identify organisational processes Stage 2 – Identify organisation's core processes and establish measurement criteria Stage 3 – Prioritize and select organisation's core processes Stage 4 – Identify key people Stage 5 – Meeting with key people Stage 6 – Obtaining Knowledge Inventory Stage 7 – Analysing knowledge flow Stage 8 – Knowledge mapping Stage 9 – Knowledge auditing reporting Stage 10 – Continuous Knowledge re-auditing
6. Cheung et. al. (2007)	Phase 1 – Orientation and background study Phase 2 – Culture assessment Phase 3 – In-depth investigation Phase 4 – Building knowledge Inventory and Knowledge Mapping Phase 5 – Knowledge Network analysis and Social Network Analysis Phase 6 – Recommendation of KM strategy Phase 7 – Developing KM tools and building collaborative culture Phase 8 – Re-audit for measuring success of the KM implementation
7. Sharma and Chowdhury (2007)	Knowledge need analysis Knowledge Inventory analysis Knowledge flow analysis Knowledge Mapping

The researcher identified six stages for this particular knowledge audit, which will be discussed in the methodology section.

1.4 The Acquisitions Department

University of Colombo was started in 1921 as a University College and was later established as an independent university in 1967. Currently it has seven faculties (Arts, Education, Graduate Studies, Law, Management, Medicine and Science), one campus (Sri Palee Campus) one school (University of Colombo School of Computing) and seven affiliated institutions (specialising in agro technology, human resource advancement, indigenous medicine, library and information science, medicine and microbiology). The university also has four study centres specialising in career guidance, educational research, human rights and staff development.

University library consists of the main library and two branch libraries for the faculties of Medicine and Science. Main Library which serves all the other faculties consists of five main functional departments; acquisitions, periodicals, cataloguing, reader services and the bindery. The collection of the main library consists of about 400,000 books, periodicals and other print/non print material. The users of the main library consist of 5000 undergraduates, 2000 postgraduates and 1500 academic and non-academic staff members

The library adds 5000 to 6000 materials to its stock every year and in 2008 subscribed to 138 journal titles. The books and periodical allocation for 2008 was Rs. 22 million (approximately US $ 200000.00) out of which 9.5 million (approximately US $ 87000.00) was allocated for book acquisitions.

Acquisitions department of the main library is responsible for acquiring all the non-journal material for the Faculties of Arts, Education, Graduate Studies, Law, Management and Science as well as for the general collection. Three Library Assistants and a minor staff member handle the work under the supervision of a Senior Assistant Librarian. The researcher, after a six year period of secondment to hold another post in the university was appointed in early 2008 to supervise the acquisitions department.

It was observed that the performance quality of the acquisitions department has declined considerably. Mistakes in the work were frequent and the attitudes towards the work were less positive. It was also observed that there has been a rapid loss of staff experienced in acquisition related work due to retirement. Staff transfers have been frequent and less experienced new staff has been assigned to the department. The new staff taking over the responsibilities had to depend on themselves to learn as clearly codified work procedures or job descriptions were absent. There are no written down instruction manuals to support the new staff. As the staff was learning through work, many trials and errors has occurred. At the same time some of the long established work procedures have been lost without even the notice of the staff.

The situation has been further aggravated by frequent changes of supervisory staff. Several senior staff members have taken leave to engage in higher studies and the workload of the remaining executive has been increased, reducing the close supervision of the activities. Although the library has automated the catalogue process, it has not been extended to the acquisitions department. The manual work process, with the increased demand for better fund management from the academic departments has become extremely time consuming and less effective.

On one hand, the acquisitions department as the heart of all the other functions of the library with the strength of the collection depending upon the annual additions to the collection, could not afford to have a low quality of service. On the other hand the academic departments are pressurising the department for speedy acquisition of material and better utilizations of departmental funds. There is no way that the acquisitions department could lag behind due to internal inefficiencies. It was necessary to identify the critical issues affecting the department and address them immediately. In order to study the departmental issue in a systematic manner, the researcher decided to exploit the concept of Knowledge Audit from the Knowledge Management domain.

1.5 Methodology

The methodology employed for the research consists of six stages;

1. Orientation and background study to identify the main functions, staff and resources in the acquisitions department
2. Drawing the Process Map – depicting diagrammatically all the functions, processes and decision making instances related to the department.
3. Task analysis– analysing each function, process and decision making instance to elaborate the sequential individual tasks performed to accomplish a given job.
4. Compilation of the Knowledge Inventory – listing all tacit and explicit knowledge sources currently available in the department.
5. Drawing the Knowledge Map – visualisation of tacit departmental knowledge indicating the strengths and weaknesses.
6. Finally making recommendations to the management based on the findings.

