EMPOWERING PEOPLE

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Collaboration between
Finnish and Namibian University Libraries

Contents

PREFACE

This is a book about empowering people, both library staff and library users. Motivated, capable and self-confident library staff can share their knowledge with users and in turn empower them.

The book is the outcome of the collaboration between three university libraries, those of the University of Namibia, the University of Tampere and the University of Helsinki. This collaboration started and developed under the Human Resource Development Project at the University of Namibia Library, financed by the Higher Education Institutions Institutional Cooperation Instrument (HEI ICI) programme of the Ministry for Foreign Affairs, Finland. As the editors of this book we hope that it will capture the essence of this development project: the inspiration to develop one's own work and the desire to learn something new.

Besides being a demanding task, the editing of the book has been an inspiring process for each of us. It has also been a learning process for us and the authors, both Namibian and Finnish. One goal of the project was to improve scientific writing skills. It is well-known that although university librarians read research publications quite often, they do not publish so much themselves. This project gave ability, know-how and guidance for scientific writing and publishing.

The book demonstrates big steps taken in this area. For some of the authors these are actually their first peer-reviewed articles, learning also from a review process and becoming familiar with the learning to write by writing.

All chapters except one were written by Finnish and Namibian authors. Co-authoring is always a demanding task, and even more so when there is a distance of thousands of kilometres between authors and when the opportunities to meet each other face-to-face are limited. Some writing took place during the Namibian authors' visits to Finland and during the seminar organized in April 2012 in Windhoek, but mostly the chapters of this book have been written by collaborating in the Internet and using ICT. We are grateful to the Ministry for Foreign Affairs, Finland. Without the financing granted by the Ministry's HEI ICI programme, the collaboration of three university libraries located far away from each other would not have come true. Our thanks also go to other financial supporters, Suomen Yliopistopaino Oy – Juvenes Print and the publisher Tampere University Press. Their contribution was needed for the publishing and printing of the book. We greatly appreciate their support.

The quality of the content of the book is essential. All chapters have been reviewed, some of them even more than once. Our special thanks go to the referees. Seven highly distinguished researchers of information studies from three countries and five universities, four professors and three university lectures with a PhD degree did an excellent job on improving the content of the book. Their assistance has been valuable. We also express our gratitude to Mrs. Virginia Mattila for her contribution and substantial help as our language consultant.

Our warm thanks also go to all 31 authors. They deserve our recognition for all their efforts. Without their wonderful dedication to this task, the book would not have been possible. They all worked hard and contributed in an excellent manner to the content of the book.

We believe that the book illustrates both the learning process and results of this ongoing development process. Although the empowerment and learning of the library staff are the first steps, the ultimate goal is to benefit the whole academic community as well as the whole of society, both in Namibia and Finland.

Tampere, Helsinki, and Windhoek,
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INTRODUCTION

University libraries, like all organizations, depend on the people working there. The success and strength of the university libraries are due to the motivated, excited and skillful people while unskillful, passive and alienated people tell about the weakness of the organization. Therefore empowering people is important in university libraries and other organizations.

Today, collaboration and networking play a more crucial role both within and between organizations than they did some decades ago. We know that people and organizations who have the ability to collaborate have better access to various resources, including information resources, and support than those who lack the ability to collaborate.

This book is about people and collaboration in the context of human resource development at the University of Namibia (UNAM) Library. The theme of the book has been considered from various perspectives. The book has been organized into five sections according to the perspective of the chapters.

Section 1 is about the development of human resources and library practice. Namhila, Sinikara and Iivonen in their chapter describe the background and aims of the Human Resource Development Project.

They emphasize the benefits of international partnership in enhancing the competence of the UNAM Library staff. They also conclude that the joint project was a learning process for all parties. Toivonen and Ndinoshiho introduce the concepts and practices of staff competence management in their chapter. Staff competence management is a critical success factor for university libraries and it has become increasingly important in the changing operating environment. According to the authors, the Competence Map has proven to be a useful tool for the assessment and development of staff competence. In their chapter, Iivonen and Namhila introduce evidence-based librarianship as a method for use in developing library practice and services. Through four real-life examples they describe how valid and reliable evidence was used to support the decision-making in two university libraries.

Libraries are for use and users. It is important that university libraries are familiar with the information seeking behaviour of academic staff and students. The chapters in Section 2 present three studies on information seeking in the various faculties of the University of Namibia. Mabhiza, Shatona and Hamutumwa studied the information seeking behaviour of the academic staff in the fields of economics and management sciences. Syvälahti and Katjihingua in their chapter present the results of a survey on how students in the Faculty of Law use the library and its resources. Nakanduungile, Shilongo and Heino describe the information use of academic staff. Their focus is on electronic resources used in the School of Nursing and Public Health. Three case studies provide evidence of the needs of the different customer segments. They also describe different problems and barriers in the information seeking of students and academic staff. The studies reveal the heavy reliance on printed material and Internet but lower usage of e-resources subscribed to by the UNAM Library. This indicates the need for training in the use of the e-resources available in the Library.

Library collections and services are the very heart of the library. The chapters in Section 3 highlight some examples of the work done

in collection development and research support services. Nurminen and Ashilungu discuss the importance and challenges of marketing collection services and provide examples of how the work is done in the University of Tampere and the University of Namibia. Hyödynmaa and Buchholz introduce collection mapping as a solid, research-based method. They also discuss how the experiences gathered at the University of Tampere can be transferred to the University of Namibia. Forsman, Ndinoshiho and Poteri introduce the current research support services and discuss the possible trends by which the libraries would be able to support research activities within universities. According to these authors, the main focus of research support services has shifted from information acquisition and delivery to specialized research support services developed in collaboration with researchers, such as bibliometric services.

The two chapters of Section 4 introduce information literacy education in the universities. The importance of information literacy has increased apace with the rapid increase in the amount of information available. Futhermore, the current teaching methods in the universities place more demands on skills in information seeking, evaluation and management. IL education is a collaborative effort of the academic community and the libraries play a crucial role in this effort. Helminen and Katjihingua introduce the basic concepts of information literacy teaching. They illustrate a model of how literacy work is organized at the University of Helsinki and discuss the challenges of information literacy work at the University of Namibia. Asplund, Mwiiyale, Karsten and Tapio focus on teaching information literacy to first-year students. They describe how the principles of constructive alignment theory influenced the development of the course "Basics of Information Seeking" at the University of Tampere. They also discuss if the experiences from Tampere could be used in developing information literacy education in Namibia.

The last section focuses on scholarly communication and scientific publishing. In their chapter Forsman, Iivonen and Namhila

argue that although university libraries have always had an important role in the chain of scholarly communication, their role is still growing and assuming new forms. They justify their opinion by focusing on various knowledge processes inside the universities. Sisättö, Mäki, Heikkilä and Katjavivi contribute the viewpoints of publishers working in connection with the university libraries. They describe how the Tampere University Press and the UNAM Press work as publishers. In the final chapter, Lehto, Matangira, Shatona and Kahengua give a voice to the library staff in the three participating libraries. In the survey conducted among the library staff, the authors explored how the library staff views their possibilities and motivation to write professional and scholarly publications. The article indicates which areas of staff competency need to be developed and what kind of support would benefit the library staff.

Together these five sections comprising 14 articles indicate that the University of Namibia Library, like other university libraries worldwide, is a learning organization. In the rapidly changing environment, continuing learning is the only way to cope with all those challenges which university libraries face today. The chapters also prove that partnership, collaboration and learning from each other can benefit us all. We hope that the authors of these chapters as well other professionals in university libraries will continue their writing and publishing and raise new questions for debate. Further, we encourage them to share the findings of their studies and contribute to the knowledge base of the university libraries.

CREATING COMPETENCE AND GOOD PRACTICE

Under the Tree by Ekning Nuusiku Shaanika
The painting is located at the University of Namibia Main Library, Windhoek, Namibia
Photo: Outi Sisättö
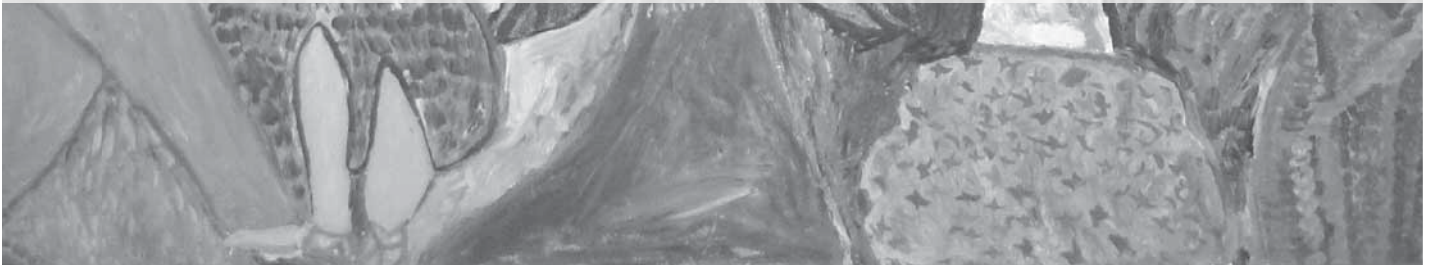
Ellen Ndeshi Namhila, Kaisa Sinikara & Mirja Iivonen

IMPROVING HUMAN RESOURCE CAPACITY: INTERNATIONAL PARTNERSHIP OF UNIVERSITY LIBRARIES

1. Introduction

The chapter describes a joint project of Namibian and Finnish university libraries which aims at developing the knowledge, skills and competence of the staff at the University of Namibia Libraries (http://library.unam.na). Britz, Lor and Bothma (2007) have stated that libraries and other information services play a crucial role in the social and economic development of all countries on the African continent as they have played in developed countries. They also argue that it is very important to invest in the people in Africa – not only in primary education, but more specifically in higher education and the R & D (research and development) sector. We share their vision. Further, we believe that it is essential to invest in the staff working in the university libraries because the capacity of human resources of the library can make a difference to the capacity of human resources and the output of the university. As Iivonen and Huotari (2007) have stated, the competence, capabilities, and brainpower of the library staff are an essential part of the human capital of the whole university.

Staff training and development plays a crucial role in improving human resource capacity and the enhancement of job performance in the libraries, too. Mbagwu and Nwachukwu (2010) examined the training and development programmes and their effect on the staff at the Federal University of Technology Library, Owerri, Nigeria. They concluded that the training had a positive effect on job performance.

Namibia is a small developing country, which has recently emerged from an apartheid system where access to education, libraries and knowledge was provided to citizens on the basis of their skin colour. The Namibian education system has undergone a major transformation since the country's independence in 1990 – from several decades of a racially segregated apartheid education system to equal education for all. Earlier there was no training institution for librarians, although the Academy offered among others courses in school librarianship. The fully-fledged librarianship training started with the establishment of the University of Namibia in 1992, when the demand for librarians increased.

Apart from the libraries of tertiary institutions, such as the University of Namibia, with its several campus libraries and the Polytechnic of Namibia Library, the Namibian library sector is largely maintained by the Ministry of Education. In 2000, the Namibia Library and Information Service Act (Act no.4 of 2000) was passed. This act established the Namibia Library and Information Service (NLIS), which ensure that the country has a functional library network consisting of the National Library, public/community libraries (currently numbering 64), school libraries (supporting 1,760 schools, of which only 400 have functioning libraries), and 22 specialized ministerial libraries. All these types of libraries and the National Archives of Namibia are administered together within one single directorate under the auspices of the Ministry of Education.

We agree with Gross and Riyaz (2004) that libraries in small and developing countries tend to be disadvantaged because there is

often no critical mass of other professionals to share knowledge and provide advice and informal collegial support. Instead of struggling alone to implement fast changing library practices, the University of Namibia Library (UNAM Library) sought partnership with university libraries from more developed countries. The UNAM Library wanted to learn from the experiences of developed university libraries in Finland because the success of any organisation rests on the ability of its workforce to deliver. A partnership programme with the Helsinki University Library (HULib) and Tampere University Library (UTA Library) was initiated and resources for its implementation secured (Iivonen & Sinikara 2011). There are similar projects between Finnish and African libraries. The University of Eastern Finland Library is collaborating with universities in Egypt, Tanzania and Kenya. The other ongoing projects between Finnish and African libraries are mostly connected with the city libraries.

In this chapter we discuss the need to enhance the professional knowledge, skills and competence of the UNAM Library staff needed to bring about improved efficiency in performance outcomes and services rendered to the UNAM academic community. We describe the initiatives taken by the UNAM Library jointly with the HULib and UTA Library in Finland to plan and implement a tailor-made capacity building programme for the UNAM Library staff. Further, we analyse the collaboration between three university libraries in the framework of the partnership (Ståhle & Laento 2000). We note the added value achieved during the project, the integration of different intellectual capital, and the building of trust.

2. Namibia's road to a knowledge-based economy and society

There are several documents which blaze a trail for the future of Namibia. Namibia Vision 2030 (Office of the President 2004) is Namibia's long-term development strategy to transform the country from an economy based on raw material resources and agriculture to an economy based on value addition and knowledge, and to leave behind poverty and development country status by the year 2030. It is an articulation of national strategic development goals stating that, by the year 2030, Namibia will join the ranks of high-income countries, and afford all its citizens a quality of life that is comparable to that of the developed world. The Education and Training Sector Improvement Programme (ETSIP, see Namibia. Ministry of Education 2007) is a comprehensive sector-wide response to the call of Namibia Vision 2030 and National Development Plan (NDP3) (Office of the President 2008). Its key purpose is to substantially enhance the education and training sector's contribution to the attainment of strategic national development goals and facilitate the transition to a knowledge-based economy. The strategic objectives of ETSIP are equality, quality, relevance, effectiveness, efficiency, economic growth and a pro-poor approach.

A knowledge-based economy and society is a national vision to which the whole country aspires. It is believed that an effective education and training system will ensure the availability of the relevant skills to propel the economy into value added products, services and innovation, leading to economic growth and ultimately to an improved quality of life for all Namibians. Both Namibia Vision 2030, NDP3 and ETSIP acknowledge a skills shortage in critical areas of Namibia's socio-economic development. Also, several studies have highlighted Namibia's inability to meet the demands of the economic sector for a skilled labour force (Hansohm & Vendetto & Ashipala 1999; Godana & Ogawa 2003; Westergaard-Nielsen & Hansohm & Motinga 2003;

Marope 2005). Hence, Namibia Vision 2030, NDP3 and ETSIP urge tertiary institutions in Namibia, particularly UNAM, to produce a competent labour force to tackle the developmental challenges facing the country. Shortage of skills has been identified as a critical element in transforming the Namibian economy into a value added economy and a knowledge-based society. A competent labour force is further considered as a prerequisite to promote economic growth and increase employment.

Since independence, Namibia had been characterized by heavy financial investment (Namibia. Ministry of Finance 2011) in its education system. This is because education is believed to have a greater multiplier effect on the entire economy of the country. As one such investment, the University of Namibia was established in 1992 with a mandate to provide qualified and competent labour force for the country. However, despite these high investments, Namibia is still confronted by a predicament of critical shortages of skills (Marope 2005; Office of the President 2010) and continues to rely on imported labour in its productive and reproductive sectors of the economy.

3. The University of Namibia and its library

The University of Namibia (UNAM) came into being on 31 August 1992, following the promulgation of the UNAM Act, Act No.18 of 1992. The University of Namibia has now grown into a multi-campus university with over 800 staff members and more than 17,000 students. It comprises eight academic faculties (Law, Education, Agriculture, Science, Medicine, Engineering, Humanities and Social Sciences, Economics and Management Sciences) and nine campuses (Windhoek Main Campus, Khomasdal, Neudamm, School of Medicine, Katima Mulilo, Rundu, Ongwediva, Ogongo, Oshakati). This rapid expansion of the University has added to the already existing

shortage of qualified librarians in Namibia as each campus has a fully-fledged library structure with a minimum six staff members (Hifikepunye Pohamba, Oshakati and Ogongo Campuses) and eight regional centres located across the various regions of Namibia.

The UNAM Library network consists of the main library in Windhoek and nine fully-fledged campus libraries located in various parts of the country. The main library supports and supervises the network of nine campus libraries and ten resource centres of the regional centres. The challenges for the management and leadership over the network are the distances between Windhoek and each of the campuses (Katima Mulilo 1211km, Rundu 700km, Oshakati 708km) and the shortage of qualified staff, as well as lack of experience in the leadership and management of campus library services and staff.

The mission of the UNAM Library is to link faculties, departments and students with information enabling the University to achieve excellence in teaching and learning, research and study, and to preserve the institutional memory for posterity. Thus, the library exists primarily to support the curriculum and research programmes of the University. Moreover, the UNAM Library has been entrusted with the national mandate to make its resources available to the wider community in Namibia. (Namhila & Ndinoshiho 2012). The facilities, services and resources at the UNAM Library are therefore also used by members of the public irrespective of whether a user is affiliated to UNAM or not. In this way, the library is making meaningful contributions towards the attainment of the national development goals.

While carrying out these responsibilities with a sense commitment and dedication, the critical shortage of skilled staff in critical areas of modern librarianship limits the library's ability to make meaningful contributions to quality teaching, research and study. The majority of the library staff comes from backgrounds where the library tradition has not been part of their daily lives, as they lived in communities with no libraries and attended schools that did not have books and library

services. The user perception study (Matengu 2000) and a performance review process (Office of the University Librarian 2010) found gaps and mismatches between library staff performance expectations and their skills and competence.

The need for this project has its roots in a self-review process at the UNAM Library in 2008, after several attempts to improve internal processes and services to users. A team was appointed to formulate a document matching the services which the library was expected to provide with the existing skills in the library. The gap between performance expectations and skills and competence required was huge. Several steps were taken and this project is one of them.

The UNAM Library is facing several challenges. These challenges are well-articulated in the enclosed UNAM Library Annual Management Action Plan for 2011 and also in the University's five-year Strategic Plan (University of Namibia 2011). The UNAM Library has a staff of 47, but there are no PhD holders. There are only four holders of Master's degrees and three holders of Honors degrees. Eleven staff members hold Bachelor's degrees, and the remaining seven are Diploma holders. Twenty-one staff members (45 %) have no formal qualifications. This situation led the UNAM Library to identify training and staff development as a major issue. Attention was paid to developing the library's personnel resources into a force that would cope with the modern challenging library environment. The development of human resource capacity at UNAM Library is therefore a critical area for this institutional cooperation. The UNAM Library attaches great importance to human resource development as it affords staff an opportunity to upgrade their skills to enable them to cope with ever-changing practices and methods of providing information services in an academic environment.

4. The partners in enhancing human resource capacity

An expression of interest was presented by the UNAM Library to the HULib and the UTA Library in 2008. These two libraries in Finland are characterized by long traditions of highly developed library services, whereas the 20-year-old UNAM Library is still developing. The UNAM Library sought professional support from renowned and experienced libraries and aspired to benchmark its services and facilities against these highly developed libraries in Finland. In Finland, close collaboration between university libraries has been of benefit to all libraries. The main targets for the year 2020 have been published in the report of the Ministry of Education and Culture. (Opetuksen ja tutkimuksen toimintaympäristö 2020, 2009)

The HULib (http://www.helsinki.fi/library/) is the largest multidisciplinary university library in Finland. The University of Helsinki and UNAM signed a collaboration agreement in 1999. The HULib is open to all and offers unrestricted access to the sources of scholarly knowledge on site, but remote access to many services is restricted to members of the university. The HULib offers not only excellent collections in digital and printed format but also premises for studying and working. It operates on the four campuses according to disciplines, and its digital library is available on the university network. The HULib with 250 staff members of whom 50% have Master's degrees, and about 30% library education at the polytechnic level serve actively as experts and hold positions in national and international organizations. Cooperation with other university libraries in the Helsinki Metropolitan Area as well as research institutes operating under ministries and located on the University campuses is under constant development. The library is involved in European development projects. Cooperation is particularly active with universities belonging to the League of European Research Universities (LERU) as well as the Association of European Research Libraries (LIBER). The library has long-term

experiences to assist the UNAM Library to develop its human resource capacity through this cooperation.

The UTA Library (http://www.uta.fi/laitokset/kirjasto/english/index.php) is an integral part of an international research university. The library supports the whole university community and its goals by providing information, content and publishing services for researchers, teachers and students. The library offers a learning environment for study and research with IT facilities, rooms for group work, and teaching labs. The library develops its services as a member of the national and international library networks. It is active in IFLA (The International Federation of Library Associations and Institutions) and in coordinating the Council of Finnish University Libraries 2011–2012. The UTA Library participates in teaching by providing students with the study skills and information literacy skills they need. It also has various guides on the net for students. The library has 70 employees of whom 55% have Master's degrees. The UTA Library possesses the capacity in modern librarianship to address the objective of this cooperation.

5. Joint project

In 2008, the UNAM Library submitted a letter of intent expressing interest in soliciting support for staff training, capacity building, exchange of experiences and sharing best practices with the HULib and the UTA Library. Meetings were held with the management of both libraries and mutual cooperation was jointly initiated. Funding was secured through the Embassy of Finland in Windhoek to define, plan and carry out project documentation during 2009.

This session was kick-started by a visit of the University Librarian of HULib and her delegation in November 2009 (Pirttiniemi 2009).

The programme of this visit included a tour of UNAM Libraries, and also in satellite campuses in Oshakati and Ogongo. These visits were meant to familiarize the Finnish colleagues with the physical infrastructure, facilities, status of collections, staffing levels, conditions of development and capacity and the distance between the main campus library and satellite campuses libraries. The UNAM Library appointed a core project team of six staff members to work on this project. The project documentation is an articulation of what these three libraries intend to do and why; specific areas of cooperation and how they would be carried out; and which outcomes and or impact each area is expected to deliver.

The joint project planning and documentation team collected and analysed empirical evidence from the UNAM Library workflow processes and practice in Windhoek. This was supported by observations at Neudanm and Oshakati campus libraries. Following an analysis of the empirical data and observation and the mismatch between the expected performance and the skills available at UNAM libraries, eight focal areas of cooperation were identified:

a) Process analysis and policy development;
b) Research and academic writing, publications;
c) Content development for Information Literacy (IL) instruction;
d) Pedagogical skills to impart IL skills to students and academic staff;
e) Collection development and management;
f) Access to electronic information resources;
g) Marketing of library products and services;
h) Quality assurance and benchmarking.

These focal areas were further elaborated into project documentation with key activities, measures and targets. The project documentation was submitted as a proposal to the Ministry of Foreign Affairs in Finland for funding. The top management of the partner universities

supported the proposal, but the initiative also received public support both in Finland and Namibia.

The Ministry is funding the development-cooperation of the universities by the HEI ICI (Higher Education Institutions Institutional Cooperation Instrument) programme. The project falls under the mandate of the Centre for International Mobility (CIMO). CIMO is an organization for international mobility and cooperation, providing expertise and services to clients at home and abroad. Established in 1991, CIMO is an independent agency under the Finnish Ministry of Education and Culture. The funding for this cooperation was approved for a period of two years June 2011–December 2012.

6. Key activities to produce the expected results

The wide-ranging activities support long-affecting change and different ways of learning. The breakthrough especially of digital culture and the rapid changes in the information environment require new competences of the staff.

Seminars

The more profound seminars have been carried out in Windhoek. The launching seminar in October 2011 and the follow-up seminar in April 2012 have been intensive training periods of about a week. The trainers were Finnish (four from Helsinki and four from Tampere) and Namibian experts. Forty Namibians participated in the seminars. The seminars have included many kinds of learning, discussion, teamwork and reporting of the results. (Iivonen & Toivonen & Nurminen 2011; Helminen 2012.)

Staff exchange

Standards and responsibilities for staff exchange were created. The staff members of the UNAM Library prepared an application including areas of interest, knowledge gaps, learning outcomes and a commitment statement to share skills and report outcomes. The selection for staff exchange was made in the UNAM. The UNAM librarians usually worked two weeks at the HULib and two weeks at the UTA Library.

The exchange weeks made it possible to review and benchmark procedures in user education, collection development and management and leadership issues. Discussions with specialists and detailed analyses of different topics proved useful. (Helminen 2011; Iivonen et al. 2011.)