In order to collect the data for this study, participative observations, group discussions, in-depth interviews, and focus group meetings with the senior executive staff were employed as well as review of related documentation.

However, there were some limitations: knowledge management is yet to gather momentum in the Sri Lankan library context, so does the knowledge audit. Therefore the necessary environment which facilitates the knowledge audit was absent. Any audit instruments or protocols built up in the library context were not available for the researcher. Hence the specific instruments had to be created with the support of the similar instruments developed in other countries. This was rather time consuming because exploratory tests had to be carried out at each stage. A second constraint

was the absence of awareness of knowledge concept among the staff. This research was the first of its kind within the Sri Lankan context and also the first time the staff reflected on their own knowledge. Articulation of their knowledge was difficult due to lack of practice and the in-depth questionnaires used in other case studies to capture organisational knowledge could not be utilised in this context. Therefore capturing the tacit knowledge was a slow and tedious process with a considerable involvement of the researcher in eliciting information from them.

However it needs to be mentioned here that due to the limited scope of the knowledge audit it did not cover several key areas covered by other knowledge audits. For instance knowledge flow and knowledge sharing practices, career development or other rewards for knowledge sharing, relationship between the executive and the non executive staff and employee job satisfactions were not studied extensively due to the straightforwardness of the work practices in the acquisitions department and also because some of these concepts could not be studied without analysing the entire library as a whole.

1.6 Review of related literature

Knowledge audits have been implemented successfully within several organisations. For instance in an airline company (Choy, Lee and Cheung 2004), in a railway company (Cheung et.al 2007), a motor manufacturing company (Cheung et.al 2005 and Kang, Park and Kim 2003), a steel manufacturing company (Kim,, Suh and Hwang 2003) and in a cooking oil manufacturing company (Heng 2001). However the application of knowledge audit is rare in the academic context but Hellstrom and Husted (2004) argues that it can be fruitful in the academic environment also. An instance of applying knowledge audit in a Dutch public library to make use of the hidden knowledge potential of the staff is recorded by Selhorst (2008) while Sharma and Chowdhury (2007) reports that a knowledge audit diagnostic tool was tested in a library. However knowledge audits in the libraries or in any other institutions in Sri Lanka have not been reported yet. Although this was a hindrance to this study carried out in the acquisitions department, the case studies mentioned above underpinned the study, to a considerable extent.

2. The findings

This section will present the findings of the knowledge audit with regard to its four key stages; drawing the process map, task analysis, compiling the tacit[2] and explicit knowledge inventories and drawing the knowledge map.

2.1 Process map
Through participatory observations and group discussions it was identified that six main functions are performed by the acquisitions department;

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[2] Polanyi (1966) has opined that there are two types of knowledge, *tacit* and *explicit*. We know more than we can explain to others. Explicit knowledge is what we can articulate to others. Tacit knowledge is the rest of our knowledge, which we cannot explain to others. Based on this definition the tacit knowledge in the acquisitions department was identified as the knowledge and skills possessed by the staff members.

1. **Processing orders sent by the academic departments**. At the beginning of the year when the annual allocations for books and periodicals are divided among the faculties by the Deans' Committees and publicised among the academic departments, individual departments send in their requests for new books. Processing them is the main function of the department.

2. **Purchasing from authors directly and publishers' catalogues** – Purchasing books brought directly to the acquisitions department by the authors and from purchasing from the publishers catalogues, in addition to the requests made by the academic departments is the second function.

3. **Accepting gifts** – The third function is accepting material gifted to the library by various authors, foreign missions, research organisations etc.

4. **Binding of cumulative journal issues** – When all the issues of a particular journal volume are received by the library, they are bound together as one volume and processed as a book to be kept in the Bound Journal Section. Binding and processing such journals is the fourth function of the department.

5. **Withdrawal of the weeded books** – When books are withdrawn by the reader services section either due to physical damage or because new editions are available, they are sent to the acquisitions department to complete the withdrawal process. This is the fifth function

6. **Cost calculation of the lost books** – When loses of books are reported by the reader services department, it is a function of the acquisitions department to calculate costs according to the relevant policy and inform the reader services section or the user so that they can take necessary action.

These six main functions are depicted in the Process Map (Appendix 1 given at the end of this paper). Each main function was further analysed to identify the sequential work processes and decision making instances associated with each function and they are also depicted in the Process Map. Each process and decision making instance is numbered from P1 to P19 for the ease of future reference.

2.2 Task Analysis

Task analysis consisted of an in-depth study of each process and decision making instance (P1-P19 in Appendix 1). This was performed by the researcher together with the staff of the department by cautiously going through the individual tasks that requires to be performed to complete each function. The outcome of the exercise was an extensive document which enlisted 155 individual tasks performed under each process and decision making instance. Not only the tasks but also the person responsible for each task, the specific tacit knowledge required to perform the task, explicit knowledge sources (Registers, policies software etc) used by the staff to perform each task were also identified at this stage. A fraction of the task analysis document is shown in Appendix 2.

2.3 Knowledge Inventory

Knowledge Inventory is the stocktaking of knowledge involving the counting, indexing and categorising of corporate knowledge (Hylton 2002) and the third stage of the knowledge audit of the acquisitions department was to prepare an inventory of the tacit and explicit knowledge available in the acquisitions department.

All the articulated knowledge in the form of registers, guidelines, policies, regulations, software packages etc required by the staff to carry out their work were identified as explicit knowledge and an Explicit Knowledge Inventory was compiled containing all the names of specific knowledge sources, physical quantity available from each item, format (paper-based or online) location (whether it is within or outside the acquisitions department), ease of access by the staff of the department, exact purpose of the knowledge sources, its relevance to the department, frequency of use and special remarks of each sources of knowledge.   The outcome was another extensive document which spelt out the significant characteristics of all explicit knowledge sources used in the department. While Table 3 summarises the list of 43 explicit knowledge sources used in the department, Appendix 3 depicts a section of the Explicit Knowledge Inventory.

Table 3 - Explicit knowledge Inventory

Knowledge Item	Knowledge Item
1. Accession Number Register	23. Foreign payment settlement copies
2. Accession Register (Current)	24. Government Procurement guidelines
3. Accession Registers (Closed)	25. Indents Register
4. Advanced payment file	26. Internet
5. Annual dept allocation documents	27. Invoice file
6. Annual general allocation document	28. Lists of recommended titles
7. Bar code generation software	29. Lost book Register (closed)
8. Bill Register	30. Lost book Register (current)
9. Card catalogue	31. Lost books communication file
10. Catalogue database (As a tool for searching)	32. Online Authority file
11. Catalogue database (for data entering)	33. Online currency converter
12. Cost Recovery Policy	34. Original Pro Form invoices
13. Custom clearance file	35. Pamphlet Number Register
14. Delivery notes file	36. Pamphlet Register
15. Departmental address/Telephone Directory	37. Petty cash file
16. Departmental order files (current year)	38. Petty cash register
17. Donation Number Register	39. Telephone Directory
18. Donation policy	40. Transliteration guidelines
19. Excel Files	41. University Financial Regulations
20. Faculty order files (Previous years)	42. Vendor details
21. Faculty/Dept based communication files	43. Yellow Pages
22. Folders of withdrawn titles pages	

In order to compile the Tacit Knowledge Inventory of the department, an in-depth interview schedule which contained 15 areas regarding the education, training, professional experience, knowledge and skills of the five staff members was used. The findings were codified to build up the Tacit Knowledge Inventory. The staff members listed that they have seven skills and three types of knowledge among themselves while they stated that they would like further training in

five areas (Appendix 4). However, the question arose whether the staff has a clear idea of the knowledge and skills *they possess at present* or *they are expected to possess* in order to perform the functions successfully.

To answer this question the researcher made a further study of the knowledge and skills required by the staff of the acquisitions department in general. Using two previous studies on staff skills (Rehman 1997 and McNeil and Giesecke 2001), a list of knowledge[3] and skills[4] required for the acquisitions staff of the University of Colombo library was prepared and refined after extensive discussions with the Librarian. The outcome was a Knowledge Need Analysis (KNA) of the department. The KNA identified the following six categories of knowledge and skills as needed by the staff of the acquisitions department. A sample list is provided in Appendix 5.