Research and publications

Training workshops on academic writing and publishing have been a part of the collaboration. Evidence-based librarianship has been taught through presentations and surveys. This publication is the outcome of co-authoring during the project.

7. Project implementation

The implementation of this cooperation began in June 2011 and will end in December 2012. Therefore concrete outcomes from this cooperation are still anticipated. This chapter reflects only the progress made towards the realization of the expected outcomes. Despite the very ambitious expected results, the cooperation is being implemented in a relatively short period of time, a problem acknowledged by the cooperating partners and the funding agency. However, the partners have made headway in some areas as described below.

Research and academic writing

Research and writing skills take time to develop, especially in academia, where a set of certain standards and conventions have to be mastered. However, there are some positive indicators that can be attributed to the implementation of this cooperation. The most notable are the research papers presented by UNAM librarians at the seminar held in April 2012, following a successful seminar on this topic in October 2011 and the book chapters included in this book. Engaging in actual research will contribute towards achieving the desired outcome. Through this cooperation UNAM Library staff acquired writing skills. Hopefully they will continue writing to sustain the skills acquired.

Development of information literacy instruction programme

This objective was one of the critical areas tackled at the seminar in April 2012. Finnish librarians shared different strategies and approaches on how to develop information literacy (IL) content and assessments. Many ideas around the format of an IL programme were evinced. Several ideas were presented to enable UNAM librarians to address an IL programme. It can be assumed that UNAM librarians now have an in-depth understanding of the factors to be taken into account in developing an IL programme. The most challenging part appears to be the next step to set the process of developing the IL content in motion.

Pedagogical skills

Pedagogical skills were considered in the seminar in April. So far little progress has been made toward developing pedagogical skills among UNAM librarians, partly because of the lack of IL content as well as a

form/method of evaluation. Ideas were shared at the seminar and the main conclusions were that practical training on presentation skills and instructional skills is still needed. It can be assumed that UNAM librarians have learnt how the Finns teach IL skills to students. Some UNAM librarians are teaching at the LIS Department at UNAM and have gained pedagogical skills in this process. These librarians should also share their teaching skills with colleagues and be at the forefront of teaching library users.

Collection development and management

Collection development and management was an issue in the seminar in October. Although much good has been done to update the collection development policy, it is still in draft format. It needs to be enriched further in order to accommodate the needs of new campuses as well as the emerging sources of information, i.e., e-Books. With regard to collection management and evaluation UNAM librarians need to harmonize collection development and management tools to ensure that the core materials to support the curriculum are always available. Such tools will also be useful to new librarians in the sense that they will serve to reveal the gaps and areas that need to be further strengthened.

Marketing of library services

In the seminar in April UNAM librarians learnt different strategies by which to market library services. A structure with the main features of the UNAM Library marketing strategy was formulated. Various UNAM Library stakeholders were identified through group work. However, the marketing strategy itself is still needed.

Quality assurance and benchmarking

This objective is based on the UNAM Library's strategic objectives formulated following an environmental analysis of users' needs, of their satisfaction and perception of various library services and collections. An assessment tool was acquired and it is expected to gauge the level of satisfaction with the library's services and collections. Nevertheless, it will only be after this tool has been administered to users that the library will be in a position to benchmark its services against those of other libraries using similar tools. The attachment of UNAM Library staff to the HULib and UTA Library has been a critical learning and benchmarking experience.

Process analysis and policy development

Some progress has been made with regard to library operating policy, which is currently in draft format and needing more work. Fortunately the process has been started and a draft policy is available.

8. A partnership of three libraries

The joint project of the UNAM Library, HULib and UTA Library offers a good example of partnership between university libraries in different countries. The partnership includes the achievement of added value, the integration of intellectual capital, and the building of trust (Ståhle & Laento 2007, see also Huotari & Iivonen 2005; Iivonen & Huotari 2007).

The origin of the project was in the search for added value. There was a call to enhance human resource capacity at the UNAM Library. It was clearly recognized that for this the Finnish partners

were needed. As we have described earlier, the added value has already been produced and both cognitive and affective results achieved. It is worth noting that the Finnish partners have also been able to learn about international collaboration and as affective results took great delight in the collaboration.

The partnership means the integration of intellectual capital which includes human, structural and relational capital. The main content of the project has been the sharing of knowledge, skills and experiences. In addition to knowledge of people, work processes and organizational learning and innovation methods have been covered.

The partnership is based on trust. In inter-organizational trust the pillars of trust are the multiplicity and open-endedness of relationships, frequency and openness of communication, and the right balance of autonomy and dependence (Lane & Bachmann 1998). Because three university libraries and their many staff members have participated in this project, it has offered a good opportunity to learn trust. It has been particularly crucial that the communication and interaction have taken place at various levels of the libraries, not only at the top level.

9. Conclusion

In a knowledge-based economy and society the knowledge, skills and competence of the people are the key factors for success. Namibia has a very ambitious vision for the year 2030 but a relatively short history of independence and an equal education system. The rapid education of the people at all levels in society is a demanding task because the country has to catch up with more developed countries in a very short time period. However, through the development of human resource capacity the country can make the leap of the tiger. In this

endeavour, improving the level of higher education is important and the contribution of the university library significant.

In this chapter we described the joint project of one Namibian and two Finnish university libraries focusing on the development of the knowledge, skills and competence of the staff at the UNAM Library. Although the scope of the project was very wide, covering many important and essential topics, in some areas, e.g. information literacy, it was possible to proceed to in-depth examination. The main activities during the project were seminars, staff exchange programmes for Namibians in Finland, and co-authoring, which produced this book. All key activities overlapped with each other: the topics of the chapters were discussed in the seminars and during the Namibians' visits to Finland. Considering the time frame of this project, it is not yet easy to measure the impact which the project has had on the knowledge, skills and competence of the staff of the UNAM Library, but the future looks promising.

The joint project was a learning process for all parties. We firmly believe that at a certain level, UNAM librarians gained a basic understanding of the approaches used by their Finnish colleagues. However, the topics covered in the seminars are the topics which need continuous training and learning, also among Finnish librarians. The global information environment is changing so rapidly that everyone has to update her/his skills and knowledge. The seminars offered a good opportunity to share our professional knowledge, which benefited all participants, as did the programmes for staff exchange.

Further, the joint project offered a platform for learning academic writing and co-authoring. As described elsewhere in this book (Lehto & Matangira & Shatona & Kahengua 2012), although many Namibian and Finnish librarians followed and read library and information research literature regularly or occasionally, only some of them had published a scholarly publication. The situation was very similar both in the UNAM Library, HULib and UTA Library.

The valuable learning outcome from the project for all participants was the learning of international collaboration. Collaboration is always challenging because the participants bring to it their own experiences, working styles, attitudes and worldviews. International collaboration is challenging in numerous ways because of the different historical, geographical and social-economic situations of various countries. Commitment to the project and trust building was needed from all parties. It was also valuable to take international collaboration into the daily routines. Although both HULib and UTA Library are active in international library organizations, the staff exchange programmes offered a more concrete perspective on international partnership.

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Leena Toivonen & Joseph Ndinoshiho

STRATEGIC COMPETENCE MANAGEMENT IN UNIVERSITY LIBRARIES

1. Introduction

Universities around the world have recently undergone fundamental transformations largely due to changes in higher education, advances in information technology and new funding models. University libraries have not escaped the impact of these changes. The changes in academia and the information landscape have placed an increased demand upon library leaders to pay great attention to the management of competencies within their libraries. This is important, because information professionals of the 21st century are required to be multi-skilled if they are to survive in their dynamic operating environment.

Apart from core competencies gained from library schools, today's information professionals need to possess an array of skills, ranging from managerial, technological, research, communication, financial and interpersonal skills. These skills will enable information professionals to make meaningful contributions towards achieving the vision and mission of their parent institutions. Referring to modern librarians, Kwanya, Stilwell and Underwood argue that "they should understand

the big picture and align the library to the parent organization's vision and mission" (Kwanya & Stilwell & Underwood 2012, 10). It is therefore imperative for library managers to not only understand the concept of competence management but to also assimilate and apply it in the management of human resources.

Competence management may be viewed as the method adopted by a particular organization to manage human resources competencies in an effective and efficient manner. Thus, competence management is an important strategy to ensure that the organization maintains a competent labour force in the right place at the right time.

2. Aims of the study

The main aim of this study is to discuss the concept of competence management at university libraries with special reference to the application of the competence management concept at the Tampere University Library and the University of Namibia Library. Another aim is to compare the models and approaches of competence management being used by management at these two university libraries. The method of the competence mapping project in Finnish university libraries is drawn upon to discuss the case of the Tampere University Library.

3. Significance of the study

The significance of this study lies in the fact that it provides useful insights into library managers in managing competencies in university libraries. The topic is likewise important because the changes in higher education and libraries demand new kinds of competencies.

Additionally, staff recruitment and continuous staff development have become critical success factors and competitive issues for university libraries. University libraries will only fulfil their functions and roles more efficiently when they recruit competent human resources and when library leaders manage competencies more effectively.

4. Literature review

While the review of the literature revealed that the topic of competence has been discussed widely in the information field, a great proportion of researchers focused mostly on lists of the competencies required by information professionals. There is a major shortage of research about competence management in university libraries. Competencies have been defined by different organizations in the library profession. The American Library Association (ALA) has defined the basic knowledge to be possessed by all persons graduating from an ALA-accredited master's programme in library and information studies (ALA 2009).

The Special Libraries Association (SLA) has also defined competencies for special librarians in the 21st century, which it revised in 2003 (SLA 2003). Other professional organizations in the USA have also produced lists of professional competencies for medical librarians, music librarians and law librarians. For example, the Association of South-eastern Research Libraries (ASERL) in the USA investigated the educational needs for librarians in order to support the research library of the future. ASERL has suggested both skills that are common to all librarians and those that are special to research librarians in higher education institutes. (ASERL 1999.)

The Online Computer Library Catalog (OCLC) has moreover been a partner in an interesting effort to compile different competency statements. They have reviewed competency lists of many library organizations and compiled them into a Competency Index. The

idea of the index is to help libraries with strategies relating to staff training and recruitment. (Gutsche 2009.) Ashcroft emphasised that new technologies mean that library and information science is currently characterised by fast-paced changes, with staff needing to be flexible in adapting and adopting new skills and levels of awareness. She further argued that new developments need to be marketed and evaluated, and these are additional skills for information professionals to adopt. (Ashcroft 2004.)

An interesting survey was conducted on 124 members of the Association of Research Libraries (ARL) in June 2002. Sixty-five per cent responded to the survey. The 17 libraries in North America indicated that they had adopted core competencies between 1960 and 2003. However, these libraries found that developing core competencies is a time-consuming effort. For example, 60% of the respondents in this survey reported that it had taken them from six months to over a year to develop core competencies. Once developed, awareness of the core competences among library staff is maintained by means of information sessions and by publishing competences on web sites. In 16 libraries, supervisors were responsible for evaluating whether an employee had attained competency. Thirteen of the 17 responding libraries also considered the individual's self-assessment. The salary is tied to core competency according to nine libraries. For several other libraries, salary increases reflect overall work performance, which includes the attainment of core competencies. (ARL 2002.)

In Canada, a study was conducted on competence frameworks in public libraries. A questionnaire was sent to 59 libraries, of which 15 responded. Seven of these libraries had competency frameworks. Six libraries out of seven had identified core competency models, while the seventh library had developed a comprehensive competency framework to describe specific classes of jobs within the library. The study found that six public libraries had adopted core competency models for all employees. These competencies were used in performance appraisal and for the human resource management functions of recruitment,

selection and identifying training needs. Performance appraisal was usually carried out for evaluation purposes, i.e. to determine salary and bonus or to support promotion decisions, for development purposes, and to determine training needs. Employees were evaluated against the core competencies in the performance appraisal process. Unsatisfactory performance in any competency required an action plan to improve the necessary knowledge and skills. (Chan 2006.)

Another example of competence building in the daily working context is the programme by the Danish National Library Authority (DNLA). DNLA developed a strategy to implement a programme for skills and competence development for the public libraries in Denmark during the period of 2000–2003. The keywords for the programme were learning organization and action learning and the idea was that the programme should have a lasting impact. (Thorhauge 2005.)

5. Theoretical perspectives

Knowledge and competence have been the most important factor in the performance of the organization (Prahalad & Hamel 1990; Sanchez & Heene 2000). Success requires that the knowledge and competence should be created, developed and be taken advantage of and this requires competence management. Although competence management has been widely discussed in the scientific literature, there is no common theory in the area of competence management. There are several theories of different disciplines. For example economics, business management and personnel management provides literature on this subject. Competence management has been discussed in various respects, such as organization, learning, economic and management perspectives. Table 1 illustrates the differences in these research perspectives.

Table1. Research perspectives (knowledge and competence management)

(Source: Kirjavainen P. & Laakso-Manninen R.: Strateginen osaamisen johtaminen =Strategic competence management 2000, p. 12)

Research perspectives	Focus	Authors
Knowledge Management	Knowledge creation, conceptualization of the processes and developing procedures for their management	Nonaka, I Sveiby, K.E. Roos, J. & Roos, G. Davenport, T. & Prusak, L. Leonard-Barton, D. Ståhle, P. & Grönroos, M.
Competence-Based Strategic Management	Way to understand the organization's strategy and competition, has also created new perspectives on how the staff development is connected to the strategy. The concept of core competence.	Hamel, G. & Prahalad, C.K. Stalk, G., Evans, Ph., Schulman, L. ym. Ulrich, D. & Lake, D.
Learning Organization	A comprehensive organization development philosophy, which is based on larger view of human as organizational actor. The social significance of the interaction. Continuous assessment self-development.	Argyris, C. & Schön, D.A. Senge, P.M. Sarala, A. & Sarala, U.

Knowledge management is one area that has been discussed in the scientific literature. The concept of "knowledge management" in this study is taken more narrowly than "competence-based management" or "competence management," which implies a broader conceptual interpretation and capability building as well as the exploitation of empowerment. Knowledge management consists of data acquisition, internalization, application and experiential activity.

Competence management is defined as an intentional management activity aimed at encouraging the renewal of knowledge and development at all levels of the organization (Sanchez 2004). The organization's competence management requires the selection of core

competence, the creation, use and securing of competence (Hamel & Prahalad 1994, 25). The organization's strategic architecture is essentially a broad plan to derive advantage from new functions, new or existing qualifications by obtaining or modifying and re-shaping the customer interface (Hamel & Prahalad 1994, 107–126). Learning organization is a much discussed topic in the literature and many definitions for it have been proposed.

Strategic management is a systematic approach to take care of the main responsibility of management, namely to relate the organization to the environment in order to manage contingencies and to ensure continued success. The strategy as a concept is to determine the strategic intent, objectives and direction in which the organization is heading. (Ansoff 1984, 15–19.)

Competency is a set of skills that an individual can use to accomplish a given task (Sanchez 2001, 7). Competence is the ability of an organization to sustain the coordinated deployments of assets and capabilities in ways which help the organization achieve its goals. Sanchez emphasizes that the concept of competence has three essential elements:

1) The co-ordination of assets and capabilities
2) Intention in deploying assets and capabilities
3) Goal-seeking as the driver of the organizational action

Sanchez further clarifies the tasks of managers: "Competence is a property of an organization that depends on three inputs from managers: articulating the general goals of the organization, defining specific action that will help the organization achieves its goals and coordinating the use of resources in carrying out those actions" (Sanchez 2001, 7). He defines: "Competence building is the process of creating or acquiring new kinds of assets and capabilities. Competence leveraging is the coordinated use of an organizations current assets and capabilities in taking actions. Competence maintenance is the maintenance of an

organization's current assets and capabilities in a state of effectiveness for use in the actions." (Sanchez 2001, 7.)

Competence management often concerns the concept of capabilities. These capabilities represent the organizational output of coordinated actions and this consists of individuals with competencies that will be linked to the group (Sanchez, 2004). Core competence is a battery of skills and techniques which offer an organization the opportunity to produce a particular benefit to customers (Hamel & Prahalad 1994, 199). The organization's management must understand the management of core competencies as part of a management tasks by identifying the right core competencies, ensuring core competence acquisition, the construction and operation of know-how, and by safeguarding human knowledge management (Hamel & Prahalad 1994, 224).

6. Methodology

The study adopted a case study research design to describe and compare competence management approaches at Tampere University Library and the University of Namibia Library. It is a desktop study, which is descriptive and conceptual in nature. As such, a critical review of the literature also formed part of the research method. This method was deemed appropriate because of its strengths in investigating trends and specific situations much more rapidly. A key benefit of the study is that it presents an overview of competency-based management as implemented at these two university libraries. The core competencies that characterize the capabilities required in library staff are highlighted. Nevertheless, the study was limited by time and resources. One limitation of the study is that the number of libraries described for competence management is limited.

7. A Competence Mapping Project in Finland

The Competence Map Development project by the university libraries in Finland network started in 2004. Its aim was to provide an approach for continuous learning and development in the university libraries. The first step was to create a knowledge map based on the strategy of the Finnish university libraries' network. The idea was that the map would include the competencies needed in the network of university libraries now and in the future. The map will further provide tools for collaborative knowledge; provide structure for the development of know-how and help in staff recruitment. The map will also support the assessment of staff skills in various positions and facilitate the development of work planning, implementation and evaluation. Equally importantly the map project will provide opportunities for employees on self-assessment. (University Libraries Network 2005, 2–3.)

In this project core competence was defined as the typical, widely adopted knowledge of an organization which makes the organization superior. Core competence is difficult to replace or emulate and it has a long life span. The benefits are that it provides an organization with a significant competitive advantage, it can be applied to new services and the core competence may result in significant benefits for customers.

The project was based on **the competency scope** developed by Green (1999). Figure 1 defines competency scope. Competencies refer to both organizational and individual characteristics. Individual characteristics include technical knowledge and skills as well as the performance skills and competencies of individual contributors. These four blocks are adapted from Green.
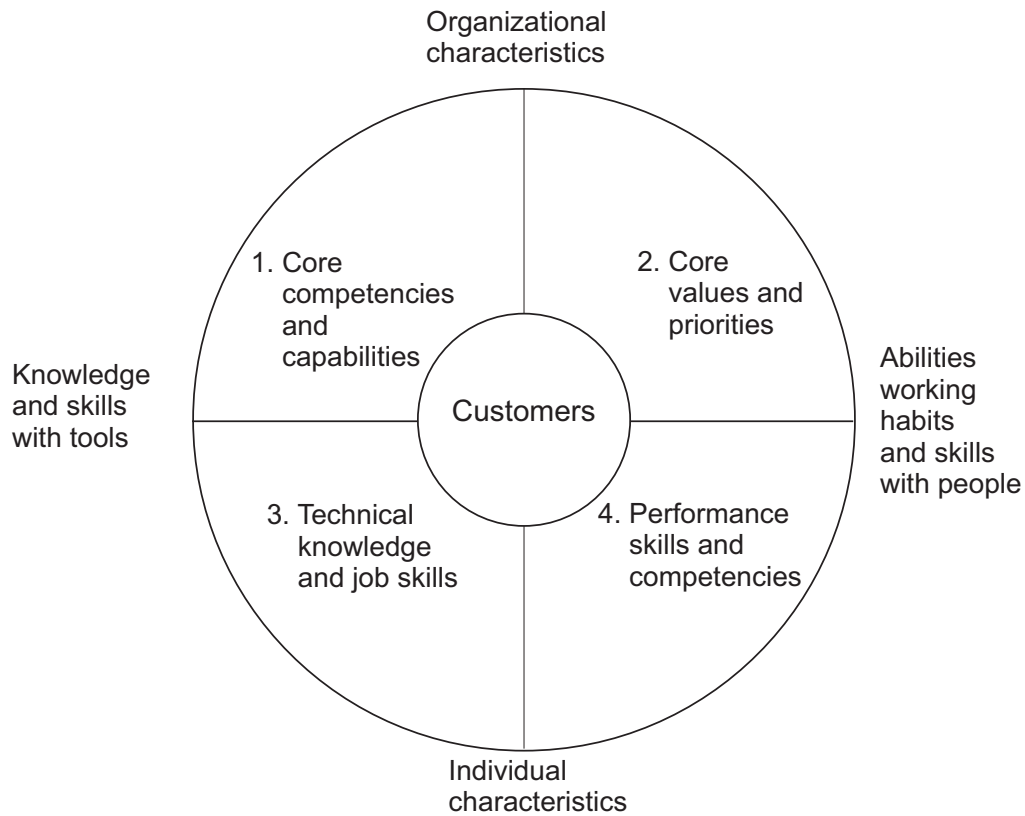
Figure 1. Competency scope adapted from Green (1999)

Organizational characteristics

1) Core competencies and capabilities
   Green explains that the combination of knowledge and skills with tools is reflected at the organizational level in core competencies and capabilities. He defines a core competency as a range of technical know-how that is central to the organization's purpose and such capability is also important to the organization's effectiveness and is perceived to be valuable by customers. He then continues that core competencies and capabilities are usually defined in a mission statement explaining what the organization will do for its customers. (Green 1999, 23–25.)

2) Core values and priorities

Green deems core values important because they complement the technical aspects of work by explaining why the work is performed. This encourages shared beliefs of people in the organization. According to Green priorities reflect an organization's emphasis on the use of individual competencies such as working habits and people skills to make processes and work systems more efficient. Green adds that a statement of core values and priorities describes how people actually do their work. (Green 1999, 25–26.)

Individual characteristics

3) Technical knowledge and job skills

Green describes that individuals use their technical knowledge and skills with tools to carry out their job responsibilities. He clarifies that technical knowledge and job skills should be in support of the organization's core competencies and capabilities. (Green 1999, 27–28.)

4) Performance skills and competencies

In Green´s view performance skills and competencies are not competencies attached to specific tasks, but are common in employment competencies. Green states that performance skills and competencies include work habits, communication styles, leadership and teamwork. They are easily transferred across different industries and jobs and they reflect a person's efficiency or effectiveness in using technical knowledge and skills. (Green 1999, 28–29.)

The Competence Map Development project by university libraries´ network analysed and defined the competencies according the competence scope and they are listed here.

CORE COMPETENCIES selected:
- competence in the operating environment
- competence in collections and their content
- competence in the management of information resources
- competence in providing support for the production of information resources
- pedagogical competence
- competence in customer service
- competence in information technology and information systems
- creative approach to work
- competence in international activities

STRATEGIC COMPETENCIES selected:
- leadership competence
- financial competence
- legal competence
- process competence
- marketing competence

COOPERATION AND COMMUNICATION SKILLS selected:
- interaction and negotiation skills
- network competence
- written communication and online communication skills
- oral communication and presentation skills
- language skills

The project also defined the levels of the core competencies, so the know-how of the staff members can be evaluated within the scale between levels from 1–5.
- 1 – basic level
- 3 – expert level
- 5 – top expert level

8. The Competence Mapping Process in Tampere University Library

The Tampere University Library values were defined as early as in 2003, and they state that "we value knowledge and learning". The Library's strategy for the period 2010–2015 underscores that one of the critical success factors is "the continuous development of professional skills".

The Tampere University Library had a competence project based on a common project of the university libraries. The library staffs were divided into working groups and the task was to review the core competence areas from the library´s point of view. After that, the staff discussed the competence needed in their respective departments and the needed competence level, so they had a shared vision of it, and this could be defined as the future level of competence.

In the second phase, each staff member discussed the competence levels with their head of department. The present levels of competence of the staff were agreed upon, and as a result, the mapping of the present knowledge was put together.

The mapping yielded a picture of the know-how of the whole library staff, which proved useful in planning the future. The competence map gives an overview of the competency level of an organization. Figure 2 describes the whole competence management scheme in the university library.

Figure 3 presents an example of the competence map of one department. This can be used in planning training and when recruiting new staff. The results of each individual can be taken into account when planning for further training of each member of the staff. The know-how and skills development of the staff are monitored in the yearly personal development discussions.
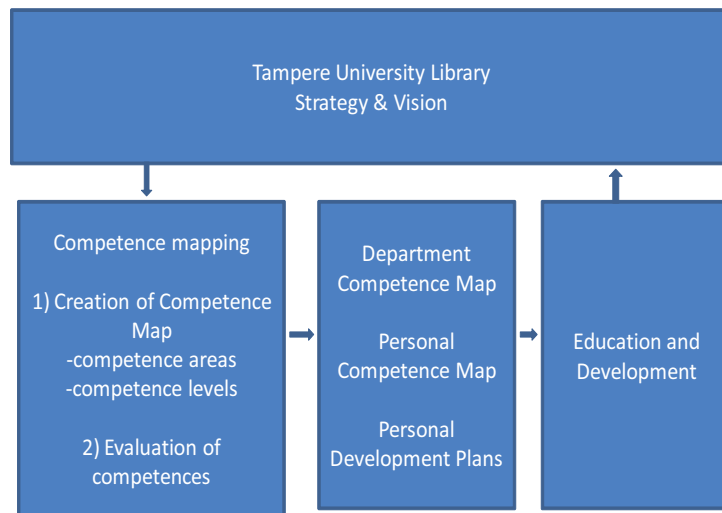
Figure 2. Example of competence management
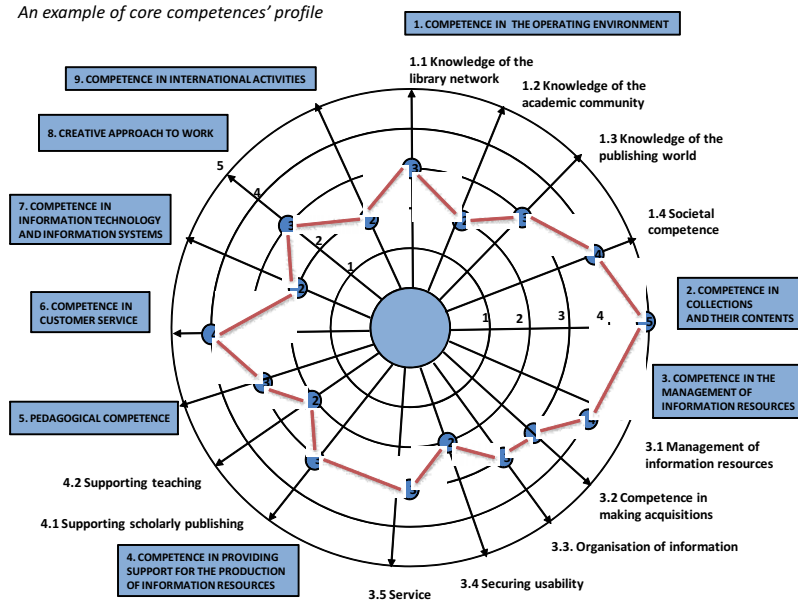
Figure 3. Example of the competence map of one library department

9. Competence management
at the University of Namibia Library

Universities are complex and dynamic organizations which require professionals with multiple sets of competencies to achieve common goals. The achievement of university goals largely hinges upon the competence of its human resources, including library staff. It is for this reason that the University of Namibia (UNAM) Library attaches great importance to competence management. The Library has been making concerted efforts geared towards ensuring that the right people are deployed in right position. The aim is to place staff in a position where they can make meaningful contributions to the library's mission and vision, and ultimately to the university strategic objectives.

In 2009, the library formulated its strategic plan, which sets out clear objectives. With the strategic plan in place, two important issues became necessary. The first was to identify knowledge gaps while the second involves aligning staff competencies to the implementation of the strategic objectives. A major assignment was undertaken to identify the core professional and personal competencies required by all staff to execute their duties more effectively. While professional competencies were defined as the skills and knowledge to carry out the core tasks of the job, personal competencies were viewed as personality traits, values and attitudes that are essential in maintaining a healthy relationship with library users and co-employees.

After the formulation of core competencies, all job specifications and job descriptions were re-defined. The Library was careful to be more inclusive in this process in which a supervisor and subordinate sat together reviewing job descriptions. This process provided useful insights into knowledge gaps. Most notable was the lack of expertise in the application of modern ICT tools in library services. This has been a major concern with the potential to impede achievement of the library goal of being more responsive to users' information needs.

Staff development was then identified as a key strategy to address the identified knowledge gaps.

Through its Staff Development Policy, UNAM offers very good opportunities for its staff to upgrade their qualifications. It is clearly articulated in this policy that UNAM supports the continuous development of staff members and sees human resources as the single most important resource through which knowledge is created and enlarged. Every year, UNAM makes funds available for staff development. The Library takes advantage of this favourable condition to send its staff for further study and training. The long-term strategy adopted by the Library entails granting approval for study leave every year to at least one staff to upgrade his/her qualification at postgraduate level (Master and PhD). The short term strategy involves human resources capacity building by means of regular in-house training sessions by external experts in certain priority areas, as well as sponsoring staff to attend important conferences and workshops.

Two critical areas of great importance in the staff development efforts of the Library are the application of new ICT tools in the library services, and librarians' competencies in research methodology to enable them to engage university researchers in a meaningful manner. However, while the UNAM Library has implemented some strategies to ensure that competent personnel are retained and/or employed, it is necessary to consider a more formal and systematic approach to competence management, such as creating a database to catalogue staff competencies.

10. Discussion

University libraries are recognized as critical catalysts in providing relevant, adequate, up-to-date information services and resources to support the teaching, learning and research programmes of their

parent institutions. However, it is not enough to only provide relevant, adequate, and up-to-date information services and resources. In order to achieve the desired outcome, the library services and resources have to be managed by competent information professionals. Thus the importance for library directors to understand and apply the concept of competence management in university libraries cannot be overemphasized. Adopting a competence management model will enable libraries to better plan for human resources, and to devise capacity building strategies.

It is abundantly clear that both libraries discussed in this study have adopted distinct but useful approaches to competence management. For example, the Tampere University Library has adopted an approach which they termed "competence mapping". The competence mapping means that the knowledge or know-how of each staff member is charted and also the level of competence is evaluated.

By contrast, the University of Namibia Library identified firstly the core competencies required to address its strategic objectives before it identified the knowledge gaps in the existing staff composition. The aim of each approach is to ensure that there are competent personnel to drive the library operations and ultimately achieve the Library's goals. Nevertheless, it emerged that the Tampere University Library uses a more systematic approach to competence management because it monitors the know-how and skills development of the staff on a yearly basis. These performance comparison and external assessment of competence management at the two libraries have indeed been valuable. The descriptions of these best practices may well be beneficial to other university libraries around the world.

11. Conclusion

This study has attempted to summarize the concepts of competence and competence management in university libraries and bridge the gap between competence management and academic libraries. There is a need for research about competence management in academic libraries. The development of competence lists is not enough. These tools should be in everyday use in the libraries, but the listings of competencies clearly show that different competencies are more important for different types of work and in different environments. Professionals working in university libraries probably require different skills from those of librarians in public libraries. The study confirmed the view that librarians need to periodically assess which new skills they need to acquire and which skills need to be updated. With the development of competence management there is a great potential and opportunity for better knowledge among staff in libraries, which can be translated into better services for library users.

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Mirja Iivonen & Ellen Ndeshi Namhila

EVIDENCE-BASED LIBRARIANSHIP AS A METHOD

1. Introduction

University libraries are challenged to demonstrate the impact of their services and collections on the scientific communities they serve. They are expected to improve their performance despite limited budgets and uncertainty. For this purpose they need methods. We argue that evidence-based librarianship (EBL) can offer simultaneously both a practical and a research-based approach to the development of library practice and services. EBL is a process where the best available evidence is combined with the insights derived from working experience, moderated by user needs and preferences, and integrated into decision-making. (Booth 2006b; Eldredge 2006.)

The concept of EBL was first introduced in 1997 by Jonathan Eldredge. The roots of evidence-based practice are in medical science. The term "evidence-based medicine" was used for the first time in 1991. (Bailey & McKibbon 2006.) As early as in 2000 Eldredge demonstrated how the characteristics of both evidence-based medicine (EBM) and evidence-based health care (EBHC) can be adapted to health science libraries (Eldredge 2000).

Nowadays EBL has spread to all library sectors. The first Evidence Based Library and Information Practice Conference was organized in Sheffield, United Kingdom in 2001. Thereafter EBL conferences have taken place every second year, the most recent in 2011 in Salford, Greater Manchester United Kingdom (see http://www.eblip6. salford.ac.uk/). The journal *Evidence Based Library and Information Practice* (http://ejournals.library.ualberta.ca/index.php/EBLIP/index) has been published since 2006 and has included articles from all library sectors including university, public, school and special libraries. As Ryan (2012, 5) states: "EBLIP is one area where librarians from every sector can work together, sharing a common interest in evidence based professional practice."

Although EBL as a concept is quite new, university libraries have based their activities on very similar methods for years and have also compiled research-based evidence to support their decision-making. However, they have not communicated and shared this endeavour very well. Probably this inability to communicate has led to the misunderstanding and suspicions that libraries do not use research-based evidence in their decision-making. For example, Neal (2006, 1) argues: "It is imperative that academic librarians and higher education libraries develop and carry out systematic research and development program." He continues: "Other organizations in the not-for-profit sector, including libraries have not advanced an R&D capacity or commitment. This needs to change." Of course there are various barriers facing EBL in everyday life in the libraries but there are also various means to overcome them (Booth 2011).

In this chapter we use four case studies to demonstrate how university libraries in two quite different countries have compiled and used solid evidence to support their decision-making. Two case studies (1 and 3) from Finland were designed and carried out as EBL case studies. Two others (2 and 4) are everyday life examples from Namibia. Although these cases were not started as EBL processes, they can also show how reliable and valid evidence was needed and

used in the decision-making in the library. In addition, they can also be analysed and described by following EBL principles.

2. The EBL process

As a process EBL is quite similar to the research process. It starts by defining and analysing problems or questions and continues by searching for and evaluating the evidence or data. In EBL, the available evidence is applied in decision-making and in scientific research in the creation of new knowledge. The evaluation is essential both in EBL and in research. In EBL, the whole process and change will be evaluated, and, if necessary, the problem will be redefined. (Bayley & McKibbon 2006; Booth 2006b.)

Understanding research methods, reading research publications and academic writing skills play a crucial role both in EBL and in scientific research. However, EBL is always related to library practice. Evidence has been sought and applied in the decision-making and development of library practice and services.

Relevant questions as a starting point

In EBL it is essential to construct a relevant, significant, focused and answerable question from practice. The questions and problems are practical and related to the library context. The questions indicate that there exists some degree of uncertainty, and in the library there is a need to work and collect evidence to be able to make a decision.

Booth (2006a) identifies three types of questions in the everyday-life of libraries. These types are prediction questions, intervention questions, and exploration questions. Prediction questions seek to predict outcomes under certain circumstances. Intervention questions

compare two or more actions in terms of "how successful?". Exploration questions seek to answer the question "why?".

Booth (2006b) presents a SPICE model for analysing the questions. In SPICE model attention is paid to:

- **S**etting (where? – the concrete library environment)
- **P**erspective (for whom – does it relate to all users or a certain group?)
- **I**ntervention (what? – the service or activities)
- **C**omparison (compared with what, alternative service or action?)
- **E**valuation (with what results?)

Evidence supports decisions

Reliable and valid evidence is needed to answer the questions and problems identified in library practice. EBL integrates user reported, librarian observed and research derived evidence (Partridge & Hallam 2005; Booth 2006b.) User reported and librarian observed evidence will offer the pragmatic perspective developed from working experiences. Research derived evidence will add to the quality and reliability of the evidence and may be produced from either quantitative or qualitative research.

Once the evidence has been gathered, it must be critically evaluated. Attention has to be paid both to the quality and usability of the evidence. (Bayley & McKibbon 2006.) Booth and Brice (cited here in Eldredge 2006) present a checklist for evaluating evidence. According to them, it is important to ask:

- is the study a close representation of the truth?
- are the results credible and repeatable?
- will the results help us in our own information practice/library?

Because the objective of EBL is to use the best available evidence to support the improvement of library practice and services, it is important that the evidence is applied in decision-making. The decisions are connected to the circumstances of a certain library. Therefore, in addition to research-based evidence, user preferences and actions, certain library circumstances and library experience must be taken into account (Bailey & McKibbon 2006). Further, the decisions should be implemented without a long delay. However, sometimes the evidence may support the decision that there is no need to change the current course of action.

3. Four case studies

Case study 1.
Continuing with the Big Deals of scientific e-journals

In the autumn 2011 Tampere University Library, like many other university libraries in Finland, faced a difficult budget situation when the costs of scientific e-journals rose more than did the acquisitions budget of the library. The library had to decide whether to continue with the Big Deals of the commercial publishers (such as Elsevier, Springer, Wiley-Blackwell) in their e-journal subscriptions, or to move to the title-by-title subscriptions of scientific e-journals.

There was an intervention question: Should Tampere University Library order scientific e-journals title-by-title instead of continuing with the Big Deals of the commercial publishers?

The question was challenging because in the library both budgetary limitations and the availability of the most important scientific journals had to be taken into account.

The question was analysed using SPICE model in the following way:

Setting: Tampere University Library

Perspective: that of the financiers of the library and the library users (researchers)

Intervention: subscribing to scientific e-journals title-by-title

Comparison: with Big Deals

Evaluation: in terms of the availability of the most important scientific e-journals at reasonable prices.

The next step was to compile evidence for use in decision-making. Although there are some articles related to the benefits and shortcomings of Big Deals (see e.g. Frazier 2001; Duranceau 2004; Pickett 2011), it was obvious that additional local evidence from the practice of Tampere University Library was needed.

It was decided to analyse the use of two Big Deals (packages A and B). The statistics of the use of e-journals title-by-title offered evidence on the use made of e-journals and the researchers' preferences. The most used scientific journals in packages A and B were identified. It was decided that e-journals were heavily used at the University of Tampere if their articles were loaded at least 50 times in a year. Further, the joint prices for the most used e-journals in package A and in package B were calculated and the joint prices were compared with the prices of Big Deals.

It was found that both Big Deals (packages A and B) covered e-journals which were heavily used at the University of Tampere. Further, it was discovered that, in spite of their high prices, the Big Deals cost less than ordering the most used journals title-by-title. These findings were introduced to the top level of the University for budget negotiations.

It was important to compile evidence on the use and the prices of the e-journals included in the Big Deals. It was also necessary to evaluate the evidence and consider the quality of the data. One limitation might be the definition of the most used e-journals. However,

this definition was made taking into account the implications of the decision for local practice.

The decision was to continue with the Big Deals for the present. However, there is a need to carefully monitor the changes both in the use of e-journals and the prices of Big Deals.

Case study 2.
A computing network system to support students' learning

The server supporting student access to information, learning and study resources at the University of Namibia (UNAM) Library crashed in November 2006. The majority of students at UNAM are totally dependent on the library ICT network for learning and study support. The library did not have extra computer facilities where students could write and print or use emails. Not did it have wireless access to enable students to access the library e-resources with their own laptops. Repairing the server was given priority but maintenance experts from South Africa could not solve the problem. Tensions built up between the library and the students. Some students expressed their disappointment through open letters to the local newspapers, tarnishing the image of the library and the whole university. In March 2007, the Student Representative Council demanded that the library management solve the problem, which was deleterious to the students' learning outcomes. A quick but lasting solution to this problem was needed.

UNAM ICT technicians very quickly confirmed that the server hosting student computing network services was damaged beyond repair. More than half of the workstations were totally out of commission. The library did not have funds in its budget to buy a new server and computer workstations immediately. There were three questions: (1) Would a thin-client solution satisfy student ICT access needs or

should the library continue with fat-client? (2) How can the library guarantee timely maintenance of the new ICT network solution? (3) Will the maintenance expertise for the hardware and software of the new solution be available locally?

These questions were challenging because the library could not ignore the fast growing library technology and therefore could not simply replace the old with the new without considering new and emerging issues in library IT. The UNAM Library did not have a specialized ICT librarian in its employ to provide the needed advice. The library wanted to learn from its past mistakes as the previous ICT network did not have local maintenance support, but was sustained by experts flown in from South Africa to solve every problem that occurred. To ensure a sustainable library service to students required a functioning solution with backup support in the country.

The problem situation can be analysed with the SPICE model as follows:

> **Setting:** University of Namibia Library
> **Perspective:** that of students
> **Intervention:** installing a new student computing network system
> **Comparison:** with the old student computing network system where a network of 20 fat-client computers supported 8,000 students in word processing, copying their work to floppy disks and going elsewhere to pay and then print their work
> **Evaluation:** in terms of the functional requirements of what the library wants the systems to perform, the features and usability desired.

The evidence to support the decision-making was compiled by testing. In testing both the librarians' and users' perceptions were needed and combined. A committee of experts from the computer center, the Library and the Students' Representative Council was established. It

analysed and tested the functional requirements at the warehouses of sales companies and also at institutions were they are installed and in use. Shortcomings were identified and used to strengthen the functional requirements.

The requirements were: maintenance and sustainability support, user authentication and UNAM based student email account, student usability – to be able to send and receive emails, Internet research, word processing and linking student payments at the finance department for printing and copying, all at one workstation.

It was necessary to test the requirements and criteria to ensure that the library could procure IT solutions appropriate for UNAM with training of library staff, backup and local maintenance support guaranteed by the supplying company. A submission outlining the problems, remedial solutions, final solution with financial implications was prepared and submitted to the Vice Chancellor's Management Committee, which provided the funding.

The procurement was thrown open to local suppliers' competitive bidding through the Unviersity's normal tendering procedure. The committee evaluated the offers on the basis of the functional requirements and criteria announced. The companies that met tender requirements were called in to set up their solutions at UNAM and to demonstrate to the Committee and interested persons how their solution would fulfill the students' computing requirements.

Finally, a decision was made to award the tender to a local company that demonstrated the ability to meet the functional requirements and library user based criteria, to deliver and install 150 thin-client workstations with a server on schedule and to train UNAM staff in their use at various intervals and provide a maintenance plan and support.

Case study 3.
The use of library premises

During the last decade, each unit of Tampere University Library has moved to the new library building: the Department of Humanities and Education Library in 2003, the Main Library in 2006, and the Department of Health Sciences Library in 2009. At the same time the amount of e-resources has increased and the orders of printed journals diminished. Because the users have access to a huge amount of e-resources via the networks, many library users no longer need the library premises and do not visit the library but use e-resources and library services via the network.

Given the simultaneous change in desk service demand and the pressure to save on salary costs, it was important to ascertain why library premises are still needed and what library users do in the library.

First there were exploratory questions: Why do library users still come to the library? What do they do there? However, this question was soon reformulated to be posed as an intervention question: How should library premises and services on the spot be developed?

The question can be posed according to the SPICE model as follows:

> **Setting:** Tampere University Main Library
> **Perspective:** that of library users who physically visit the library
> **Intervention:** developing on-the-spot library services
> **Comparison:** present on-the-spot services
> **Evaluation:** in terms of the use of equipment, library space and information services at the desk.

A lot of research derived evidence was available from the published literature on the use of library premises (see e.g. Rizzo 2002; Oyston 2003; Shill & Tonner 2003; Freeman 2005; Brindley 2006; Gayton

2008; Applegate 2009). Tampere University Library had several years' user-reported evidence related to users' assessments of library premises on the basis on regular surveys of the quality of services (Lehto & Toivonen & Iivonen 2012). However, more evidence on the use of library premises was needed.

Librarian observed evidence was acquired by the monitoring method through observation walks in the library (see e.g. Hoivik 2008). The activities of the customers were divided beforehand into a set of categories, and on regular observation tours of the public areas of the library the observers (library staff) noted on a standardized form the activity what each customer was doing. The monitoring tours were also learning processes for the staff and enhanced collaborative knowledge building and sharing in the library.

The results of monitoring have been reported in detail elsewhere (Lehto & Toivonen & Iivonen 2012; Lehto & Poteri & Iivonen & Matthew 2012). The findings of the monitoring supported those of earlier studies: the university library as a space is still important to library users. The users still come to the library although there are differences according to the days of the week and the time of the day.

Some concrete decisions were made on the basis of the evidence. Because there was evidence that only some users came to the library in the morning and that these people usually used the library independently without consulting the information desk, it was possible to make changes related to the information service available on the desk. It was decided that the services on the information desk would be available on the third floor of the library from noon instead from 10 a.m. This saved time and resources for other tasks and responsibilities. The service on the circulation desk on the first floor was still available from 10 a.m. to serve the users.

Further, it was found that library users increasingly used their own laptops in the library, the number of desks without computers but supplied with electrical sockets and wireless network was increased. In addition, it was noticed that the size of the most common group

was two people, while the group work rooms of the library were for bigger groups. The changes in the group work rooms are still under consideration at the time of writing. Some spatial changes in the library are called for.

Case study 4.
Integrating the collections of college libraries into the UNAM Library

In 2009, the Namibian Government took a decision to transfer all four independent colleges of education to the University of Namibia. The colleges of education had been administered directly under the auspices of the Ministry of Education, but the education reforms recommended that they should be transferred to UNAM. In January 2010, the main UNAM Library was confronted with issues pertaining to college libraries without any background knowledge of the colleges and their academic programmes. The only information available was a Task Force Report of 2006/2007 by the Directorate of Library and Archives Service (NLAS) in the Ministry of Education. The report stated that not all college of education libraries met minimum education standards. They were poorly funded, their collections outdated and thinly spread across the curriculum. The college library collections were intended to support the Basic Education Teacher Diploma programme which was to be phased out and reinstated as a UNAM degree.

There was an intervention question: Can the inherited college library collections intended to support teaching and learning on the Diploma programme, be relevant to support teaching and learning on the newly introduced university degree or should the UNAM Library order new literature?

The question was challenging because the college library collections were transferred without any documentation of the content: what

they had and what the gaps were. The UNAM Library had to decide what to do with the inherited collections and provide meaningful and relevant information to support teaching and learning, research and studying on a curriculum that was constantly subjected to major changes. The college libraries were under-funded and did not have a budget for library resources. Many were managed by under-qualified staff. A further challenge was posed by distance. Three of the former college libraries were located far away (Rundu 900km, Katima Mulilo 1400km and Ongwediva 750km) from the UNAM Main Library. Travel costs had to be considered and procured to ensure onsite evaluation and later monitoring.

The question can be analysed by the SPICE model as follows:

Setting: four former college of education libraries at Rundu, Katima Mulilo, Ongwediva and Windhoek respectively.

Perspective: that of the new curriculum, students and lecturers

Intervention: access to e-journals and e-books already subscribed to by UNAM, new books specifically recommended to support the new curriculum

Comparison: the old collections

Evaluation: in terms of the requirements of the new curriculum.

The rich data was needed to support the decision-making. It was important to collect data on both the content of current collections and the new and changing curriculum they were intended to support and also on the needs and preferences of lecturers and students.

The next step was design a questionnaire for the library staff, lecturers, management and students at the former colleges to gain an understanding of the objectives and targets that this library was to meet. The questions were related to the strengths and weaknesses or gaps in the existing collections. A contrast between the contents of the collection and how it covered each subject on the curriculum was observed. This information was further contrasted with existing

UNAM eBooks and the e-journal collection immediately available to lecturers and students.

Data was collected through focus group interview surveys with college management (rectors, vice rectors, and heads of departments), lecturers, Students' Representative Councils (SRCs), and Library staff. The same standard interview guides were used to gather data from the sub-groups at different campuses throughout the study.

Data collected from interviews was strengthened by additional data collected from personal observations and physical inspection of library collections and usage. Personal visits and observations were also extended to the Centre for External Studies (CES) satellite libraries, and community libraries where these existed, with a view to establishing whether alternative reading and research materials, a quiet study environment and access to a broader range of information sources could be exploited for use by college students and staff.

The results of the survey revealed that almost 90 percent of the collections of former college libraries were obsolete. It was decided to weed them out from the UNAM Library. If there was a need for the discarded books elsewhere, they were donated.

The major part of the collections of college libraries did not meet the UNAM curriculum requirements. It was obvious that additional funding was needed to build up a new collection. The report on the findings of the library audit survey was presented at various merger committee meetings and a decision to provide additional funding to the UNAM Library to upgrade the dilapidated and outdated college library collections and turn them into information and learning resources for the academic community was made. However, it is essential that after a few years the relevance and appropriateness of the collections, and their ability to meet users' needs be reviewed.