1. 11 types of generic knowledge.
2. 21 types of general skills
3. 22 types of acquisition-specific knowledge.
4. 47 types of acquisition-specific skills
5. 3 types of knowledge in bibliographic database manipulation and
6. 4 types of skills in bibliographic database manipulation

Compiling the Tacit Knowledge Inventory and the KNA were somewhat complicated tasks when compared with the compilation of the Explicit Knowledge Inventory, as the former required in-depth analysis of the unarticulated capabilities of the workers.

2.4 Knowledge Map

Knowledge map which is a visual representation of the corporate knowledge network (Hylton 2002) is the final output of the knowledge audit and it helps the management to grasp the status of knowledge and plan knowledge development strategies (Kang, Park and Kim 2003). However it is never the solution but it directs us towards information. This information, when reliable and relevant, empowers us (Wexler 2001). To visualise the corporate knowledge meaningfully five perspectives must be considered which answer five questions; *what type* of knowledge is visualised, *why* that knowledge should be visualised, *for whom* is the knowledge visualised, in *which context* should it be visualised and the *how* can the knowledge be represented (Eppler 2007). Five types of knowledge maps have been identified by Eppler (2001): knowledge source maps, knowledge asset maps, knowledge structure maps, knowledge application maps and knowledge development maps**.**

In this research it was decided to visualise the knowledge assets owned by the individual staff members for the purpose of codifying and assessing the existing levels of knowledge and skills for the use of the management and the employees of the library. The report was to be utilised as a management tool in planning human resource development. The exact visual format of the

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[3] Knowledge is defined in the context of the paper as the consciousness or familiarity gained by experience or learning.
[4] Skills is defined as the special abilities acquired by training

knowledge map was a structured colour coded matrix as identified by Eppler (2007) as the most suitable format to visualise knowledge assets.

To draw the knowledge map, all the items of knowledge and skills identified at the Knowledge Need Analysis were listed in a table. Using a continuum of six levels varying from 'Very High' to 'Not Applicable to the post' the level of each knowledge / skill possessed by the individual members of the staff was assessed and recorded in the table using a particular colour corresponding to each level. This assessment was initially carried out by the researcher and later reviewed and validated by the Librarian, the senior executive staff of the library and the staff of the acquisitions department. The final outcome was a colour coded structured matrix which clearly visualises the levels of tacit knowledge assets available in the acquisitions department. Appendix 6 depicts a part of the complete map.

4. Findings

The knowledge audit presented six significant and original explicit outcomes; 1) the Process Map 2) the Task Analysis 3) Inventories of current tacit and explicit departmental knowledge 4) Knowledge Need Analysis (KNA) and 5) the Knowledge Map. These documents provided a good opportunity for the staff and the researcher to evaluate the work processes and tools used within the department with respect to their relevance. Many duplications, gaps, irrelevances as well as significances hitherto unseen were brought in to light. Most significantly, as was expected by the researcher, the knowledge audit helped solving many of the issues identified at the beginning. Especially the Process Map and the Task Analysis addressed the absence of codified work procedures. These two documents could be used by the new Library Assistants assigned to the department as well the supervising executives as guidelines to avoid mistakes in the work procedures. These codifications could be used in future not only by the departmental staff but also by the library management and the Library Science students who come for in-service-training. The Knowledge Inventory recognized the strengths and weaknesses of the staff as far as the knowledge and skills are concerned and the KNA could be used in future to provide more appropriate staff training. It also helped the management to decide on the types of education and training programmes that should be provided for the staff.

The usual practice in the library is to send the staff for training workshops organised by the other institutions but the knowledge need analysis and the knowledge map serves as an ideal guideline for the management to plan the future training programmes to address the critical gaps in the departmental knowledge requirements. Four types of education and training programs beneficial for the staff could be identified with the help of the KNA: 1) training programs conducted within the acquisitions department and 2) training programs conducted within the university library as soon as possible to fill the identified gaps in the staff knowledge 3) training programs conducted by other organisations and 4) formal Library & Information Science education programs which will address some of the gaps on long-term.

The sixth outcome is the formal job descriptions and person specifications for all posts in the acquisitions department which were not available before. These could be drawn up with the assistance of the Process Map, Task Analysis and the KNA.

Other than the tangible outcomes carrying out the knowledge audit was a unique encounter because the exercise was new to the researcher as well as the other staff. It enabled a self-evaluation opportunity which is a novel experience. A considerable amount of enthusiasm was generated by the frequent discussions between the researcher and the rest of the acquisitions staff. They were enthusiastic not only about the wide range of skills and knowledge they discovered that they possessed but also about the codified functions, processes and tasks of the acquisitions department which would help the new staff members in future. It also identified many new knowledge and skills that they require to perform their jobs and the necessity to develop the areas in which they are not so competent.