4. Conclusions

Undoubtedly, university libraries have based the development of their practice and services on careful consideration and valid information for years. However, they could more systematically benefit from EBL and use it as a method in their decision-making. We believe that it would help them to keep library services up-to-date, valid and reliable in the rapidly changing environment. All our four case studies show how the evidence was used and how library services were developed (see Table 1). Although in case study 1 no changes were made, the level of the good availability of the important scientific e-journals was kept on the basis of the evidence.

There are also other benefits from the use of EBL. All four cases were definitely learning processes. In collecting evidence for decision-making, the libraries also learnt about their status quo.

These EBL processes also yielded updated, valid and evidence-based information on the resources and financial needs of the library for presentation to the top level of the university. As described in our case studies 1, 2 and 4, it was important to be able to reliably demonstrate the real reasons for the need for extra money for the library. The sponsors of the library are entitled to know how the library spends its money.

EBL can also serve as a basis for building a good partnership with the users. The users appreciate being asked to provide evidence and report on the level of library services. As our case study 2 indicates, when students were involved in the whole planning and implementation process of the new computing system to support students' learning, it helped the students to gain an understanding of the process and increased their respect for the library.

Inside the library, EBL empowers people. When the staff members are involved in the EBL process, they feel they have ownership of their work; they work together more effectively and they believe in what they are doing (see also Greenwood & Cleeve 2008). As our case

Table 1. Summary of four case studies

	Case 1	Case 2	Case 3	Case 4
Description/ Topic	Subscription of the scientific e-journals	Computing network system to support students' learning	Use of library premises	Collection development to support teacher education
Setting	Tampere University Library	University of Namibia Library	Tampere University Main Library	Former colleges of education libraries at Rundu, Katima Mulilo, Ongwediva and Windhoek
Perspective	the financiers and the users	students	the library users who physically visit the library	curriculum, students and lecturers
Intervention	subscription to scientific e-journals title-by-title	installing a new student computing network system	developing library services on the spot	access to e-journals and e-books already available, ordering new books
Comparison	continuation with Big Deals	the old students' computing network system	current services on the spot	old collections
Evaluation criteria	the availability of the most important scientific e-journals at reasonable prices	functional requirements and usability	the use of equipment, library space and information services on the desk.	the requirements of new curriculum
Data/ Methods	statistics of the use and prices	usability testing	monitoring	survey, focus group interviews and observation
Decision/ Change	library continued with the Big Deals	new student computing network system was procured and installed	service hours on the information desk were changed; the number of electrical sockets was increased	almost 90 percent of the old collection was weeded; the need for the additional funding for the collection development was presented to the top level of the university
Other benefits	learning; informing the top level of the university	learning; informing the top level of the university; building partnership with students	learning; collaborative knowledge building; empowering the staff of the library	learning; informing the top level of the university

study 3 indicates, when the librarian observed evidence was acquired by monitoring it also enhanced collaborative knowledge building and sharing in the library.

Although the goal of EBL is fundamentally to improve library practice and services in the context of a certain library, it is also important to share the experiences and results of EBL processes with other libraries. As Eldredge (2006) points out: "… even if these results are not dramatic or new, to build a more solid foundation to our knowledge base. Otherwise, we distort our understanding of reality by focusing only novel and dramatic research results." Therefore it is the library directors' duty to encourage and mentor the librarians to constantly collect evidence about their work, and to redirect the library's efforts to meaningfully support the user community and to remain relevant in the rapidly changing library environment; and, more importantly, to contribute actively to knowledge creation through research and publishing.

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Section 2

INFORMATION SEEKING
AT THE UNIVERSITY OF NAMIBIA

UNAM students studying in the University of Namibia Main Library,
Windhoek, Namibia
Photo: Mirja Iivonen, November 2012

Chenjerai Mabhiza, Menete Shatona & Nampa Hamutumwa

INFORMATION SEEKING BEHAVIOURS OF THE FACULTY OF ECONOMICS AND MANAGEMENT SCIENCES, UNIVERSITY OF NAMIBIA

1. Introduction

Background to the study

Studies on academic researchers' information seeking behaviours are warranted in order to establish if they have distinctive information needs and information use situations. Globally, academic researchers are known to contribute towards the attainment of university objectives through teaching, research, consultancy and community service; the University of Namibia (UNAM) is no exception. The responsibilities of academic researchers require them to become involved in information-gathering activities. Like other scientists practising in today's information society, academic researchers at UNAM are today inundated with vasts amounts of information that may not fit the category of evidence-based scientific literature while they try to make intelligent decisions, conduct research or deliver lectures to students.

The number of studies on the information seeking behaviours of academics is vast, showing clearly that the topic is well researched. The volume of literature on this topic reached more than ten thousand publications by the 1990s. (Tahir & Mahmood & Shafique 2008). Studies on the information needs and information seeking behaviour of academics are and will continue to be an interesting area of research for information professionals (Majid & Kassim 2000). Earlier studies on information needs and information seeking behaviours report that faculty members relied heavily on books and journals (Majid & Kassim 2000). A similar study of arts and humanities teachers found that academics consulted colleagues when preparing their teaching (Tahir et al. 2008).

Makri (2006) argues that academic libraries must understand how best to serve, support and meet the needs of academics. Therefore the study on academic scientists at the Faculty of Economics and Management Sciences (FEMS) is of great importance to the University of Namibia (UNAM) Library.

Aim and significance of the study

This study was conducted in order to examine the information seeking behaviours of academic scientists from the Faculty of Economics and Management Sciences (FEMS) at UNAM. The objectives included establishing the type of information sources used by academics, the circumstances that caused respondents to engage in information seeking activities, respondents´ knowledge of library resources, and the barriers they encountered during their information seeking processes.

Studies on the information seeking behaviours of academic researchers are a neglected research area in Namibia. Online searches and local library catalogues yielded no positive results. As far as we know, no study on the information seeking behaviours of academic scientists at UNAM has been conducted to date. This study is therefore a direct

response to this research gap in the literature. The study adds new knowledge to the existing body of literature on information seeking behaviours. Additionally, the study identified gaps in library resources in the fields of accounting, economics, business management, politics and administrative studies. The study makes recommendations on faculty training in library user education and information skills.

Research questions

A review of related studies helped the authors to formulate the research questions used to guide the enquiry:

- What are the information needs of the FEMS academic scientists?
- Which information sources do FEMS academic scientists use to search for information?
- How familiar and satisfied are the FEMS academic scientists with the UNAM Library resources?
- What are the barriers encountered by academic researchers when seeking information?

2. Literature review

Information is currently regarded as one of the essential elements of science that is pivotal to the livelihoods of individuals and communities. Information is a prerequisite for the advancement and generation of new knowledge. Patitungkho and Deshpande (2005) state that "the present era is the era of information and knowledge revolution which has affected information seeking behaviour".

The literature reviewed in this study, looks at various resources deemed relevant to the discourse of information needs and information

seeking behaviours of academic scientists. Patitungkho and Deshpande (2005) report that, "literature on information seeking behaviour of faculty members is greatly broad ranging". The same is underlined by several scholars such as Hiller (2002), Brown (1999), Fidzani (1998), Clougherty, Forys, Lyles, Persson, Walters and Washington-Hoagland (1998) and Pelzer, Wiese and Leysen (1998). Callinan (2005) opined: "Research studies have been carried out which examine the information needs and behaviour of different library user groups such as academics, researchers, graduate students and undergraduates while others distinguished between these groups on the basis of their faculty."

Conceptualizing information needs and information seeking behaviour

The literature abounds in definitions of information seeking behaviour. Leckie, Pettigrew and Sylvain (1996) posit that, information seeking behaviour "involves personal reasons for seeking information". This study uses the term information seeking behaviour (ISB) from Wilson's (1994, 2000) perspective, he discusses "information seeking behaviour from a perceived need for information by the user. In order to address this need, users then visit an information system such as library or database and other sources of information such as textbooks, lecturers and handouts". Callinan (2005) agrees with Wilson.

In his study, Ellis (1989) developed a model of six information seeking activities that comprise a pattern of information seeking behaviour which is often exhibited by academic researchers: starting, chaining, browsing, differentiating, monitoring and extracting. Nicholas, Rowlands, Clark, Nicholas and Jamali (2009) identified the same patterns. They report that economists and business users exhibited the following distinctive characteristics: heavy use of e-textbooks; off-campus and searches outside office hours; more abbreviated searches and visits;

popularity of Google and Google Scholar among the users, likewise abstract viewing; and a marked preference for current material.

Sources of information

Social scientist respondents from a related study by Shokeen and Kushik (2002) revealed that most scientists visited the library daily and preferred searching using indexing and abstracting periodicals and citations in articles. Respondents in Khan and Shafique's (2011) study acknowledged that they sometimes acquired resources from their colleagues and from their institutional library. The same respondents frequently sought information for lecture preparation, improving personal competencies, improving general knowledge and current awareness. Respondents also conversed with co-workers and experts at other institutions; they read articles and books as part of their information seeking habits.

A survey of 2,084 students and staff at two Australian universities showed that 62% respondents from business said they used e-books (Borchert & Tittel & Hunter & Macdonald 2009). Findings from a study by Patitungkho and Deshpande (2005) indicated that "business and economics students and academic staff used and sought information very much like their virtual colleagues in other subject fields".

Studies by Patitungkho and Deshpande (2005), Khan and Shafique (2011) and Nicholas, Rowland, Clark, Nicholas and Jamali (2009) all produced similar results. Most faculty members were said to seek information for preparing class lectures, 79% for keeping knowledge up to date, and 54% for writing and presenting papers (Patitungkho & Deshpande 2005). The choice of library collections should be based on the needs of the end users. Consequently, librarians must be aware of how their faculty members seek information. (Patitungkho & Deshpande 2005.)

Barriers to information seeking among academic scientists

Barriers that hinder access to information by scientists vary. Respondents from Patitungkho and Deshpande's (2005) study faced problems similar to other scientists, i.e., "unavailability of information, lack of time to search for information, incomplete information materials and language problems".

Respondents in Khan and Shafique's (2011) study encountered the following barriers: "Lack of computer hardware and software, information overload and its availability in various sources, lack of time to search for information, non-availability of required materials and lack of good searching skills."

3. Methodology

This research employed a case study design. Data was gathered through a survey method. A pre-designed standard questionnaire was used as the main data collection instrument. The target population comprised 36 full-time academic scientists working at the time at FEMS, some lecturers were away on study leave, while some lecturships were vacant, the Faculty recruited part-time teaching staff to stand in. Part-time teaching staff was excluded from the study because their contact details were not on the faculty mailing list.

Survey

A draft questionnaire was discussed and pre-tested on a few voluntary academic researchers at UNAM. The research instrument was validated and data collection commenced on 25 August 2011 and was scheduled to be completed at the end of October 2011. The questionnaire was

sent to the 36 targeted respondents' e-mails. However, researchers were alerted about possible printing problems among some respondents two weeks into the study. The researchers printed 15 copies of the questionnaire and handed them to the Faculty Secretary for distribution upon request. The introductory paragraphs of the questionnaire contained a statement on ethics assuring respondents that participation was voluntary and that their privacy would be respected and the data kept confidential.

Some respondents complained of busy teaching schedules, hence initial attempts to schedule interviews and focus group discussions failed. Data collection was then restricted to a questionnaire survey. One meeting was held with the Department of Management Sciences to discuss the purpose of the study and clarify the content of the questionnaire.

Descriptive statistics were used to present and analyse empirical data from the completed questionnaires. Statistical data produced frequency distributions which were presented in tables and summary statements.

Respondents

A total of nine respondents out of a possible total of 36 academic scientists took part in the survey. Five respondents were male, and four female. Respondents from the accounting, management sciences and political and administrative studies departments took part in the study. There was no response from the Department of Economics.

The age categories of respondents varied between 20 and 60 years. Five respondents were aged between 41 and 50, while two were from the 31–40 years age group. One respondent was between 20 and 30 years old, while the other was between 51 and 60. The teaching and research experience of the respondents varied according to their age.

Table 1. Academic ranking of respondents

Academic Rank	Frequency
Assistant Lecturer	1
Lecturer	4
Senior Lecturer	1
Associate Professor	3
Professor	0
Total	9

Table 1 shows that most respondents occupied the ranks of lecturer and associate professor, while none occupied the rank of full professor.

Four respondents were Post Honors Degree (PHD) holders, while another four respondents possessed a Master`s Degree, and one respondent had a Bachelor`s Degree. Six respondents used the Windhoek Main Library, while one respondent used a UNAM branch library. Two respondents did not answer this question.

4. Findings of the study

Information needs of respondents

The information needs of academic scientists vary. In this study, respondents engaged in information seeking for various purposes.

Table 2. Circumstances that necessitate information seeking (n = 9; multiple answers were allowed**).**

Circumstances that necessitate information seeking	Frequency
Preparing for Lectures	7
Literature Review	5
Conference Presentation	4
Confirm Research Findings	4
Continuing Professional Development	3
Preparing for Meetings	1

Table 2 shows that the most frequently reported information needs were related to preparing for lectures, followed by writing literature reviews. Fewer respondents sought information to confirm research findings to present a paper at a conference. Fewer respondents gathered information for continuing professional development and only one respondent sought information in order to prepare for meetings.

Three respondents spent an average of 1–5 hours per week seeking information, while two respondents spent 6–10 hours per week. Two respondents spent a minimum of 16 hours per week seeking information, while the behaviours of the last two respondents were unknown.

Various tools were used to locate information sources.

Table 3. Tools used to locate information sources (n = 9; multiple responses were allowed).

Access Tools	Frequency
Internet	7
Library Catalogue	5
Indexing Journals	3
Publishers` Websites	3
Local Bookshop	2

Table 3 shows that more respondents preferred to use the Internet and the library catalogue to access information in comparison to indexing journals, publishers websites and the local bookshop.

Two respondents felt overwhelmed by the amount of information available, in comparison to three respondents who did not. Four respondents did not answer the question.

Most respondents were not satisfied with the information that they could find on their own. Only one respondent expressed satisfaction, while five respondents were not satisfied. Three respondents' views were unknown.

Two respondents expressed willingness to pay for required research information, while two other respondents did not. Five respondents did not respond.

Five respondents were aware of contemporary developments in their fields, while one respondent was not. Three respondents' views were unknown.

Four respondents agreed with the statement that academics lacked time to conduct research in comparison to three respondents who disagreed, and two respondents did not answer this question.

Information sources used by respondents

Respondents used a variety of information sources as indicated in Table 4.

Table 4 shows that the most popular information sources among respondents were textbooks, followed by the Internet and then journals. It is surprising that scientific databases were not popular among researchers. It is also interesting that the respondents trusted their own personal notes more than colleagues from the same department.

Four respondents agreed that the library subscribed to print journals in their fields of specialization, while the other four respondents disagreed. One respondent did not answer the question.

Respondents listed the Harvard Business Review, Emerald and EBSCO HOST as their preferred sources. Respondents did not specify the exact preferred titles from Emerald and EBSCO HOST scientific databases as expected from the question.

Table 4. Various information sources used by respondents

Information Sources	Used Very Often	Used Often	Used Sometimes	Used Rarely	No Answer	Total
The UNAM Library	2	3	2	0	2	9
Journals	4	2	1	0	2	9
Textbooks	8	1	0	0	0	9
Conference papers	3	4	1	0	1	9
Research reports	3	2	2	1	1	9
Publications of international organizations	4	2	0	2	1	9
Scientific databases	0	2	2	2	3	9
Colleagues from the department	0	3	3	3	0	9
Scholars from the same field	2	4	1	2	0	9
Personal notes	3	4	1	0	1	9
Internet	7	1	0	1	0	9

Key information sources selected
in urgent information seeking

The Internet proved to be the most popular information source in urgent information need situations, with seven respondents ranking it as their first choice, while two respondents selected it as their second choice, and one respondent as a third choice. Eight respondents selected journals when in urgent need of information: first choice (4 respondents), second choice (2 respondents) and third choice (2 respondents). Eight respondents selected textbooks in such situations: first choice (2 respondents), second choice (5 respondents) and third choice (1 respondent).

Use of Internet technologies

All nine respondents had Internet access at their offices. Two respondents additionally accessed the Internet through their own 3Gs, while one respondent additionally accessed the Internet at home, and another respondent accessed the Internet through a friend.

The data below present respondents' ratings of online services that they considered beneficial to the organization (Office Practice and Management, Current Awareness Service, Research Online Tools (E-Books, E-Journals, etc.), E-mail, Web 2.0, uploading lecture notes on e-learning platforms among others).

Research online services, such as access to e-books and e-journal articles and Current Awareness Services were the most popular and selected as first choice (5 respondents). Five respondents also selected communication with students through the Internet as a benefit to the organization. Other less popular benefits were office practice and management and communication with colleagues (4 respondents). Communication with colleagues via Web 2.0 tools such as blogs and Google groups (3 respondents) and uploading lecture notes online

(1 respondent) were considered insignificant benefits. None of the respondents considered usage of cellular phone technologies as a benefit.

Four respondents preferred to read information retrieved from the Internet in electronic format only, while three respondents preferred print format. Three respondents reported that the preferred format of a document was dependent on circumstances.

It was interesting to note that seven respondents preferred to begin their search process from the Google search page, while two respondents preferred the Library homepage.

Familiarity with the UNAM Library resources

The UNAM Library offers many resources but the FEMS academic scientists were not necessarily familiar with them. The Library's website hosts a number of scientific databases relevant to the fields of accounting, management sciences, economics and political science.

Table 5. Usage of scientific databases hosted on the Library website

Usage Rate	Databases	Frequency
Quite Often	Emerald	4
	EBSCO HOST	3
	Springer Link	2
	JSTOR	2
	OUP	3
	Google Scholar	4
Often	None	0
Sometimes	Emerald	1
	EBSCO HOST	1
Rarely	None	0

Table 5 shows that Google Scholar and Emerald were the most used databases followed by EBSCO HOST. It is interesting to note that Google Scholar proved to be very popular among academic researchers while the majority of scientific databases were rarely used. There was generally low usage of all scientific databases by academic researchers.

Continuing professional development is also important for the scientists, who have to acquire new skills and knowledge in their fields. They should also update their knowledge about library resources. Only one respondent attended Library user training, while the other eight respondents did not. Eight respondents answered that they did not receive training in searching electronic databases; one respondent did not answer the question. Only two respondents had received training on how to search the Internet, while seven respondents had not.

Collection development is one of the primary responsibilities of all course lecturers at UNAM. The study found that three respondents regularly recommended materials to be purchased by the library in support of FEMS curriculum and research activities, while five respondents did not.

Barriers to information access and use

As reported in the literature, barriers to accessing research information vary. Table 6 shows the different barriers encountered by respondents in this study.

Table 6. Barriers in accessing information

Barrier	Very important	Important	Slightly important	Less important	No answer	Total
Research materials that I need on a regular basis are not readily available	6	1	1	0	1	9
Library staff is reluctant to assist users	1	1	1	0	6	9
Some information sources available at the Library are out of date	1	1	1	0	6	9
Information on the same subject is scattered in too many sources	1	1	2	0	5	9
Incomplete information materials	0	3	1	0	5	9
I don't know how to search the Library catalogue	2	2	3	0	2	9
I do not have time to conduct research	1	3	0	2	3	9
I cannot cope with the available information	0	1	0	1	7	9
Information sources are far apart from each other	0	2	2	0	5	9

Clearly, the most important barrier was that research materials required by respondents on a regular basis were not readily available. Another important barrier was the respondents' inability to search the library catalogue. Instead, the respondents did not consider their own ability to cope with available information, information sources' obsolenscence or the library staff's reluctance to assist users such important barriers in accessing information. The lack of time was mentioned as a barrier by only a few respondents.

When the respondents were asked their major reasons for not using the Internet, only few answers were received. One respondent mentioned lack of time, another limited searching skills and third slow speed of downloading information online.

5. Discussion and analysis of the findings of the study

The study was conducted in order to examine the information seeking behaviours of FEMS academic scientists at UNAM. Additionally, the study elicited respondents' views on the relevance and currency of library resources and researchers' participation in collection development. The results of the study were to be used to align library collections and services with researchers' needs and to benefit students.

Although only one quarter of the target population participated in the study, their views were quite useful. The findings of the study confirmed those of earlier studies (Patitungkho & Deshpande 2005; Nicholas et al. 2009; Khan & Shafique 2011) that most academic scientist seek information when preparing for lectures, keeping up-to-date with knowledge, and when writing and presenting papers. Most previous studies on the information seeking behaviours of scientists, report that academic scientists use journals, textbooks, the Internet, colleagues and scholars from their network as information sources.

The FEMS scientists tended to rely on the library of their parent institution. In considering the barriers to information access, the findings of this study only partly confirm the findings of earlier studies. The most important barrier in accessing information in this study was non-availability of required materials. The same was reported by Patitungkho and Deshpande (2005) and Khan and Shafique (2011). Another important barrier in this study was the respondents' inability to search the library catalogue. The lack of good searching skills was also mentioned by Khan and Shafique (2011). Instead, lack of time was not such an important barrier in this study as it reported in earlier studies.

None of the respondents uses the SA E-Publications database, yet there are accounting, business management and social science journal collections with scientific literature relevant to the FEMS curriculum. The SA E-Publications is a South African database with a regional perspective on Southern Africa; there is also evidence of a number of articles on Namibia. Nor did any of the respondents use the HINARI database, although it has social science literature that could benefit scientists from the departments of management sciences and political science and administrative studies.

The respondents in this study also noted that their lack of time to conduct research was due to a heavy teaching workload, and hence they could only do topical research in order to prepare for lectures but did not have time to carry out field studies. They lagged behind in producing new knowledge in their areas of expertise. This finding could have a big impact on UNAM's publications profile as an academic and research institution. Equally affected was the career advancement of academic scientists whose promotion from lecturer to senior lecturer, and from associate professor to full professor was dependent on their publications output in peer reviewed journals, monographs and textbooks.

The emergence of the information and knowledge society has resulted in rapid developments in information and communication

technologies (ICTs) which have opened avenues for online publishing ventures causing exponential growth and availability of information through the Internet and the World Wide Web. According to the literature, one of the biggest challenges facing all scientists today is their ability to cope with the amount of information available in their respective disciplines, a situation popularly referred to as information overload. This study also sought to ascertain if FEMS academic scientists were experiencing information overload, and if so, investigate their coping strategies.

The views of the respondents who reported that the library materials were out of date corroborates one of the findings reported earlier above that some academics did not participate in material selection for unknown reasons. Many respondents reported that the materials required were not readily available, but it is not known if the Library failed to purchase these to support the researchers information needs.

It is the authors' considered view that most of the respondents who took part in the study were not heavily involved in material selection, and hence were not aware of their obligations to evaluate and develop library resources to support the curriculum and research programmes. The authors conclude that there is a weakness in library-faculty relations with regard to collection development, collection evaluation and weeding of irrelevant and outdated materials. One of the major reasons why the first ISB study was targeted at the FEMS was because it had been observed that the personnel did not participate effectively in collection development between 2009 and 2011. The Faculty Librarian responsible for the FEMS and the Head of Technical Services had both complained of failure by the personnel to exhaust the library collection development budget for three consecutive years. Annual acquisitions statistics generated by the Technical Services Department between 2008 and 2011 supported the above claim.

In view of the above, the authors recommend that:

(a) The Library must organize an Online Public Access Catalogue (OPAC) search training session in order to train the six respondents who could not search the catalogue. There could be more academic scientists from FEMS and other faculties with a similar challenge.

(b) Failure to cope with information overload suggests that there is a training gap in the development of information search strategies, mastery of the Internet and functionalities of digital libraries.

(c) UNAM needs a dialogue on the heavy teaching workload in order to address the concerns of five respondents who selected lack of time to conduct research as a barrier to access to and use of information, and yet research comprised 30% of their core academic responsibilities. Reduction in teaching hours could provide academics with more time to carry out field studies in order to increase the publications output of both researchers and UNAM as an academic and research institution.

(d) Regular customer care training targeted at frontline staff is recommended in order to address library staff`s reluctance to assist users as reported by three respondents.

(e) Some catalogue records may need to be scrutinized in order to verify the claims by some respondents that related information sources were scattered at the library. The authors' interpretation of this response is that some researchers understanding of information organization may be inadequate; this could be addressed through information literacy training targeted at the location and arrangement of materials in the different sections of the Library.

6. Concluding remarks and directions for further research

Overall, this study justifies the need to train academic scientists in information literacy so that they can become self-directed lifelong learners. Library user education and information skills training could

help improve usage of scientific databases whose user statistics have been below 50% since 2008, as well as general library use patterns. The participation of more academic scientists in collection development also needs consolidation. Library-Faculty relations need continuous improvement.

This study pioneered research on academic scientists at UNAM. The study established a research gap and recommends that more information seeking behaviour studies across academic scientists should be carried out. Future studies should use both quantitative and qualitative methods in their investigations in order to gain in-depth perceptions of respondents through interviews and focus group discussions.

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Kati Syvälahti & Mbenae Katjihingua

THE INFORMATION SEEKING BEHAVIOUR OF LAW STUDENTS AT THE UNIVERSITY OF NAMIBIA

1. Introduction

How to design better library services for law students? How can the library support their information seeking processes? How should library professionals respond to law students' needs? With these questions in mind, we decided to conduct a survey among law students in the University of Namibia.

It is a well known fact that students are increasingly turning to the web, especially Google and Google Scholar, in their search for information. As for instance Makri (2008, 108–109) has argued, this happens among academic and practising lawyers, too. They use Google in order to have an overview of a certain area of interest. Who needs libraries when there is Google? Legal discipline is a conservative and traditional profession, which has relied heavily on printed sources (Otike 1999; Kuhlthau & Tama 2001). The young generation, the so-called Y generation, appears to differ in their willingness to accept and embrace technology.

We start our discussion by presenting our theoretical framework and a review of the literature on legal information seeking. Then we turn to our theoretical background and methodology. Next, we analyse the survey results. In conclusion, we look at the main findings and possible future directions for research.

2. The purpose of the study

The Faculty of Law at the University of Namibia consists of the following academic departments: Commercial Law, Private and Procedural Law and Public Law & Jurisprudence. This paper reports a study that examined the University of Namibia's law students' information seeking.

The research questions guiding this study are:

- What information resources are preferred by law students for academic tasks?
- According to the respondents, what is the role of the academic library in information seeking?
- What kind of problems and barriers do the law students face in information seeking?
- What role do the mediators play in the information seeking process?
- How do the students evaluate the usefulness of information sources of various types?
- How do the students assess their information literacy skills?
- How could the information services be improved to better meet student's expectations?
- How often do students use other libraries?

3. Theoretical framework

The concept of information literacy

Information literacy is a key concept in this article. It is very important to remember that information literacy is not identical with "library skills". Information literacy is wider than traditional information skills. According to Johnston and Webber (2003, 336) information literacy is:

> "… the adoption of appropriate information behaviour to obtain, through whatever channel or medium, information well fitted to information needs, together with critical awareness of the importance of wise and ethical use of information in society."

At the University of Namibia Library the focus is still on library skills, but we are aiming in a wider direction. We see information literacy not as a discrete set of skills; it is important to emphasize the connection between information literacy and lifelong learning.

Models of information seeking behaviour

In our study, we are interested in the multifaceted process of information seeking and the role that librarians play in it. To interpret the survey results and design better library services, we need information seeking theories. For the present study, the most important information seeking theorists are Kuhlthau, Ellis and Wilson.

Kuhlthau´s model of the information search process (ISP) is one of the most important works in information seeking studies. The model shows the information seeker's activities, thoughts and feelings over time while preparing, for example, an essay. (Kuhlthau 2004, 45.) According to Kuhlthau intervention is not necessary or

even helpful all of the time. The model of the information seeking process (ISP) helps librarians to know when not to attempt intervention. (Kuhlthau 2004, 143.)

According to Ellis the different behaviours constitute a single set of features. The six primary behaviour patterns in information seeking are starting, chaining, browsing, differentiating, monitoring and extracting. Ellis's model and Kuhlthau´s model have been tested in several empirical studies. (Wilson 1999, 254.)

Wilson has presented numerous information seeking models. Those are very widely used. He emphasizes the importance of developing a general model of information seeking behaviour. (Wilson 1999, 250.)

4. Literature review

There are seven works which we find particularly relevant (Otike 1999; Kuhlthau & Tama 2001; Wilkinson 2001; Haruna & Mabawonku 2001; Jones 2008; Makri 2008; Thanuskodi 2009). In addition, there is one study on the information seeking behaviour of social sciences doctoral students (Fleming-May & Yuro 2009).

Otike (1999, 29) investigated the information seeking habits of lawyers in England. He conducted semi-structured interviews with nine academic lawyers and found that legal information seeking depended on the type of work the lawyers undertook and the experiences they had in their particular work roles and legal areas. According to Otike delegation of information seeking is common in the legal profession. Delegation is more common for practising than for academic lawyers. (1999, 35–37).

Kuhlthau and Tama (2001) studied lawyer's information seeking behaviour in a study that was part of the development of the Information Search Process model (ISP). They focused on the variety of

information tasks that lawyers undertake. The participants worked in small to medium sized law firms. One of the purposes of this study was to ascertain what role mediators play in the process of legal information seeking and use (2001, 38). In our study we are also interested in the role of librarian in students' information seeking process.

Wilkinson (2001) investigated more than 150 practising lawyers' information seeking. She found that lawyers working in larger law firms relied more on internal information sources, while lawyers working in smaller firms or practising privately used external information sources in their information seeking.

Haruna and Mabawonku (2001, 72) examined the information seeking behaviour of 361 lawyers in Lagos, Nigeria. They found that the most important information for lawyers were the latest judgements of the superior courts.

Jones' (2008, 99) study examined Villanova University School of Law students interacting with legal information systems. Students were observed in the law clinic setting as they located legal materials. Legal research is traditionally taught as an individual activity. Jones' findings showed the deeply collaborative nature of research in the law clinic environment. (Jones 2008, 350.)

Makri (2008, 48) used Ellis's information seeking model as a lens to analyse the information-seeking behaviour of 27 academic lawyers. The aim of his study was to support both the design of new digital law libraries and to improve the design of existing electronic research tools (Makri 2008, 10).

Thanuskodi (2009) used a questionnaire to investigate the information-seeking behaviour of academic lawyers at Central Law College, Salem. In this study respondents were asked to provide a self-assessment of their library skills. Thanuskodi found that the academic lawyers use IT-based library sources and facilities less frequently than printed sources. Thanuskodi observed that, although respondents perceived the library as effective in meeting their information needs, they preferred to consult their personal collections first.

Fleming-May and Yuro (2009) investigated information seeking behaviour of social sciences doctoral students. The authors note that librarians should not expect to serve doctoral students in the same way as undergraduates or master's level students. Postgraduate students' problems in information seeking are unique and their schedules are tight. Therefore they are more selective when choosing services.

5. Design and methodology

The results of earlier studies motivated the development of this research. In designing the questionnaire we have taken earlier studies into account. In our research we have attempted to make a comparison with earlier studies. Our important themes are the same as e.g. Kuhlthau and Tama (2001), Makri (2008), Thanuskodi (2009) and Fleming-May and Yuro (2009). The key topics are the role of mediators in the information seeking process, problems in information seeking and how students assess their information literacy skills.

The present study was conducted using a quantitative method. The empirical material consists of data gathered by a questionnaire. The data were collected in autumn 2011. Information seeking behaviour was measured with multiple choice questions and open-ended questions. The study was carried out at the University of Namibia.

The questionnaire was pre-tested among ten individuals. The aim was to identify any confusing questions and to gain the feedback from the pre-test respondents. The questionnaire consisted of four parts. First, personal information was elicited, such as age, gender, degree, level of studies. The second part focused on habits when seeking legal information and using libraries. The third part focused on the students' information literacy skills. At the end of the questionnaire the students were invited to make any additional comments.

The questionnaires were anonymous and participants were guaranteed confidentiality. Voluntary participation with the option to withdraw at any stage was guaranteed. The questionnaires were given to the students during lectures in October 2011, with the help of a student from the Faculty of Law.

6. Participants

The participants in this study were undergraduate and postgraduate law students at the Faculty of Law. It is useful that postgraduate students are included in the study, because only few studies have focused specifically on researchers (Fleming-May & Yuro 2009, 204). A total of 100 questionnaires were distributed and 77 were returned.

The majority of the respondents were undergraduate students (40) and 37 were postgraduate students. Of the respondents, 39 were studying for the degree of B Juris and 38 for the LLB degree, 44 were doing course work only, 19 course and research projects and 14 course work and theses. Most of the respondents were full-time students (66) and 11 were part-time students. The data shows that 33 of the respondents were male and 44 of respondents female.

The respondents were grouped into five age groups (18–25, 26–30, 31–35, 36–40, 41+). Most were in the age group 18–25 years (64), followed by 26–30 years of age (6), 31–35 years of age (3), 36–40 years of age (2) and 41+ years of age (2).

7. Data analysis

The raw research data were processed in Microsoft Excel. The survey results were analysed using charts e.g. cross-tabulation and content

analysis. Frequency tables and percentages were used to examine all variables used in the study.

There were some limitations to the study. As data collection was by questionnaires, it is possible that respondents were unwilling or unable to respond to all questions. It is also possible that they failed to finish questionnaire due to lack of time or interest. In this study a few participants left some questions unanswered.

8. Findings

Source preferences of the students

The respondents were asked to report where they found information for studying and research. Figure 1 shows that the four most frequently used information sources were the Library, Internet, lecture notes and fellow students.
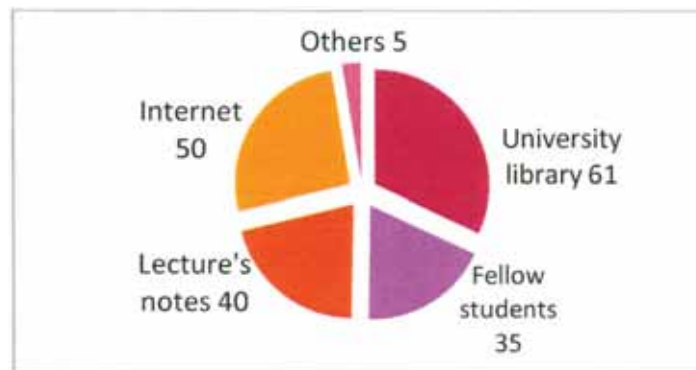
Figure 1. Source preferences of the students (n=77, multiple responses were allowed)

Haruna and Mabawonku (2001, 75) found that the library was the most consulted information source for job related information.

According to Otike (1999, 32), Kuhlthau and Tama (2001, 37) and Wilkinson (2001, 271) lawyers have many ways to access new information, but at the top of the list was high regard for colleagues. Our study found the same. It seems that reliance on fellow students or human sources for information is high. Only five respondents reported others and mentioned their personal collections. Otike (1999, 35) and Thanuskodi (2009) found in their studies that lawyers have personal collections of legal information in their offices. They need to have basic information nearby.

How often the students visit the University Library and why

The use of a library can be measured in different ways. The frequencies of visits to a library are one index to judge the use of the library resources. The results (Figure 2) reveal that 31 of the respondents used the University Library daily, 25 once a week, 13 once a month' and only eight reported that they used the library more than twice a week. The survey showed that 31 of the postgraduate students visited the library daily.

Figure 2. How often the students visit the university library? (n=77)

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Otike (1999, 34) found that 85% of lawyers did not visit or use a library on a daily basis and on a weekly basis 54% used the library three times a week. This indicates that lawyers find information elsewhere than in the library. Jones (2008, 336) argued that according to the lawyers "using libraries seems more like mountain climbing to some". Fleming-May and Yuro (2009, 208) found that doctoral students rarely visited the physical library and they came to the library "as a last resource".

The respondents were asked what they used the library for. The study shows (Figure 3) that the highest percentage of students used the library to borrow books.
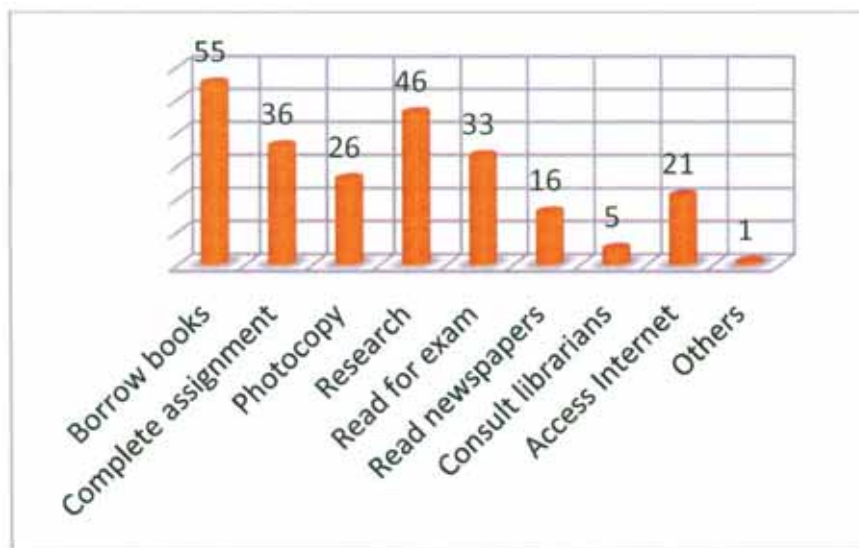
Figure 3. Why do you use the University of Namibia Library? (n=77)

Finding information in the library

An important part of the library's role is to help customers to find information effectively. Thus it is useful to know how they locate information in the library. In this study (Table 1) the library catalogue was the primary tool for postgraduate students. According to Otike

(1999, 35) lawyers prefer browsing through the bookshelves. In Makri's study (2008, 128) browsing behaviour was also found to be common among lawyers. Browsing was also popular in our study.

Table 1. Frequency of the use of information sources (n=77)

Source	Very often	Often	Sometimes	Never
OPAC	15	12	26	16
Reference librarian	6	9	15	27
Subject librarian	2	8	10	29
Browsing shelves	23	13	21	6
Browsing journal titles	11	8	21	11
Fellow students	24	14	16	8
Other(s)	1			1

Adequacy of the law collection and students' information seeking problems

The adequacy of the collection is one factor determining how well the library meets customers' needs. Respondents were asked to assess the adequacy of the University Library's law collections in meeting their information needs. Figure 4 shows the results.

The majority of the responses showed that the Library's law collection met respondents' information needs moderately well. This was followed by inadequate, adequate and very adequate. Otike (1999, 34) in his study also found that the information available in the library was not adequate for lawyers' needs.

There seems to be some contradictions between the results. According to the respondents the law collections are moderately good, but students still have some problems in finding information in the Library. For example, 57 of the respondents reportedly could not find current statutes and law reports in the Library (Table 2).
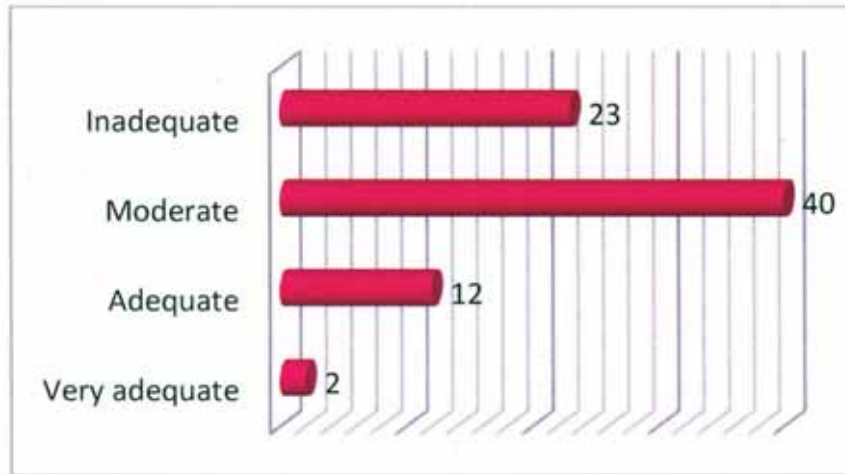
Figure 4. Adequacy of library collection (n=77)

Furthermore, some respondents had problems finding law information sources and current law journals. These findings are important to the Library. Acknowledging the typical problems in information seeking helps the Library to develop better services. For example the Library could develop better information literacy courses to support students in their information seeking.

Table 2. Students' information seeking problems (n= 77, multiple responses were allowed)

Non-availability of current statutes and law reports	57
Inadequate law information sources	54
Inadequate supply of current law journals	41
Inadequate staff availability	0
Distance	2
Others	1

Law students' preferences in information sources

Respondents were asked to indicate the type of information sources they trust. Table 3 shows that books were the most trusted information sources. According to Otike (1999, 36) law books were the most heavily used of all legal materials. Kuhlthau and Tama (2001, 40) found that print resources allowed lawyers to look at many resources at the same time and thus process their cases more easily. The study by Thanuskodi (2009) showed that books and law reports were the most important resources for teaching and research.

In our survey books were followed by short loan collection and statutes and law reports. It seems that law students trust print sources quite a lot.

Table 3. What information sources do you trust (n=77, multiple responses were allowed*)*

Sources	A lot	Sometimes	Never
Books	50	22	2
Current journals	19	21	12
Bound journals	6	18	23
Electronic materials	31	7	12
Short loan	48	11	1
Special collection	21	35	3
Reference collection	10	31	18
Statutes and law reports	48	8	2
University archives	3	14	30

Law students' information literacy skills

Students' self-assessment of their information literacy skills is shown in Figure 5. In our study 18 students (out of 77) reported that their information literacy skills were adequate, and three respondents as-

sessed their information literacy skills as very good. It was found that postgraduate students were more confident about their information literacy skills. Fleming-May and Yuro (2009, 207–208) found that doctoral students reported considerable confidence in their capabilities with research tools. The authors noted that doctoral students attempted to distinguish themselves from undergraduates in terms of information seeking skills. Doctoral students emphasized that their research process was much more systematic than those of undergraduates.
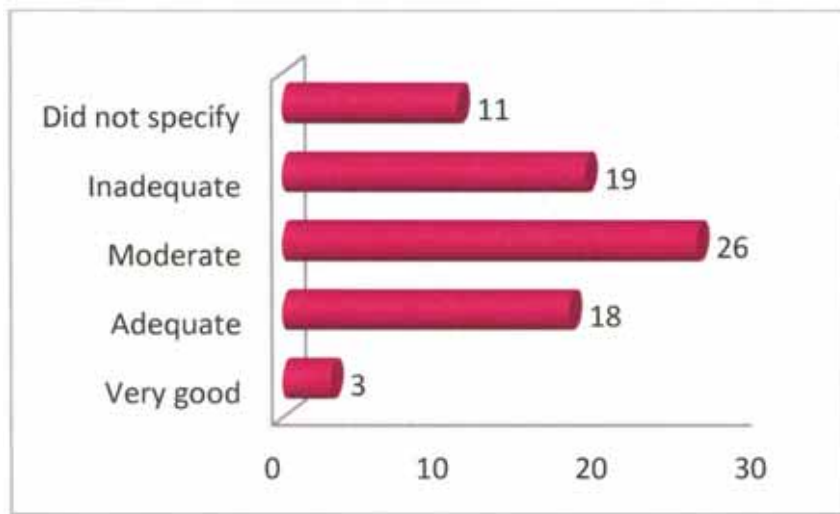
Figure 5. Law students' information literacy skills (n=77)

The role of mediators

It is interesting to know if students need some type of assistance in information seeking. Students were asked how often they needed help when seeking information in the University Library. As many as 45 of the respondents reported that they very often and 15 often sought help in order to locate the information in the Library.

The students were asked whom they would contact when seeking assistance. Figure 6 shows that fellow students were the most famous mediators.
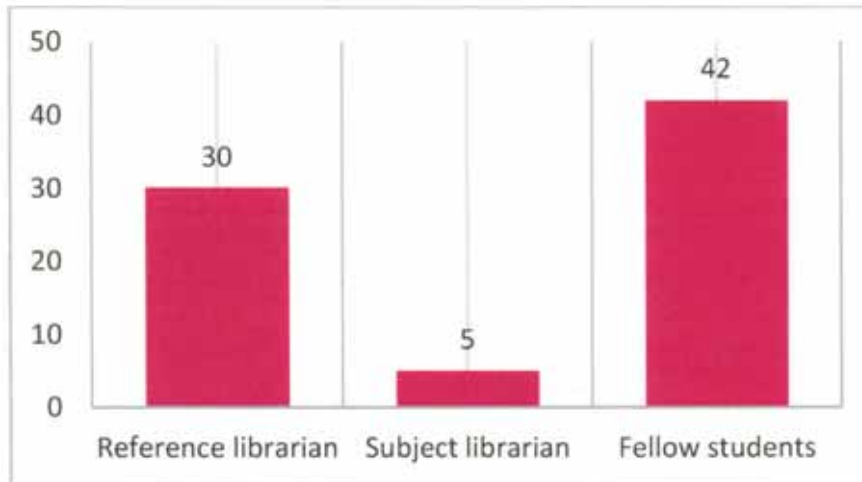
Figure 6. When seeking help to find information sources, whom do you go to? (n=77)

The findings of this study confirm those of earlier studies. For example, Kuhlthau and Tama (2001, 39) demonstrated that the role of librarians as mediators was very limited. Otike (1999, 37) claimed that the use of legal colleagues was the most popular way to seek information. The study by Jones (2008, 336) also revealed that people will more likely go for information that is close to hand such as their friends and colleagues. Fleming-May and Yuro (2009, 212) found that doctoral students preferred asking colleagues for research assistance rather than librarians.

The use of other libraries

Cooperation with other libraries is an important element. Collaboration helps to develop better collections and services for customers. It is essential for libraries to co-operate over acquisitions and access to avoid unnecessary overlaps in their collections. It is an investment in the future.

One of the research questions concerned how often students used other libraries. The respondents were presented with a list of options.

Figure 7 shows the results. Apparently students use other libraries apart from their University Library to carry out their research work.
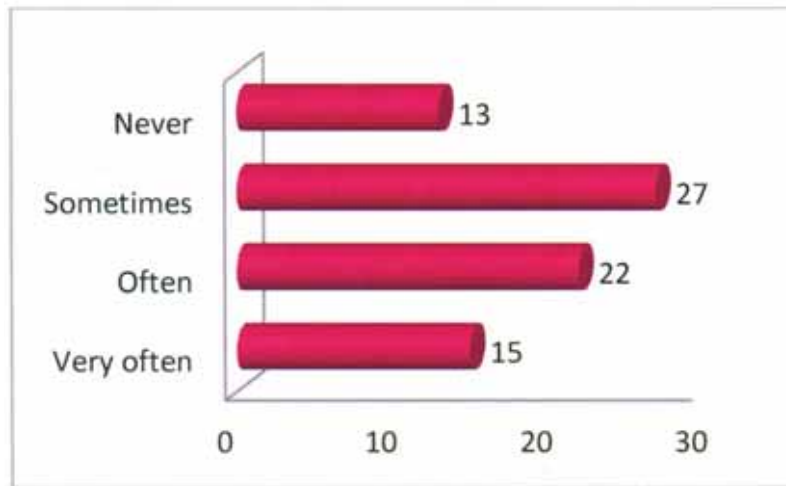
Figure 7. How often do you refer to other libraries for information sources? (n=77)

The results indicate that the respondents used the Supreme Court Library, the Namibia National Library, the Polytechnic of Namibia Library, the Human Resource Documentation Centre, the Law of Society of Namibia Library and the High Court of Namibia Library.

Services and facilities provided by UNAM Library

The aim of this study is to design better library services and facilities for customers. Thus it is essential that customers have an opportunity to give feedback.

The respondents were provided with a list of library services and facilities. Most of the respondents rated the services adequate. According to this study the information literacy services are inadequate. It is also possible that the term *information literacy* was not familiar to all and this affected the results.

Table 4. How would you rate the services provided by the UNAM Library? (n=77, multiple responses were allowed)

Service	Very adequate	Adequate	Inadequate
Help with finding books	5	45	19
Inter-library loan	14	32	17
Literature search	4	44	15
Reference service	5	40	19
Information literacy	2	12	48
Operating hours	17	34	18

Fleming-May and Yuro (2009, 214–215) found that doctoral students did not know all the services and resources available in the library. This is quite a common problem in many libraries. Therefore libraries need new ways to co-operate with customers. In the study by Fleming-May and Yuro doctoral students recommended librarians to communicate directly with students.