Although conducting the knowledge audit was a constructive experience, the researcher had to be careful of several human related aspects. It could have easily generated suspicion among the staff that there work is being monitored to be reported to the management resulting in fears. The researcher had to take care that the knowledge audit did not generate high expectations that it will be the answer for all if not for most problems in the department immediately after the completion of the project. Care also had to be taken not to generate negative attitudes that nothing will change after the study. The researcher had to be aware of the danger that knowledge audit becomes the end itself rather than becoming an empowering tool for the management. These issues required the researcher to communicate effectively with the staff and the management about the strengths of the knowledge audit and the opportunities it will provide. Finally it needs to be stressed here that it was a fruitful exercise which provided a series of activities to be implemented to solve the critical issues in the acquisitions department, but it is not a permanent solution to human resource development. As soon as a change occurs in the staff or the work procedures, a gap will arise in the existing and required departmental knowledge which will lead to the inevitable knowledge re-audit. It is expected that this paper would provide guidance to the other librarians who want to use knowledge audit to study systematically the departments in their libraries.

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Appendix 1 - Process Map

External Environment   **Acquisitions Department**   **Collection**   **Finance Br.**

F1 — Initiate requests from academic departments

P1 — Accept requests

P2 — Title Available?
- No → **P3** Funds Available?
- Yes → **P4** Inform

P3 — Funds Available?
- Yes → **P5** Call for Pro Forma
- No → **P4** Inform

P4 — Inform (→ back to Initiate requests)

P5 — Call for Pro Forma
- Yes → **P6** Call for Pro Forma
- No → **P8** Place Order

P6 — Call for Pro Forma → **P7** Evaluate

P7 — Evaluate → **P8** Place Order

P8 — Place Order → **P9** Received?

P9 — Received?
- No → **P10** Remind (→ Place Order)
- Yes → **P11** Process of books

P10 — Remind

F2 — Purchasing from Authors / Publishers

P16 — Approval of department?
- Yes → Dept. Approved?
  - No → Stop
  - Yes → **P11** Process of books
- No → **P11** Process of books

F3 — Gifts → **P11** Process of books

F4 — Cumulative Jl. issues for binding → **P11** Process of books

P11 — Process of books → **P12** Pay?

P12 — Pay?
- No → **P13** Dispatch books to relevant section
- Yes → **P14** Process of payments

P13 — Dispatch books to relevant section

P14 — Process of payments → **F5** → **P15** Documents to Finance Branch

P15 — Documents to Finance Branch

F5

P17 — Withdrawal process

Withdrawal of weeded books → **P17** Withdrawal process

F6 — Cost calculation for lost books

P18 — Calculation of costs

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Appendix 2 – Sample from the Task Analysis

F1 Initiating requests from the academic departments

Procedure	Sequential tasks	Responsibility	Tacit Knowledge	Explicit Kn. sources
P1. Accept departmental recommendations	1.1 Write to the Deans/Heads requesting recommendations	SAL	• Knowledge of the availability of funds for the given year	• Annual allocation document
	1.2 Accept the postal mail from the office 1.3 Direct to SAL for necessary action	L	Ability to identify • book lists • communication relevant to Acq. from what is delivered by the office • publishers catalogues • mail which needs urgent attention • Liaise with others	• Lists of recommended titles
	1.4 Identifying mail relevant to acquisition and return irrelevant to office 1.5 Scan lists of requests / e-mail attachments 1.6 Evaluate and categorise into Fac / depts. 1.7 Distribute among staff for processing	SAL	Knowledge of • subjects taught in the university • different department /unit affiliations • acquisitions policy for each department/unit • e-mailing • Liaising with others	
P2. Check availability of requested titles	2.1 Check appropriate database 2.2 Check on order / in process files 2.3 Inform SAL if title available 2.4 If title not available proceed to P3	LA	• Database searching skills • Identify material by Title/Author • Searching in the appropriate Dept/Faculty files	• Catalogue database maintained in Alice for Windows • Card catalogue • Order files
	2.5 Check accuracy of information supplied by staff and proceed to P4	SAL	• Overall familiarity with previous orders	
P3. Fund Availability	3.1 Check availability of funds for the appropriate department 3.2 Inform status to SAL	LA	Knowledge of • total allocation for each department • the amount spent of departmental allocations • the amount committed from the departmental allocations • major foreign currencies. • current exchange rates • Currency conversion	• Annual Faculty/dept allocation documents • Online currency converter
	3.3 Check accuracy of information supplied by staff 3.4 Instruct staff to proceed to P4	SAL	Thorough knowledge of fund availability for each department	4 Annual general allocation document

Appendix 3 – Sample from Explicit Knowledge Inventory

Source	No. of items	Location	Access by Acq. staff	Format	Purpose	Relevance[5]	Frequency of use[6]	Remarks
1. Lists of recommended titles	Many	Various academic depts..	Easy	Paper /online	To generate orders for a given year	VR	F	• When lists are e-mailed they are printed for calling for Pro Forma.
2. Catalogue database (As a tool for searching)	03 (Main Library , Science & Medical)	Via Intranet and Internet	Fair.	Online database	To locate availability of titles To add new records after processing (P12)	R	F	• Access depends on speed and sometimes it is slow. • Three databases (Main Library, Medical $ Science have to be accessed separately). • Adding new records to the db occur external to the Acq. Process therefore it is irrelevant
3. Card catalogue	04 (Author, Subject, Sinhala & Law)	Reader Services	Fair.	Catalogue cards	To locate availability of titles. To count pages to calculate the cost according to the Lost Book Policy when a book is lost.	R	O	• Access is time consuming because the catalogues are located in a different section. Staff has to visit the section physically to search. • If a price is not mentioned in the Acc. Reg. the number of pages is considered to calculate the cost of a book lost.
4. Annual general allocation document	01	Acq	Easy	Paper	To check allocations for books and periodicals and for each Faculty	VR	F	• This indicates the allocation for each faculty for a given year
5. Annual dept allocation documents	01	Acq	Easy	Paper	To check allocations for book purchasing for each department	VR	F	• This indicates the allocation for each department for a given year
6. Online currency converter	-	Internet	Easy	Online	To convert foreign currency	VR	F	• Used to convert the prices in foreign currencies given by the foreign suppliers

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[5] **VR**- Very Relevant, **R**-Relevant, **IR** - Irrelevant
[6] **F**- Frequently, **O** – Occasionally, **R**- rarely

Appendix 4 - Tacit Knowledge Inventory

	Aspect measured	SA[7]	LA2	LA3	L
1.	Highest level of general education	GCE/AL	GCE/AL	GCE/AL	GCE/OL
2.	Highest level of LIS education	SLLA - 1	SLLA - Final	None	None
3.	Experience in the Library	23	11	03 months	
4.	Experience in the Acq. Dept.	02	04 months	03 months	
5.	Experience in other sections similar to acquisitions	Periodicals Dept. 13 years	Periodicals Dept. 04 years	None	
6.	Knowledge of job description in the Acq.	Written down job descriptions are not available			
7.	In the absence of a job description the method of knowing about the responsibilities in the department	SAL or AL in charge of the section assigns duties			
8.	Training in Acquisitions obtained within the last 3 years	None		Not Applicable	None
9.	Training in Acquisitions obtained within the last 5 years	None		Not Applicable	None
10.	Training in other library work obtained within the last 5 years	None		Not Applicable	None
11.	Without attending any training how did you learn the work in the acq. dept.?	Work-based training given by the SAL/AL and the other co-workers		2-day Orientation program given in the acq. dept. upon recruitment and work-based training given by the SAL/AL and the other co-workers	Work-based training given by the SAL/AL and the other co-workers
12.	Skills possessed	1 MS Word 2 MS Excel 3 Internet searching to locate book / supplier details 4 Currency conversion 5 E-mailing 6 Use of Calculator 7 Use of numbering machine			Difficult to answer
13.	Knowledge possessed	1 IT knowledge 2 LIS knowledge 3 Mathematical knowledge		1 IT knowledge 2 Mathematical knowledge	Difficult to answer
14.	Requirement of training Yes/No	Yes	Yes	Yes	Not known
15.	Areas in which training is required	1 English 2 Internet 3 MS Windows 4 MS Excel **5** Alice for Windows			-

[7] SA-Staff Assistant, LA2- Library Assistant Grade 2, LA3- Library Assistant Grade 3, L-Labourer