The respondents also evaluated the facilities provided by the Library. It seems that students need more reading places and access to Internet is also inadequate. The same emerged in the additional comments.

Since the questions of the survey were mostly closed, the students were asked at the end of questionnaire for additional comments or suggestions on how the Library could be improved.

(i) Size of the law collection
"The library does not have a lot of law books", another one said "the books must be easily accessible, and the library should also include new editions."

(ii) "Law reports are essential and for UNAM Library is a must that they try and get all law reports in the library."

(iii) Internet

"Please improve the Internet, is very slow and very few computers with Internet access."

Twenty-five respondents requested that the university library opening hours should be extended to allow them to make maximum use of the library resources.

9. Conclusions and possible further directions in research

A total of 100 questionnaires were distributed and 77 were returned (response rate 77%). The survey indicated that 31 postgraduate students visit the library daily. It is important to find new ways to meet customers' needs. It is important that the libraries support undergraduate and doctoral students in their studies and research. They need different kinds of places for studying, for example, reading places and group working rooms.

In our study most respondents visited the Library to borrow books. It is noted that the legal profession relies heavily on printed sources. In our study law books were the most heavily used of all legal materials. In the future it will be essential to support students in the use of digital libraries. Research groups especially are a real challenge for the libraries. This is one area for future research. More research is also needed to find out how lawyers keep up with developments in a field. It would be interesting to know how often they use current awareness programmes, such as email alerts, blogs and RSS-feeds.

Our results confirm those of earlier studies. Law students have many ways to access new information, but they put high regard for fellow students and colleagues first. According to earlier studies lawyers prefer browsing and this was also popular in our study.

The results showed that the majority of the respondents used other law libraries. It is important to promote cooperation with other legal libraries in the future to avoid unnecessary overlap in collections.

In this study we observed that students need more information literacy courses. It is important to have different kinds of courses: online courses, classroom courses and lectures. Cooperation with the teachers is essential when planning information literacy courses. Students learn information literacy better when it is embedded in the curriculum.

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Charlotte Nakanduungile, Gregentia Shilongo & Tiina Heino

USE OF ELECTRONIC RESOURCES IN SEARCHING FOR HEALTH INFORMATION AT OSHAKATI CAMPUS

1. Introduction

The development of information and communication technology has expanded the access of library services. The increase in electronic information resources requires new skills to utilize them effectively by both among users and library staff. The library has a leading role in instructional services, such as orientation and training in the use of library resources. Information technology has posed new challenges to libraries, and access to information through the Internet has changed their role (Kaur & Verma 2009).

The Internet has enabled access to electronic books and journals, various databases, and search engines. Even though libraries have been among the early adopters and providers of electronic resources many of the students and academic staff still have difficulties in retrieving information with these resources. User training needs to be increased if researchers, students and lecturers want to become and remain efficient in information retrieval. It is also important that the library staff keep their skills and knowledge up-to-date, and therefore training

for them is also crucial. Information is the cornerstone on which the survival of any society depends.

The attitude to using electronic resources is positive, but lack of awareness is found to be a big barrier, therefore more user training as well as marketing of electronic resources is needed (Borrego & Anglada & Barrios & Comellas 2007; Ibrahim 2004). Ndinoshiho (2010) emphasizes that lack of computer skills, shortage of computers, and slow and unstable Internet connections make the use of electronic resources difficult. The high quality of the electronic resources available motivates users (Okiki & Asiru 2011). The accessibility and availability of literature on electronic resources has a positive effect on researchers' publication productivity (Vakkari 2008).

In this study we consider the usage of electronic resources at the School of Nursing and Public Health at Oshakati Campus, University of Namibia (UNAM).

2. Background information

The School of Nursing and Public Health at Oshakati Campus

The School of Nursing and Public Health at Oshakati Campus prepares academically and professionally qualified personnel for Namibian health care in preventive, curative and rehabilitative health fields. The Oshakati Campus Library has a central role in the academic programmes and helps the School of Nursing and Public Health to fulfill its UNAM mandate in teaching and learning by creating an appropriate study and research environment. The Library provides the information infrastructure necessary for the students' learning and research needs, and thereby contributing to positive graduate outcomes. Oshakati Campus Library faces pressures like reduced annual budgets

and rising costs for electronic resources subscriptions. The UNAM uses a proportion of its annual budget for the acquisition of electronic information resources, and it is a major mission for an academic library to assist the University's research and learning programme.

Electronic resources of academic libraries in education

In today's libraries quick access to electronic resources is vital for patrons. It is imperative that health care educators incorporate information technologies into their teaching (Hjørland 2007). There is a growing need for nurses to access the latest health information, and they need to have quick access to it when meeting a patient (Bachman & Panzarine 1998). Appleton (2004) emphasizes that the teaching staff expects the students to use databases and electronic journals: the use of these electronic resources is accepted as fundamental to health studies. It appears that the rate of production of electronic materials has exceeded that of print-based publications (Dalgleish & Hall 2000). Library staff requires better tools beyond those integrated library systems offer to be able to manage the large number of e-journals, e-books, and databases in their collections (Czechowski & Fort & Spear 2012).

It is beyond dispute the library is the major source of information when academic staff and students search for information for their educational needs. McDowell (2002) highlights the cooperation between lecturers and library staff: library staff knows the information environment and lecturers have the subject knowledge.

Tenopir (2003) analysed the results of over 200 studies on the use of electronic resources in libraries published between 1995 and 2003. The main findings of these studies indicate that electronic resources have been rapidly adopted in academic spheres though the behaviour of users varies according to their discipline. Users find it useful to be able to search across a wide range of journal articles, and

also within an article. The opportunity to access current material any time from the desktop computer was also considered strongly positive. Downloading or printing the desired document or segment, storing articles electronically, and easy scholarly communication by sending the articles to colleagues were likewise found useful. The students found electronic books useful because they could make searches in the text itself, and did not need to carry heavy textbooks (Rickman & Von Holzen & Klute, & Tobin 2009). Ongoz and Baki (2010) found that students considered electronic books environmentally friendly. The opportunity for multiple users to access same book simultaneously was also regarded as an advantage. McDowell (2002) surveyed lecturers' attitudes to electronic resources and found that lecturers considered students became more independent learners by accessing and using electronic resources. By using the electronic resources the users access a wider range of information, and they get it faster and easier.

3. Objectives

The aim of this study was to investigate how well the nursing students and staff knew and were aware of the electronic resources available at the library website of the Oshakati Campus Library. The adequacy and the level of use of these resources were also investigated. This study yielded information that may enable UNAM Oshakati Campus Library to take stock of its mandate and to evaluate its performance and service delivery to see if these meet the expectations of academic staff in nursing.

Academic staff in nursing are health care educators working full-time or part-time for the School of Nursing and Public Health at UNAM Oshakati Campus. Nursing students are full-time students registered for bachelor's degrees in nursing and clinical science at the same campus. Electronic resources refer to all databases (open

access and subscribed), electronic journals and books, online catalogue (OPAC), websites, electronic texts and other materials that are subscribed to and available on the UNAM Library website. Information literacy is the ability to access, search, interpret and use health information for whatever purpose.

The specific objectives of the study were:

- To explore the purpose and frequency of use of library electronic resources and services
- To identify the habitually used types of electronic resources
- To identify the benefit of using electronic resources
- To identify barriers encountered when searching for information in electronic resources
- To identify areas/programmes where training is needed
- To suggest actions to make library services effective and efficient

4. Methodology

To obtain qualitative and quantitative data a questionnaire including both open-ended and closed questions was distributed to 141 students in their second, third or fourth years study, and to 22 academic staff from the School of Nursing and Public Health.

In addition to demographic information the questionnaire elicited information on topics related to searching for information in electronic resources, the respondents' use and awareness of electronic resources, the relevance and quality of information resources, the benefits of and barriers to using e-resources, and information literacy and professional development. It required 15–20 minutes to complete. Permission was sought from the Oshakati Campus Director, and the Head of Department of Nursing and Public Health who informed her colleagues

(lecturers) and encouraged them to participate in this study. Permission was also sought from lecturers teaching graduate students to administer the questionnaires during their teaching time without disturbing lectures. All responses were anonymous.

A total of 132 questionnaires were completed and returned giving a response rate of 93.6%. Of the respondents 81.1 % were female. The age of 62.9% of the respondents was between 21 and 30 years. Most respondents 40.2% were in the fourth year of their studies. A few of the respondents, 3.8%, held positions as lecturers and their teaching experience ranged from four to 26 years.

5. Research findings

Searching for information in e-resources

Frequency of searching for relevant information is a very important issue for the Library as it can be used to measure how electronic resources can contribute to the Library's mission as well as to the UNAM vision of teaching, learning, researching and community services. Figure 1 shows that the majority of respondents, 40.9%, rarely sought information in e-resources, while 29.5% sought information on a weekly basis. Respondents seeking information in e-resources daily amounted to 13.6%.

The study revealed that most respondents (59.8%) spent 1–2 hours searching electronic resources in the library. However 60.6% of respondents admitted that they had difficulties in accessing e-resources at Oshakati Campus Library.
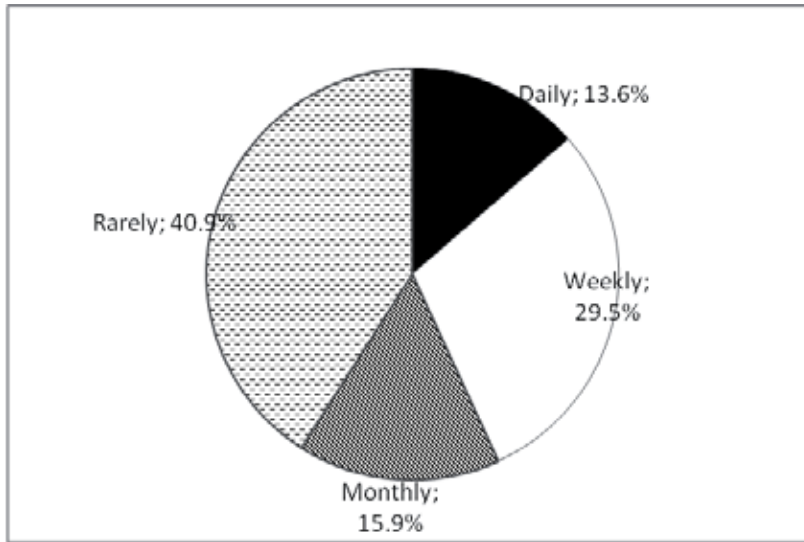
Figure 1. Frequency of seeking information in e-resources

Use of electronic resources

Despite the amount of specialized electronic resources available in the Library, users tend to use other sources and tools. And whatever tools they chose depended on their skills to judge whether such a resource was correct and factual or not. Respondents were asked to indicate multiple information sources that they usually used. Table 1 shows that the most used source of information at 80% of respondents is the Internet. None of the respondents reported using DVDs and videos and online seminars.

Table 1. Information sources used by respondents

Information sources	N	%
Electronic databases	3	2.4
Internet	106	80
E-journals, E-books	23	17.4
DVDs and videos, video conference	0	0
Online seminars, online conferences	0	0

Respondents were asked to report the tools they used to find e-re-sources in the Library. Figure 2 shows that 38.6% used the Library website while 29.5% used colleagues to find e-resources in the Library. It also emerged that respondents asked help twice as often from their colleagues as from the library staff, even when searching information in the Library.
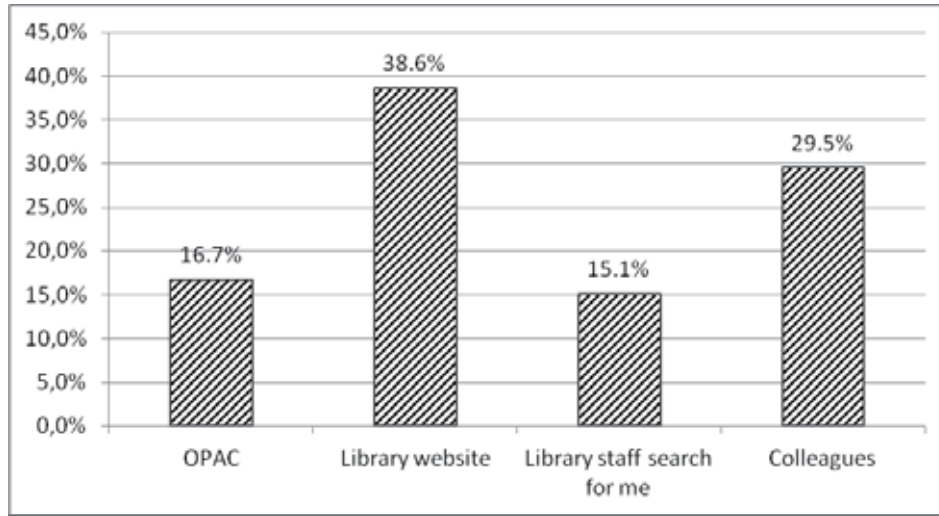
Figure 2. Tools used to find e-resources in the Library
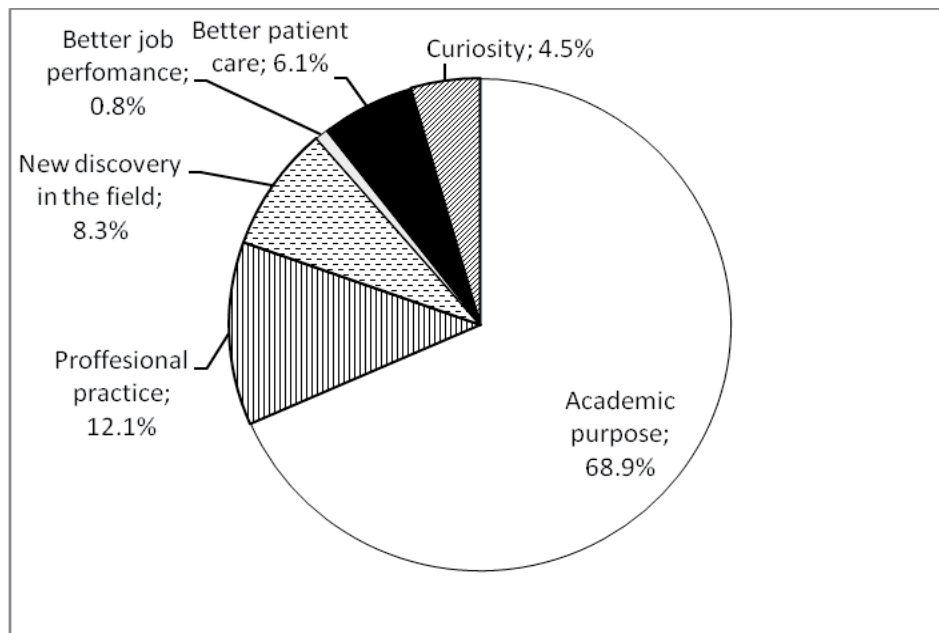
Figure 3. Reasons motivating respondents to search

Respondents were asked about the reasons that motivated them to search for information. Figure 3 shows that 73.5% were motivated to search for academic purposes. Surprisingly, 4.5% of respondents also reported searching out of curiosity.

Use and awareness of information sources

Regarding usage and awareness of the information sources available in Oshakati Library (Table 2) shows that the most used database was Health Source and the second one was Global Health. HINARI, Medline and PubMed Central were not used so much. Nine respondents reported not using any of the databases listed. Participants were allowed to indicate multiple sources.

Table 2. Electronic databases used in the Library

Electronic Database	N	%
Medline	3	2.3
Health Source	67	50.8
HINARI	8	6.1
Global Health	21	15.9
PubMed Central	3	2.3
Other: Google	2	1.5
None of the above	9	6.8

The majority of respondents (93.9%) were not aware of nursing e-journals available in the library. The 6.1% of respondents reporting awareness were asked to name the three journals that they liked most. These three journals were:

1. Nursing Magazine
2. General Nursing
3. Research in Nursing

Respondents were further asked if the library e-journals met their academic needs. The question was clearly formulated but disappointingly 90.9% did not respond. Only 3.8% reported that e-journals did indeed meet their academic needs, while 5.3% reported that they did not.

Respondents were asked to list subject areas of e-journals or e-books that they think the library should have. These were:

1. Research in nursing
2. Midwifery practical
3. Oncology
4. Management
5. Anatomy and physiology
6. Community nursing
7. General nursing

The list of the subject areas that need most attention according to respondents:

1. Research methods in nursing
2. Pharmacology
3. Human anatomy and physiology
4. Nursing sociology
5. Community health
6. Psychology
7. Pharmacotherapy

The respondents' opinions of which kinds of audiovisual materials the Library should have:

1. Anatomy and physiology of all body systems
2. Cell division
3. Cardiac blood supply

4. Dialysis (haemodialysis)
5. Operations/surgeries of different scenarios
6. Management of general mental health
7. Childhood and adolescent diseases
8. Disaster preparedness
9. Patient care

Assessment of the relevance and quality of sources of information to nursing practice

Respondents were asked to evaluate the adequacy of the nursing e-resources available at the UNAM website. Table 3 shows how participants responded. 15.1% indicated that e-resources were outdated at the UNAM website. They reasoned that when changes are made in the curriculum or in a certain course, the website does not change immediately, and 4.5% of respondents reported that the e-resources available were irrelevant because one got unnecessary information.

Table 3. Evaluation of the adequacy of nursing e-resources on the UNAM website

Evaluation criteria	N	%
Relevant	33	25
Irrelevant	6	4.5
Up-to-date	27	20.5
Outdated	19	14.4
Average	18	13.6
Poor	23	17.4
No response	6	4.5
Total	132	100

The majority of respondents, 65.9%, considered the available e-resources relevant to their studies, work and teaching, while 25.8% said they were not relevant because they were outdated and inadequate.

Benefit of using electronic information resources

Respondents were asked to describe their positive experiences of using Library e-resources. Figure 4 shows that 50.8% reported that e-resources contained useful information for their studies, and 4.5% reported that they had useful information for their teaching, while 12.1% claimed that using library e-resources saved them time. Furthermore, 25% said that they did not use electronic resources.
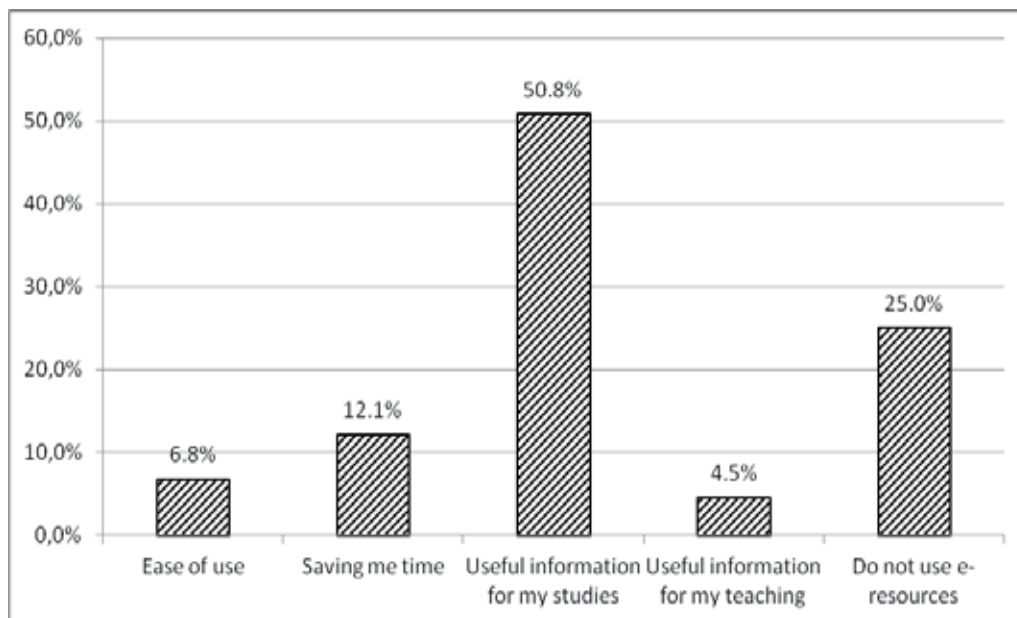
Figure 4. Respondent's experiences in using the Library e-resources

Figure 5 shows that 59.8% reported that the Internet was more useful to them, while 6.5% reported that the Internet and Library electronic resources were equally useful to them, and 4% considered the Library e-resources more useful.
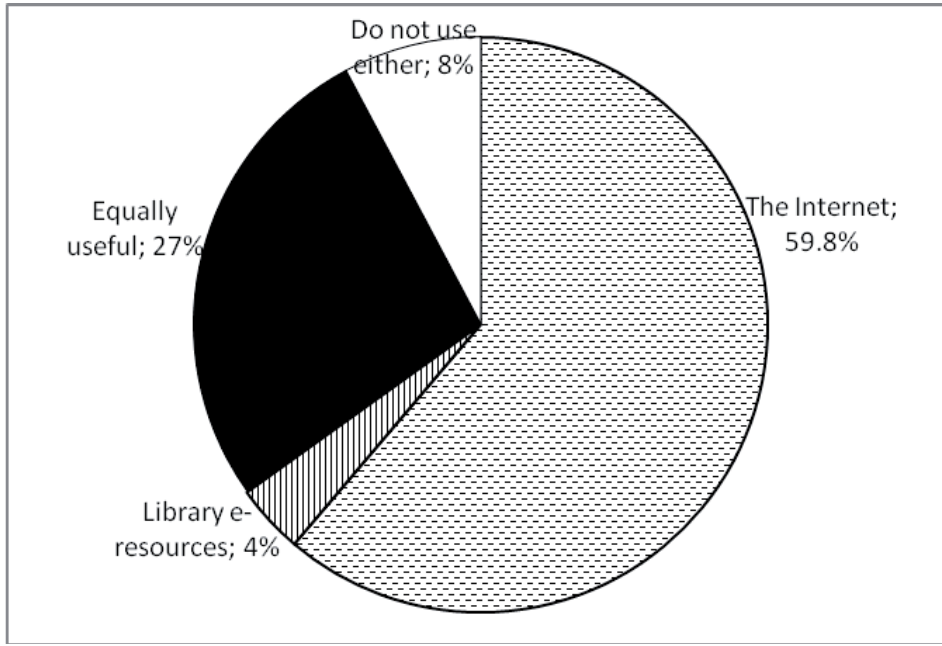
Figure 5. Comparisons in use between the Internet and the Library e-resources

Barriers to the access and use of electronic resources

When respondents were asked to state whether they encountered problems when searching for electronic resources, and also to give suggestions to improve the situation, 68.2% admitted that they encountered problems while 23.5% reportedly did not experience problems. Respondents experiencing problems suggested the following:

a. The library needs to fix computers that are "out of order" or acquire enough new computers that will work properly and fast.
b. Provide regular user training, and print out clear instructions to help users at each PC, or recruit someone to assist users when they have difficulties in searching e-resources.
c. Improve the speed and Internet connection.
d. Staff should be willing to help users to use the services provided.

e. Supply users with the usernames and passwords of databases the Library has access to.
f. Install Adobe Reader for users to access information in PDF format.
g. Information literacy training needs to be extended to all useful information that needs to be taught.
h. The Library needs to provide wireless connections for users to use their own laptops and notebooks without too many restrictions.
i. The Library needs to extend the computer lab because the current one is very small.

Figure 6 shows that almost half of respondents, 42.4%, were discouraged from using the Library's e-databases by slow speed of network.
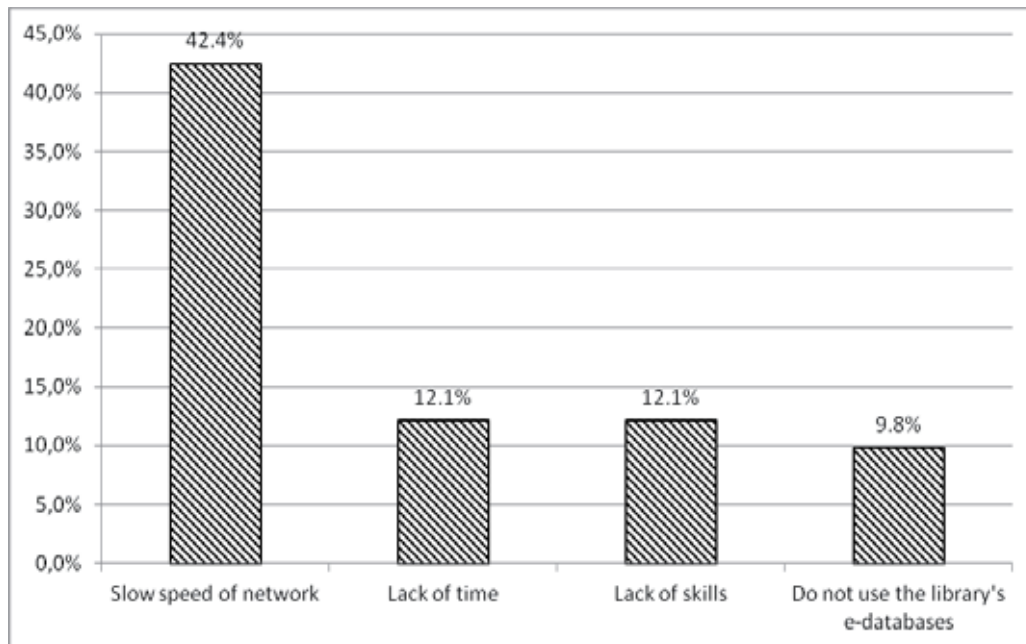
Figure 6. What discourages respondents from using the Library's e-databases

Respondents were asked if they used the UNAM Libraries catalogue (OPAC) to search for e-resources, and 62.1% did not use it because

they lacked skills since they had not been trained. They also claimed that OPAC computers are always "out of order". Some respondents did not have time to use the catalogue and some were not aware of OPAC being available. Those reporting that they used OPAC to search for e-resources amounted to 32.6%. The respondents were asked how they had learned to use OPAC. Some reported learning it through Library orientation training (information literacy) given by the Library staff, some through friends and colleagues. Respondents who had used OPAC were asked about their experiences and the following responses were received:

a. The OPAC is complicated to use.
b. The system is always slow to search and retrieve information within the limited short time that I get.
c. Information manuals on how to operate OPAC are needed at all OPAC computers.
d. Very limited experience, more training is needed.
e. Has been a good experience as the process is fast and it is easy to locate materials in the library.
f. It saves me time and it's very reliable because I get exactly what I requested.

Information literacy and professional development

Respondents were asked if they had received training in any of the following programmes: library orientation, how to use the Library's e-databases, or Internet searching skills. Figure 7 shows that the majority of respondents, 51.5%, had received library orientation.
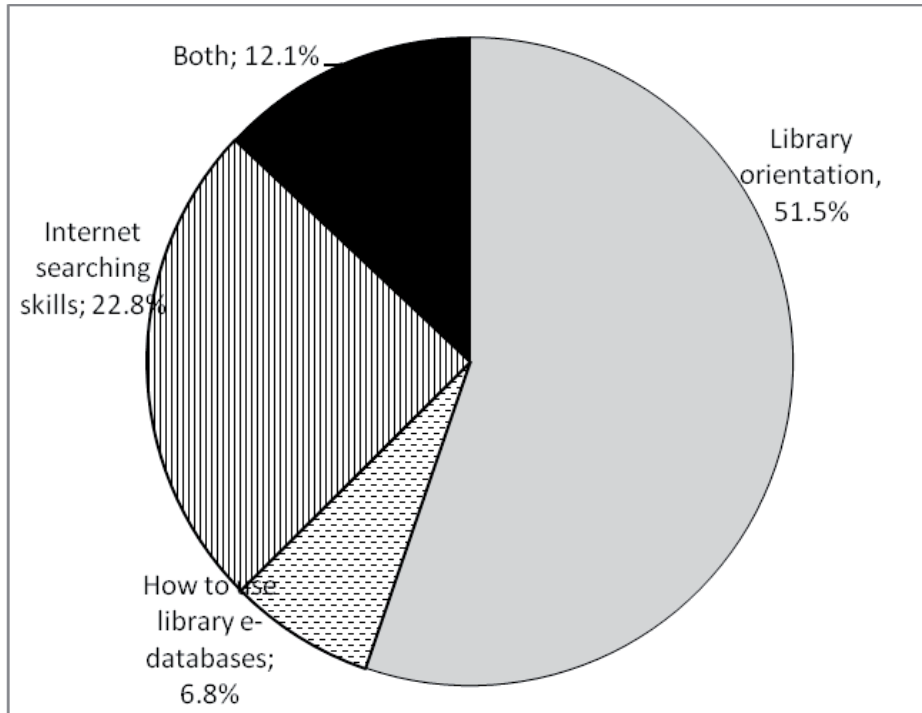
Figure 7. Training received by respondents

Respondents were further asked if they contributed towards the development of the UNAM Library collections and 32.6% reported that they contributed by suggesting information resources which were relevant and could be used by academic staff as well as by students. However, 42.4% reported that they did not contribute while 3.8% were not sure if they could contribute towards the development of the Library collections.

Regular consultations are needed between users and librarians to make sure that the Library collections meet users' needs. Respondents were asked if they thought that they should be consulted before the Library subscribed to e-resources (databases, e-journals, e-books) and 68.2% reported that they should be consulted about which e-resources were worth subscribing to, and which were outdated and needed to be updated. They also wanted to be aware of new developments in the Library, especially regarding e-resources. However, 16.7% indicated that they need not to be consulted.

The majority, 51.5%, reported dissatisfaction with Library staff customer service/care. They made comments such as:

a. Some of the Library staff are difficult, slow, and refuse to help.
b. Some lack good communication skills and do not give clear information.
c. Female Library staff are not always in a good mood; they are rude and have no respect.
d. Most times they are busy with their personal issues and do not pay much attention to users, especially regarding computers.
e. Some Library staff serve those users they know well, and sometimes they keep users waiting for their services for a long time.

Of the respondents 37.9% reported that they were satisfied with the Library staff and customer services. Respondents showed their appreciation by saying that the Library staff was very warm and sincere. Some said that the Library staff were quite friendly and did their best to assist.

Respondents were asked to give their general comments on the Library services at Oshakati Campus Library:

a. Internet connection must be improved and all computers that are not working should be repaired or replaced by new computers.
b. A full-time computer technician is also needed to help users in the computer lab.
c. Female staff need to change their attitudes towards users and improve their communication skills.
d. Rules on safety and personal property should be reviewed, we (users) feel unsafe.
e. Please provide more training on how to use OPAC and how to access e-resources in the Library.
f. The Library air conditioning should be adjusted properly, it's always too cold.

g. Students must be treated equally.
h. Librarians should print all instructions about how to access and use OPAC and e-resources.
i. Extend the computer lab and provide wireless connections.
j. The Library is always overcrowded with learners from nearby schools and UNAM students can hardly find empty spaces. The Library staff needs to change their rules and start to refer learners to public libraries.
k. Library hygiene and maintenance is excellent.
l. Amendments must be made on using cellphones in the Library

6. Limitations

This study provided valuable data on which to base further actions and investigations, and also on how to improve study design in future research. The study was limited by the small sample size of a total of 132 participants, who composed a convenience sample, but not a true random sample. The study was also limited by the low participation of academic staff, who were supposed to provide information at another level than the students' skills and experiences. One limitation may be that the questionnaire included ambiguous wording and Library terminology that were not clear to respondents. Only a questionnaire was used to collect data, which may be a limitation. In future research the impact of information literacy training on students and staff for their performance in studies, teaching and research, would be of interest.

7. Discussion

We studied the use and awareness of the electronic resources, as well as the benefits of and barriers to in using them at the Oshakati Campus. It emerged that many respondents were using Internet, but not so much the databases and e-resources available on the Library website. Most of the respondents did not know about the electronic journals available. All this emphasizes that marketing, communication and user training are crucial, which is in line with the findings of Borrego et al. (2007) and Ibrahim (2004). In our study the importance of the functioning infrastructure of computers and Internet connections emerged as also in the study by Ndinoshiho (2010).

The respondents attached importance to user training. It has been seen in several studies that an information literacy programme has a positive effect on the information searching skills of the nursing students (Shorten & Wallace, & Crookes 2001; Craig & Corrall 2007). It is also argued that librarians should be leaders in promoting IL activities (Grassian & Kaplowitz 2009; Diep & Nahl 2011).

Hallyburton and St John (2010) point out that "to bridge the gaps in information literacy and lifelong learning, nurse educators, nursing students, and librarians must work together and use as many communication formats as needed to accomplish their goals". Hollister (2010) claims that "the credit-bearing information literacy course is an increasingly useful, effective and even popular vehicle for integrating libraries into college and university curricula, and for advancing the cause of IL across campus". At UNAM IL is treated as an extra-curricular activity, not as an integral part of the curricula. For this reason library users may not see or realize the importance of IL.

Diep and Nahl (2011) suggest that to prepare students for the information demands inherent in personal, academic and career life, they must acquire the ability to access information efficiently and effectively, evaluate information critically and competently, and use information accurately and creatively to make good decisions. "One of

the challenges facing libraries is teaching skills that help students keep current with developments in advanced technologies and exponential information growth throughout their lifetime." Chowdhury (2010) agrees that although the developments of web interfaces and online search services have become easier to use, one still needs training and practice to become an expert online searcher. According to him, users need to be familiarized with the search interface and they must learn various search options. This was also one of the outcomes of our study: users want to learn to use the electronic resources, and they want help from the Library staff.

It is a known fact in business life that high quality customer service is very important in order to achieve and retain customers. In our study it also emerged that the customers were not totally satisfied with the help received from the Library staff. In modern marketing philosophy marketing is everybody's responsibility (Vierula 2009). It is important that library services meet customers' needs: the library services would be utilized more efficiently, and the customers feel that the library staff and services are there for them.

On the basis of our study we want to present the following recommendations:

a. Information literacy training should be provided on a regular basis (OPAC and e-resources) to all students, staff and other Library users. This will help them to easily access, use and evaluate the Library e-resources available.
b. An information literacy programme must be included in the University curricula to increase attendance and to stress its importance.
c. A more aggressive information marketing strategy to raise awareness among students and staff should be developed by both subject librarians and on departmental level.

d. Library staff should participate in-service training in customer care skills. To be able to perform their duties well, the Library staff should also familiarize themselves with work ethics, policies and procedures.

e. The Library needs to acquire new computer machines and improve Internet connectivity.

8. Conclusion

The study contributed to a broader understanding that the majority of students and staff are not aware of the electronic resources – databases, e-journals, e-books – that are subscribed to and available on the UNAM Library website. The study also discovered that most Library users have inadequate training in using the Library electronic resources and even lack the necessary basic skills to utilize the resources. The study also revealed that not all Library staff have good skills in customer care. Internet connection was too slow and some computers were not functioning at all. A follow-up study could be done after two years in order to ascertain how the improvements made on the basis of this study have affected the customers' information behaviour.

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LIBRARY COLLECTIONS AND SERVICES FOR THE ACADEMIC COMMUNITY

Helsinki University Main Library in Kaisa House, Helsinki, Finland
Photo: Tuomas Uusheimo

Hannele Nurminen & Maria Ashilungu

MARKETING THE COLLECTION SERVICES IN TWO DIFFERENT UNIVERSITY LIBRARIES

1. Introduction

Organizations and nonprofit organizations market their products and services to achieve their goals. In many cases, the libraries have become popular places on the campus, especially among students. But are the users really aware of what the library offers them? The marketing of the library as a space is not the main thing but what about the users, e.g. students, do they use library services effectively (Mathews 2009)?

Libraries formerly enjoyed much more status on campuses because the users had no other option for information seeking. These days, libraries compete with the Internet, Google etc. These modern, diverse and wide possibilities pose new and demanding challenges for libraries to find their users and make them aware of libraries' services. Moving from print to electronic form implies new challenges for collection marketing. Earlier, in print decades, libraries marketed print books and journals by putting them near doors or near the loan and reference desk. In the electronic era this is impossible because the space is on the internet. (Kennedy 2010.)

This chapter compares collection services in two different university libraries. The "Human Resource Development Project at the University of Namibia Library" (Namhila & Sinikara & Iivonen 2012) enables the comparison of the functions and activities of the University of Namibia (UNAM) Library and the Tampere University (UTA) Library. The libraries have different histories and backgrounds. The UTA Library has its roots in the 1920's, its collections have grown over many years, including big e-resources from the beginning of the 2000's. The main purpose of the UTA Library is to serve the needs of research and teaching at the University of Tampere. The history of the UNAM Library is rather short, the Library was established 1992, the e-collection is just developing and the Library also has national responsibilities.

In this chapter, we consider what tools, means and ways are utilized in marketing collections and collections services. We pay attention to the marketing methods used in the UNAM Library and the UTA Library. We want to identify possible similarities and differences and if the libraries are going to develop the marketing of their collection services. The important goal of our article is to share our experience and understanding with others working in university libraries and thus add to the knowledge base of our profession.

2. Background and main concepts

Marketing in libraries is widely understood as a way to promote the usage of library services. In this article, we concentrate on collection marketing and the marketing of collection services. We compare the collection marketing processes in two libraries as a part of the collection development.

Collection development

Collection development policy is taken to be the written statement that provides planning and implementation guidelines for most collection building tasks (Fourie 2001). Johnson (2009, 371) says that collection development policy (CDP) is "the formal written statement of the principles guiding a library's selection of books and other materials, including the criteria used in selection, de-selection and acceptance of gifts. It also addresses intellectual freedom, future goals and special areas of attention." Van Zijl (2005, 6) says that "collection development policies have proven valuable tools for many collection development and management librarians in academic libraries". Collection development policy may be "user-centered", "library-centered" or "project-centered" depending on the principles of building collections.

User-centered collection development policy strives to increase users' access to information, attempts to engage users in building collections and emphasizes user education. Library-centered collection development policy underlines the library's role to optimize financial resources, space, storage, and staff, contributes to the symbolic function of the library and provides the framework for acquiring unique materials. Project-centered collection policy pursues projects for their own merit and develops the common good in the information environment. (Burgett & Haar & Phillips 2004.)

Marketing in the libraries

Marketing is the process to determine the users' wants and needs, develop products and services for users and encourage them and potential users to use these products and services (Johnson 2009). Kotler (1982, 19) writes: "The basic reason nonprofit organizations should be interested in formal marketing principles is that they will enable these organizations to achieve their objectives more effectively." On

the other hand, organizations have to know and ascertain what the needs of consumers and users. Libraries' advertising and marketing should focus on the lifestyles of users and fit into their lives, not on the other way around (Matthews 2009).

Collection development and marketing

Collection development and library services have been much researched in recent decades. Collection developing policy has been considered as a part of collection management. For instance, Hibner and Kelly (2010, 2) say: "We've emphasized the word 'management', rather than calling it 'collection development policy' or 'materials selection policy' so that the entire life cycle of a collection is represented in the policy. Developing a collection is a small part of the life cycle because it focuses on the selection."

Johnson (2009) considers that collection management and collection development are synonymous. According to Johnson these terms concern the life cycle of collections from selecting to weeding, including budgeting and financing both users' needs, and also liaison and outreach activities. In this sense, the collection marketing is a part of collection development policy.

Marketing in libraries was earlier considered mostly "how-to-do-it-guides". Kennedy (2010) identified 38 marketing techniques used for e-resources marketing in libraries when she analyzed the literature published in library science from 1994 to 2009. She grouped the techniques into four categories: human interaction (e.g. collaboration, phone calls, visits, surveys), e-communication (e.g. branding, e-mails, feedback forum, social network), physical items (e.g. flyers, pins, postcards, brochures) and training (e.g. patron training, staff training, demonstrations).

Singh (2009a) researched if some libraries were more market-oriented than others and found some differences between them.

He found three kinds of libraries: the strong, medium and weak market-oriented. He measured the service performance of different libraries through their respective customer feed-back on accessibility of materials, equipment, collections etc. against the libraries' level of market-orientation. He found a positive connection between market-orientation and service effectiveness, the ultimate result being higher customer satisfaction.

In our article, we emphasize marketing as a part of collection development, and as a natural part of "user-centered" collection development.

3. Organizations of case studies

General information on the cases, the UTA Library and the UNAM Library

The UTA Library exists for its users. According its strategy the Library develops its services emphasizing customer orientation as a part of the national and international research library network (Tampere University Library Strategy 2010–2015). The premise of the collection building of the UTA Library is to serve the needs of research and teaching in the University of Tampere (Tampereen yliopiston kirjaston kokoelmien kehittämisohjelma 2011). The marketing of collections is ultimately a matter of securing that information about the collection services offered by the Library reaches the members of the scientific community and that the whole Library achieves its goals.

The primary mission of the UNAM Library is to facilitate excellence in teaching and learning, create an appropriate study and research environment, anticipate and respond to student learning and research needs, contribute to positive graduate outcomes and provide an infor-

mation infrastructure necessary for ground-breaking teaching, learning and research. (University of Namibia Library Establishment 2012).

In-line with the University of Namibia's strategic plan (2011–2015), the major goal of the UNAM Library is to deliver client-focused innovative information products, services and programs of the highest quality that are integrated with, and central to, the University's teaching, learning, research and community service activities.

The UNAM Library is charged with the duty of selecting, acquiring, organizing and providing access to appropriate, current, relevant and adequate information facilities, services and resources in support of the University's curriculum and research programs. The Library is therefore a knowledge hub that underpins learning and study, research and development. The UNAM Library is moreover entrusted with the national mandate to make its resources available to individual members of the public, even if they are not in any way affiliated to the University. The Library thereby makes meaningful contributions towards the attainment of the Namibian nation's development plans. However, the Library has been declared an official depository which strengthens its legal responsibility to provide public access to and preserve Namibian intellectual output. (Namhila & Ndinoshiho 2011.)

Collection development and marketing examples

Collection marketing in the UTA Library – two ways

Libraries and other non-profit organizations have two ways to manage the promotion of their libraries and library services. They can do it through marketing and through public relations. (Carter & Seaman 2011.) The UTA Library uses both of these.

To manage the library services promotion with public relations, the UTA Library co-operates with users, i.e. with researchers, teachers, and students. Representatives of the Student Union of the Uni-

versity of Tampere have an annual meeting with librarians to discuss students' wishes and needs concerning library services. The meetings with students have been very important, for instance the discussions about e-books as textbooks.

Also, the Rectors and Administrative Director of the University and the Deans of the Schools are invited to the Library every year. They are introduced current matters, including collections and they are, of course, welcome to make questions and suggestions to Library representatives. The main significance of these meetings is in the fact that the Library can tell the University management about its strategy, its objectives, and its services. This course of action is a part of the marketing of collections. The activity and initiative of the Library are crucial.

The Library has assigned a contact person, a liaison librarian, for all of the Schools and Independent Institutes of the University. The liaison librarians ensure that all current Library news, including collections, is reported to every unit of the University. Units may also invite the liaison librarian visit to the Schools or units.

The UTA Library has used the collection mapping method when describing its collections. When the new description is ready, the Library invites the experts of the subject area to explore the description. The description of one subject collection is a very good tool to inform the members of the personnel about the quality of a specific subject area. Researchers and teachers are also able to voice their thoughts and ideas concerning the collection. The collection mapping method is a special tool when estimating collections but can also be considered as a part of collection marketing. (Hyödynmaa & Ahlholm-Kannisto & Nurminen 2009.)

This course of action in the UTA Library describes the two-way model: inform the academy community about the Library collections and listen to their questions and suggestions. The usability of the UTA Library collection mapping method at the UNAM Library has been considered elsewhere in this volume (Hyödynmaa & Buchholz 2012).

By collecting customer feed-back, the Library develops its services. Customer feedback is collected continuously and regularly. Customers are able to give feedback or ask questions about the Library and its services by completing the form on the Library's web-page or by leaving written feed-back at the customer service desk. Customer feedback will be analyzed and reported regularly once a year.

User questionnaire surveys are arranged at intervals of a couple of years, most of them have been conducted nationally on electronic resources provided by FinELib, the National Electronic Library. The analysis of the results is crucial to ascertain customer satisfaction. When analyzing user surveys the Library has sometimes detected some weaknesses not only in resources but also in its marketing. Sometimes the customers have suggested in the questionnaire surveys such resources which have already been acquired.

In collection marketing guidance in information literacy is very important. The UTA Library offers this to students and staff members. For students it is compulsory and is integrated into the curricula of the Schools. Teaching the basics of information seeking to first year students at the UTA Library has been described elsewhere in this book (Asplund & Mwiiyale & Karsten & Tapio 2012).

With electronic resources, collection marketing has become much more important than in the era of print resources. The methods and channels of marketing have diversified from face-to-face to Internet, social media etc. (Kennedy 2010.) The UTA Library utilizes different techniques when marketing its resources and develops them continuously. Reporting by e-mails is a fairly traditional means of informing the customers about new resources. Particularly, liaison librarians send e-mails to inform their contact persons in the Schools and units. Customers are able to order the Library Newsletter, which is delivered once a month to the subscriber's e-mail. This provides customers with all kinds of information about Library services and collections.

The Library's web-pages are the most important way to discover what the Library offers its customers. The collections website, the Development Program of Collections, actual in e-resources, feedback forms, acquisition suggestion forms etc. are an essential part of collection marketing. The LibraryThing -service is used to give examples to the customers of the Library's latest book acquisitions. The acquisition personnel select the books for the service. Certain urgent or minor matters and changes in e-resources are announced using Twitter. The branch library for Health Sciences is, for the present on Facebook. Occasionally the collection marketing, in other words, special contributions about the Library collections is the theme of the Library's blog and network magazine.

Collection development policy and information seeking skills
– ways of marketing in the UNAM Library

The UNAM Library collection development policy is a document drawn up by the UNAM Library to provide guidelines whereby the collection is developed and managed to meet the needs of students, staff and academics. It also explains the past, present and future acquisition and collection practice of the UNAM Library for the edification of bibliographers, clientele and everyone who has a concern in the library question.

Since, a large percentage of the students come from disadvantaged backgrounds and lack basic information, orientation in library and information seeking skills need to be studied effectively at the University of Namibia. Additionally, Namhila and Ndinoshiho (2011, 8) say that "each year the library faces highly variable skills levels among new student intakes. Some of these first year students enter the university without even having seen a computer or an encyclopedia and with no prior experience in using a library, let alone computer or possessing basic information skills."

The UNAM Library staff has created some mechanisms to ensure that collections and services are marketed to the library users. As Madhusudhan (2008) stressed, marketing is the instrument through which the library objectives can be fulfilled. Indeed, the UNAM Library has appointed a Library Exhibition Committee at the same time partnership and working together with other departments in the University, namely the Computer Center, the Marketing and Communications unit as well as the UNAM Information Society, in order to ensure that the Library's resources and services are marketed to the University community as well as to the general public.

The committee is approved by the University Librarian and sits for a term of one year, after which a new person is nominated and incorporated by the entire Library staff with the cooperation of the heads of the sections, and the approval of the University Librarian. This committee holds regular meetings, once every quarter for general committee follow-up, and regularly when mounting an exhibition as and when is required. Furthermore, the committees mount exhibitions at least four times in a year; draw up themes from national events as well as international events.

User perspectives

Better collections with the help of users – the UTA Library

The UTA Library exists for its users. The collections have been built to serve users' needs. Co-operation with customers enables the Library to receive the best information on which books, journals and databases are important and necessary for research and teaching.

In spring 2012 acquisition department in the UTA Library wanted to elicit additional information about the significance of the acquisition suggestions. What proportion of the book acquisitions are "just in case", and what proportion are "just in time", what is the

concept of the errors of inclusion and exclusion. "Just in case" refers to books which may be needed later, not now. "Just in time" refers to those books which are needed at once. (Jones 2007.)

The acquisitions department collected all book orders, separating the books suggested by users (suggested books) and the books selected by the librarians (selected books) and examined the loan history during the first year of the book life cycle. Ten per cent of the books acquired were followed up during the first year of the life cycle of the books. The acquisitions department wanted to know if there was any difference between the number of loans when the book acquired had been selected or suggested. The result was that, especially among foreign books, those suggested by users were more "just in time", meaning resources needed immediately. The books selected by the librarians were more "just in case" and had not been borrowed as many times per year as suggested books. Some foreign books had not been borrowed at all during the follow-up period (Table 1.).