Appendix 5 – Sample of Knowledge Need Analysis

Required Skills related to Acquisitions		
1	Ability to locate items from lists by author/title	26	Identifying communication related to Acq. Dept
2	Ability to match catalogues with academic depts.	27	Identifying types of material relevant to acquisitions
3	Assign PF numbers	28	Keyboarding skills (Sinhala)
4	Assign order numbers	29	Keyboarding skills (Tamil)
5	Assign indent numbers	30	Labelling
6	Assign delivery numbers	31	Language skills (English)
7	Assign donation numbers	32	Language skills (Tamil)
8	Bar code generation	33	MS Excel
9	Currency conversion	34	MS Windows and Word
10	Database searching skills	35	Photocopying
11	Entering data accurately in the Acc. Register	36	Reading mailing addresses
12	Entering data accurately in the Database	37	Safety of the Acq. Dept.
13	Filing	38	Searching publisher web sites
14	Folding letters and prepare for mailing	39	Sources of bibliographic information
15	Fund utilization within the allocations	40	Team work
16	Generation of lists using software	41	Telephone skills
17	Handling book trolley	42	Transliteration of Sinhala terms
18	Handling Elevator	43	Transliteration of Tamil terms
19	Handling foreign payments	44	Use of calculators
20	Handling local payments	45	Use of explicit sources of kn. in the Acq. Dept.
21	Handling advanced payments	46	Use of numbering machine and date stamps
22	Handling packages with care	47	WWW (General)
23	Handling Petty cash payments		
24	Matching titles in the original order and Pro forma invoices		
25	Identifying relevant folders for Filing		

Appendix 6 – Knowledge Map of skills related to Acquisitions

VH Very High	H High	AV Average	L Low	VL Very Low	A Absent	Not Applicable for the post

#	Required Skills related to Acquisitions	SA[8]	LA2	LA3	L
1	Ability to locate items from lists by author/title	H	H	H	
2	Ability to match catalogues with academic depts.	L	L	A	
3	Assign PF numbers	VH	VH	L	
4	Assign order numbers	VH	VH	L	
5	Assign indent numbers	VH	VH	L	
6	Assign delivery numbers	VH	VH	L	
7	Assign donation numbers	VH	VH	A	
8	Bar code generation	VH	VH	L	
9	Currency conversion	VH	VH	L	
10	Database searching skills	AV	AV	AV	
11	Entering data accurately in the Accession Register	VH	VH	VH	
12	Entering data accurately in the database	AV	AV	L	
13	Filing	VH	VH	H	
14	Folding letters and prepare for mailing	VH	VH	VH	H
15	Fund utilization within the allocations	H	H	VL	
16	Generation of lists using software	VH	VH	VH	
17	Handling book trolley				VH
18	Handling Elevator				VH
19	Handling foreign payments	VH	VH	VH	
20	Handling local payments	VH	VH	VH	
21	Handling advanced payments	VH	VH	A	
22	Handling packages with care	VH	VH	H	H
23	Handling Petty cash payments	L	VH	A	
24	Matching titles in the original order and Pro forma invoices	VH	VH	VH	
25	Identifying relevant folders for Filing	VH	VH	VL	H
26	Identifying communication related to Acq. Dept	H	H	L	VL
27	Identifying types of material relevant to acquisitions	H	H	A	L
28	Keyboarding skills (Sinhala)	AV	A	VH	
29	Keyboarding skills (Tamil)	A	A	A	
30	Labelling	VH	VH	VH	H
31	Language skills (English)	L	L	L	L
32	Language skills (Tamil)	A	A	A	A
33	MS Excel	AV	AV	AV	
34	MS Windows and Word	AV	AV	AV	
35	Photocopying	H	A	A	VH
36	Reading mailing addresses	VH	VH	VH	
37	Safety of the Acq. Dept.	H	H	A	VH
38	Searching publisher web sites	H	H	A	
39	Sources of bibliographic information	VL	VL	VL	
40	Team work	H	H	H	H
41	Telephone skills	AV	AV	AV	
42	Transliteration of Sinhala terms	H	H	VL	
43	Transliteration of Tamil terms	A	A	A	
44	Use of calculators	VH	VH	VH	
45	Use of explicit sources of kn. in the Acq. Dept.	VH	H	VL	
46	Use of numbering machine and date stamps	VH	VH	VH	VH
47	WWW (General)	VL	VL	VL	

[8] SA-Staff Assistant, LA2- Library Assistant Grade 2, LA3- Library Assistant Grade 3, L-Labourer