Table 1. Number of borrowings of just-in-time and just-in-case books 2010–2011*

Number of loans of just-in-time and just-in-case books				
	Finnish books (total 39)		Foreign books (total 114)	
	Just-in-time =Suggested by the users (9)	Just in case =Selected by the Library (30)	Just-in-time =Suggested by the users (72)	Just in case =Selected by the Library (42)
Borrowers per book	6,2	4,5	2,5	1,2
Checked out	80%	63%	49%	21%
No check-outs	0%	0%	11%	48%

*textbooks were not included

The follow-up showed that when the Library activates its users to send acquisition suggestions it ensures that the book purchased on the basis of suggestions are those which are needed immediately.

UNAM: Subject Librarians – cooperation with users

The Academic library is the "heart" of the learning community, providing a place for students and faculty to do their research and advance their knowledge. The role of the Subject Librarian differs from institution to institution and often requires some subject expertise, sometimes technical and language skills. Subject Librarian's relationship with the user should be seen as crucial because it reflects the subject and faculty structure of the educational institute it serves. (Pinfield 2001.)

At the UNAM Library most of the services are handled by the Subject Librarians also known as Faculty Librarians. These Subject Librarians are the primary contact for the assigned faculty for questions and information regarding library collections, instructional support, reference services, and designing a search strategy for retrieving information on a broad topic. Although it has been claimed that marketing is the responsibility of everyone, it is also the obligation of the Subject Librarian to market library collections and services to the heads of departments, faculty and students, especially new/old acquisitions, print and electronic resources. There is no formal information literacy teaching program at the UNAM Library; this is included in the Subject Librarians' responsibilities (Asplund et al. 2012).

One part of marketing strategy is to research the needs of the community served and to match those needs with the competencies of the library, being very careful to set user expectations at a realistic level (Boudreau and Manley 2004). However, with the emergence of new technology students as well as academic staff needs change, too. Therefore, there is a serious call for academic libraries to refocus

their thinking and marketing strategies towards the changing needs of their library users**.**

4. Discussion

Above we considered the ways of collection marketing in two libraries, the UNAM Library and the UTA Library. We asked what tools, means and ways are utilized in marketing collections and collections services. Due to the differences between the libraries, the collection marketing assumes different forms and emphases in its functions.

The teaching of information seeking skills is used in one way or the other in both of the libraries. The UNAM Library has the subject librarian system and the UTA Library has a liaison library system. The UTA Library uses some special methods like collection mapping descriptions and certain channels of social media when marketing collection services. In the UNAM Library, there is a Library Exhibition Committee which works together with other departments of the University to ensure the marketing of library services.

There is no library without collections and no collections without customers. Both libraries are considered to be custom-oriented or user-centered. Libraries are different and the ways of doing are different but Singh (2009b) proved in his research that it pays to be more "market-oriented" because it means better customer satisfaction.

New technology, for instance social media, has assumed an increasingly important role everywhere. Naturally, librarians have to follow innovations and develop libraries' modes of action in the same direction. Of course, the changes in a university are reflected in the functions of its library.

In the future, the UTA Library will concentrate even more than before on creating some kind of subject librarian course of action, namely subject-based information specialists. Probably some special

groups, for instance researchers, will receive some tailored services from the Library. Guidance in information literacy is for first time compulsory at every level of curricula in 2012. Some new ways of collection marketing will also be planned and tested, for instance BookNavigator. A Patron-driven-acquisition (PDA) model is planned to start up soon in e-books acquisition.

The UNAM Library creates an atmosphere as well as a set of intellectual resources conducive to teaching, research, discussion, and the appreciation of knowledge across the disciplines of the higher learning institution, where the staff makes sure they provide the resources to their users. Providing library resources is a great initiative; however there are some marketing strategies that the UNAM Library should consider for successful marketing. The Library Exhibition Committee will continue to plan future marketing activities and to make recommendations about marketing in the Library. Next year, there will be a new committee so that librarians can rotate, thereby enabling new staff to participate with new experience. It is also important for the committee to create an annual budget devoted to marketing activities.

5. Conclusions

In this chapter, we considered the collection services marketing in two university libraries. We reviewed the subject in the light of literature and compared it with two cases, collection marketing in the UTA Library and the UNAM Library.

Libraries consider the term "marketing" somewhat strange and associate it with commercialism. The idea of non-profit organizations' marketing is to broaden the concept of marketing. The literature published in the field of information and library science concerning marketing shows that there are differences between libraries. Some

libraries have used different marketing techniques, some have separate budgets for marketing. (Singh 2009a.) Both the libraries, the UNAM Library and the UTA Library use two ways of collection marketing: through traditional marketing ways and through public relations. The UNAM Library has the national mandate to make its resources available to the public thereby being a part of the Namibian nation's developments plans. The UTA Library concentrates its collection services mainly on serving the University's needs. In these libraries the ways of collection marketing are similar, telling customers about collections and activating them to tell their respective libraries what is needed. When marketing their collections, the main goal in both libraries is to improve customer satisfaction.

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USABILITY OF THE TAMPERE UNIVERSITY LIBRARY COLLECTION MAPPING METHOD AT UNIVERSITY OF NAMIBIA LIBRARIES

1. Introduction

The information resources offered by libraries are the backbone of research, teaching and studying at universities and the libraries actually want to ensure the availability of high-quality information resources (Tampere University Library 2011b). To develop the collections and ensure quality, libraries need to identify the present state, the strengths and weaknesses, of their subject-based collections. Facts about the subject collections and their usage are needed and the collection mapping method used by Tampere University Library provides such facts.

The main purpose of this chapter is to characterize the collection mapping method in use at Tampere University Library and assess the possibilities for its adoption by the University of Namibia Library (UNAM) in spite of differences in collections, size and circumstances.

Background of collection mapping

Collection mapping, collection evaluation and collection assessment are terms that describe the same process. Reitz (2012) sees collection evaluation as synonymous with collection assessment and defines collection assessment as "the systematic evaluation of the quality of a library collection to determine the extent to which it meets the library's service goals and objectives and the information needs of its clientele. Deficiencies are addressed through collection development."

The concept of collection mapping or collection assessment is not new; the idea of this professional library tool dates back to the 1940's (Bushing 2006a, 9). According to Bushing (2006a, 10): "… collection mapping provides a broad range of operations and techniques to be selected to achieve the degree of informed collection understanding necessary in any given circumstances." Finally, collection mapping at Tampere University Library is understood as a technique to map, evaluate and describe subject-based collections (Hyödynmaa & Alholm-Kannisto & Nurminen 2010, 43).

Collection evaluation, mapping or assessment is a process whereby the scope and balance of a library's existing collection is systematically compared with the scope and balance of materials desired by the library user. It is intended to provide the libraries with important information and can serve as a management tool for internal analysis, for adapting the collection, as a communication tool for resource sharing possibilities or to respond systematically to budget changes. Professional collection development skills can further enhance a collection that is as appropriate as possible. (Arizona State Library, Archives and Public Records 2012.) Whatever the size of the collection, the objectives are both responsiveness to actual and anticipated user needs and accountability of the material added to the library's collection (National Library of Australia 2004).

Collection evaluation methods can be grouped into collection-based methods (counting holdings, checking lists to determine the

collection´s scope and depth), usage statistics (turnover rate) and user-based methods (gathering information on how clients use the collection) (Arizona State Library, Archives and Public Records 2012).

There are various techniques for gathering either quantitative data (including numbers, age or use statistics) or qualitative data (observations and analysis by informed staff and users familiar with specific subjects). The most common techniques are:

1) Shelf list measurement / Collection-centred statistical method

The shelf list method produces collection-centred statistical quantitative information on the number of titles, percentage of the total collection and average age as well as possible language divisions of the collection. **Shelf lists are nowadays collected using electronic** library systems. Quantitative data is gathered including the number of titles/items of a specific segment and the percentage this section constitutes of the total collection/subject area. Statistics on the age of a collection reveals currency and/or retrospective strength, keeping in mind the subject area as well as the goals of the library.

2) Usage statistics

This method can include circulation statistics, interlibrary loans, in-house use and turnover rate. The turnover rate is ascertained by dividing the number of circulations by the number of items or titles in a segment. If the usage rate is high, it indicates that this area may need more resources. A low turnover rate may suggest that the collection is not very popular with users.

3) Shelf-scanning

This technique entails the physical examination of materials on the shelf. Both the contents of the collection and the condition of the material are examined. **This method, like every method, has its** strengths and weaknesses. It is fast and yields immediate results,

but the results may be subjective and depend on the knowledge and expertise of the librarian or **outside experts.**

4) **List checking**

This method compares the percentage of standard titles or items against best lists or standard bibliographies. The disadvantage is that these lists rapidly become outdated. The Conspectus method commonly used in the United States is an example of a list checking method.

5) **User survey**

This client-centred method entails user surveys and by eliciting users' opinions, views and assessments.

6) **Citation analysis**

This method is more common in special or research libraries and can measure the strength of collections or recent developments. It is useful for broad subject fields and necessitates examining citations, footnotes and/or bibliographies in local theses or recent articles and scholarly books and checking them against the library holdings.

It is not necessary for libraries to follow all of these methods to achieve quantifiable results. The first three methods are the most used. (Simosko 2003; National Library of Australia 2004; Bushing 2006b; Wilén & Kortelainen 2007, 118–119; Hibner & Kelly 2010, 62, 92; Arizona State Library, Archives and Public Records 2012.)

In order to get the best results it may be worth combining collection-based evaluation methods for print resources with usage-based statistics for electronic resources (Borin & Yi 2008, 136). The changing landscape of collections may require new evaluation methods such as combining usage indicators with capacity measurement, in terms of dollar expenditure (Borin & Yi 2011, 120). Although collection evaluation techniques have changed due to changes in technology, the

purpose and benefits have remained the same: "Whatever the tool, the 'picture' of resources that results enables libraries to adjust their holdings to better meet their missions…" (Bushing 2006a, 9).

In Finland collection mapping is based on the work done in scientific libraries. In 2003, the Council for Finnish University Libraries initiated the Collection Map Project for Finnish University Libraries, which was continued as the Finnish Collection Map Consortium 2008–2011. The collection mapping method is an outcome of this collaboration.

The Finnish collection mapping method provides a framework to plan and carry out collection evaluation at the library. It combines both collection-centred and usage-centred methods. The method includes the determination of the volume of the subject-based collection, determination of the average age and language divisions of the print collection, shelf-scanning and usage statistics. When defining the present level and the goal level of each field collection, the application of the Conspectus technique can be useful. Defining is based on the Finnish Conspectus application, which indicates the completeness of a field collection expressed by levels from 0 to 5 (Wilén et al. 2007, 130–131; The Collection Map Project 2009a).

The Finnish collection mapping method is primarily focused on subject-based collections, but is applicable to any collection. Sharing some features of the Conspectus method, the method used in Finnish libraries is, however, more flexible and enables balanced collection evaluation.

2. The University of Namibia Library: the need for collections mapping and description

The University of Namibia (UNAM) is one of the most recently founded universities in the southern African region and was established

by an Act of Parliament on the 1ˢᵗ September 1992. Currently the UNAM Library includes 11 branches and eight centres.

The Library experienced problems initially as it was administered as a unit of the Registrar's department. This meant that the University Librarian could not have a seat on policy-making committees, particularly those committees that decided on budget allocations. As a result, the Library was poorly financed as it was allocated only 4% of the institution's budget. Another problem at its inception was the poor physical facilities, as the library was housed in an apartment building that was unsuitable as a Library building. It was only able to seat 85 people and its Technical Services section was housed in a different building on the other side of the campus. Furthermore, the Library did not have a balanced collection because certain subject areas were over-represented while others were inadequately represented. A small staff with limited subject knowledge backgrounds also added to the Library's problems.

With the transition from an academy to a university in 1992, the prospects for the Library and its staff improved considerably. University management acknowledged the importance of the Library as an extension of the lecture room. Financing improved significantly when the Executive Committee of the University allocated a 10% of the recurrent expenditure budget to the Library documents. (Avafia 1993, 115–123.) In 1995, the University moved its premises to a new campus. This included a dedicated Library building, a great improvement on the previous building in functionality and space.

It was recommended that the University Library's operations be computerized from the outset and in 1992 the URICA library system became operational. The library of UNAM established Internet access in June 1996 through a Point of Presence (POP) server located at the University Computer Centre (Chisenga 1999, 4; South African Development Community 1999, 40). The INNOPAC Millennium library system was introduced in 2006 following a grant from the Andrew Mellon Foundation. In contrast to the URICA library system

previously in use, INNOPAC is accessible via standard Web browsers; for the first time copy cataloguing through OCLC was possible.

The different collections within the Library are the so-called open shelf collection, reference and short loan/reserve collection, serials collection and a special collection which houses material on Namibia or by Namibian authors. Although the Library is only starting to order e-books by mid-2012, electronic database subscriptions have been provided since 2003. The Library also develops some databases with local Namibian content. (University of Namibia Library 2006–2009.)

3. Collection mapping methodology at Tampere University Library and its applicability to the UNAM Library

The collection mapping method used by Tampere University Library is an application of the Finnish method at a multidisciplinary university library. It involves all key elements except the Finnish Conspectus application. The collection mapping method focuses on subject-based collections, both print and electronic, in the teaching and research fields offered at the University of Tampere. Both the quantity and quality of each field collection of the Library are analysed. Statistical data is gathered on the volume and the usage of the subject-based collections, separately for books and journals and likewise separately for e-books, e-journals and databases. A description of each subject-based collection is written after the data has been analysed. Furthermore, the details are shared with the representatives of the subject field, namely lecturers and researchers. (Hyödynmaa et al. 2010, 45.)

Collection mapping has been carried out one subject area at a time at the Main Library with over twenty subject-based collections in the fields offered at the University of Tampere. Mapping the

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collections all at once would have been excessively laborious. As the number of subject-based collections at the branch libraries is smaller, all collections at the Department of Health Sciences were mapped at the same time. As for the Department of Humanities and Education, collections were mapped one by one as at the Main Library.

Evaluating print book collection

The subject areas according to which the collections at Tampere University Library are mapped, evaluated and described are based on those described in the Finnish Collection Map Project. These subject areas are quite compatible to the shelf classes at Tampere University Library (The Collection Map Project 2009b; Tampere University Library 2011a). The book collections of the Library are therefore mapped according to shelf classes.

In Tampere University Library all searches are executed as Microsoft Access queries in the Library´s own online catalogue, which is a Voyager database. In most cases, in the Main Library, the shelf classification is too rough to find focal areas in the subject-based collection. In such cases, the search is based on the classification systems and thesaurus used in the Library now or earlier. The number of titles, the age distribution and the language distribution of the subject-based collection are counted. Likewise, the age and the language distributions of the checkouts and the titles in circulation on a given day are counted. (Hyödynmaa et al. 2010, 45.)

The results of Microsoft Access queries are converted into Excel tables, where the numbers of titles are sorted by year of publication and language, see Table 1. The checkouts and titles in circulation are sorted likewise. The years of publication are grouped mainly by decade according to the recommendations of the Finnish Collection Map Project. The Excel tables provide information on the main languages of the collection and the age of the collection, likewise information

on which decade of publication is the most typical in the collection (the mode decade of publication). Combining the Excel tables yields information on the usage of titles of different ages, see Table 2, and language. Furthermore, it is also possible to obtain a ranking list of the most circulated titles as well as a list of the titles that have not circulated at all. (Hyödynmaa et al. 2010, 45–46.)

Number of titles in journalism and mass communication collection												
Year of publication	Eng.	Fin.	Ger.	Swe.	Fre.	Dan.	Nor.	Rus.	Mul.	Spa.	Est.	Por.	Total
0000-1899	0	0	0	6	1	0	0	0	0	0	0	0	7
1900-1949	41	40	20	14	2	3	1	0	0	0	1	0	122
1950-1959	47	16	13	12	2	2	0	0	0	0	0	0	92
1960-1969	144	34	34	20	7	3	3	0	0	0	0	0	245
1970-1979	242	140	43	26	9	5	1	0	4	0	0	0	470
1980-1989	766	268	201	119	48	17	28	2	2	7	0	0	1,458
1990-1999	786	282	133	84	45	22	13	2	4	1	1	1	1,374
2000-2009	786	215	31	78	3	5	7	7	0	0	0	0	1,132
2010-2014	41	8	0	2	0	0	0	0	1	0	0	0	52
Total	2,853	1,003	475	361	117	57	53	11	11	8	2	1	4,952

Table 1. Age and language distribution of the journalism and mass communication collection at Tampere University Library (2010)

	Titles		Checkouts		In circulation (11 Nov. 2010)		
Year of publication	No.	Percentage	No.	Percentage	No.	Percentage	
0000-1899	7	0.1	0	0.0	0	0.0	
1900-1949	122	2.5	89	0.4	8	1.0	
1950-1959	92	1.9	45	0.2	3	0.4	
1960-1969	245	4.9	357	1.8	13	1.6	
1970-1979	470	9.5	814	4.1	37	4.6	
1980-1989	1,458	29.4	3,099	15.6	101	12.7	
1990-1999	1,374	27.7	7,819	39.4	222	27.9	
2000-2009	1,132	22.9	7,518	37.9	383	48.1	
2010-2014	52	1.1	88	0.4	30	3.8	
Total	4,952	100.0	19,829	100.0	797	100.0	

Table 2. Number of titles, checkouts and titles circulating on 11 November 2010 in the journalism and mass communication collection at Tampere University Library by year of publication

At the UNAM Library subject specification can be done very concisely as cataloguing is done in detail using the Dewey Decimal Classifica-

tion (DDC) system. By applying often extended class numbers (e.g. 344.41012596 for "law of dismissal of employees in Great Britain"), specific subject areas or focal areas can be identified without difficulty. The decision could/should be made to only reflect broader subject areas by limiting the DDC numbers to a certain level.

The principle of the Finnish collection mapping method is to keep the process simple. For example, it is not necessary to count every item of the whole library. At Tampere University Library, only the titles of the general loan collection, books on open shelves and books in closed stacks, and the reference collection of the field are counted. Books belonging to text-book collections, special collections, the dissertation collection or the thesis collection are excluded. In addition, only the books of the main collection are counted. For example, the Main Library is responsible for the psychology collection and the most psychology books are located in the Main Library. In the branch libraries there may be some psychology books but they are not included in the mapping.

The textbook and general loan collections are not separated at the UNAM Library and are together known as the Open Shelf Collection. Because of the geographic distribution of Library branches all over the country, a decision could be made making the Main Library representative of the whole collection. Gaps in the collections of the branch Libraries are of major concern. A collection mapping exercise could be of great value in identifying them.

Evaluating book collections by shelf-scanning

Shelf-scanning is a part of the Finnish collection mapping method. It is a qualitative method of evaluating book collections based on the librarian´s expertise. The idea is that the librarian visits the bookshelves to scan the book collection of a given field. What is typical for this book collection? Is it scientific or not? Who seemed to be the target

users of the collection? Is the collection up-to-date or out-of-date assuming that the newest books are circulating? Does the collection hold both earlier editions and recent revised editions or unnecessary copies of the same book? What about the physical condition of the books? Do the books look as if they are read? One aim of shelf-scanning is to ascertain whether there are principal works and classics in the collection. Moreover, if possible, shelf-scanning together with some representatives of the discipline, lecturers and researchers is a great advantage. After scanning the librarian describes the collection in a few sentences. (**National Library of Australia 2004; Bushing 2006b;** Hyödynmaa et al. 2010, 46–47.)

At Tampere University Library 23 subject-based collection analyses have so far been completed. Of these collection analyses 15 included shelf-scanning. Shelf-scanning was focused on the general loan collection of each subject area. The closed stacks collection was excluded. The length of the description based on shelf-scanning varied from a few sentences to one page. **Usually, one or two librarians scanned** the book collection of the subject area. In four cases, the lecturers and researchers of the discipline shared their collection observations with librarians.

The results concerning 15 of the scanned subject-based book collections differed to some respect. All book collections seemed to be scientific, while some unscientific material was noticed in only three of the collections.

The physical condition of the books was generally good. In some collections, the material on the bookshelves looked as if it had been used frequently and in others not. Reasons for the non-use of books may include language, age and the specialization of the contents. The age of practical guides especially seemed to be an obstacle to usage. In some cases, depending on the subject area, the age of the books did not restrict their use; for example in general linguistics. However, some librarians expressed concern about the new material being lost

among the old material on the bookshelves. This concern was justified because most of the subject-based loan collections included material published since the 1960´s, the oldest material being in the closed stacks. Assuming that the newest books were in circulation, there were fewer new than old books on the bookshelves.

Unnecessary copies, such as earlier editions, were seen as a problem in only one subject area. In most cases librarians were aware of duplicates. Multiple copies were often due to collections having been combined or to internal relocations.

Shelf-scanning also focused on serials. Only in one case was it mentioned that the collection contained only monographs and not serials. Serials, especially old ones, seemed to be quite problematic in some subject areas.

Weeding was mentioned in many cases, either it had been done recently or it was to be done at a later stage, weeding was seen as a solution to get rid of out-of-date and old material, duplicate copies, books not used and damaged material.

In addition to the physical condition and usage of information sources, librarians evaluated the quality of each subject-based collection by looking at areas such as current content, core titles and classics. The latter was the most demanding part of shelf-scanning and the aspect in which the expertise of librarians or lecturers and researchers was most helpful.

This principle could be applied in the same way to the UNAM libraries. As shelving of books is sometimes in arrears, unshelved books can also give an indication of the usage of certain material.

Volume and usage of print journals

The volume of print journal titles in a given field is counted manually at Tampere University Library. Only current subscriptions to print

journals are included. Fortunately counting is not very time-consuming because the number of print journal subscriptions is diminishing. Information on the most used journals in a given field is gathered through journal usage data which Tampere University Library organizes every year. (Hyödynmaa et al. 2010, 48.)

UNAM still relies heavily on print subscriptions because of electricity and bandwidth problems which occur frequently, especially in the rural areas. Determining the usage of print journals was only done randomly by shelvers of that section when considering possible cancellations of non-used journals. More systematic counting would only be possible for journals older than one year as they are bound and available for loan.

Volume and usage of e-journals

The electronic collection of Tampere University Library is defined as electronic material that can be found and accessed through the Library´s Nelli portal at the University of Tampere. Both mapping of electronic material like e-journals, e-books, databases and e-reference works and the usage of e-journals, is based on the information available through Nelli portal. Electronic subject collections are gathered from Nelli´s categories and subcategories. Categorizing databases by subject was done at Tampere University Library but categorizing of individual e-journals by subject is dependent on the categories predefined by the SFX link server of Ex Libris. Mapping the electronic collections of various subject areas, especially e-journals, is quite laborious. (Hyödynmaa et al. 2010, 47.)

The electronic collection includes both licensed e-material and selected open access material. The volume of the e-journal titles in the subject area is counted and usage statistics are compiled for them and converted into Excel tables. The ten most used e-journals in the field are ranked according to full-text article requests. Usage statistics

are not collected for open access journals or the e-journals outside the licensed packages of the Library. (Hyödynmaa et al. 2010, 47.)

E-journals in UNAM can also be found in packages, as individual subscriptions and via open access. Data on subscription based e-journals is also gathered using the integrated statistical modules of the subscription databases. Although collection mapping at Tampere University Library has not included calculating the costs per article depending on the usage of e-journals, it would be useful to do this at the UNAM Library.

Quality of print and e-journals

A new feature of the collection mapping method used by Tampere University Library is that of evaluating the quality of the print and e-journals of a subject-based collection. This evaluation is based on the work done in the Finnish Publication Forum Project. The subscribed journals of a subject-based collection at Tampere University Library could be compared with the journals classified in the Finnish Publication Forum Project.

During the project, the publication channels were rated by fields in categories: level 1 covers scientific publication channels and level 2 covers the leading scientific publication channels; moreover, level 3 covers the world top publication channels in the respective fields (Auranen 2012, The Finnish Publication Forum Project 2012). It is possible to obtain the subject-based lists of journals with Publication Forum classification and upload them into Excel tables. As to the journal subscriptions of the field, it is important to ascertain if Tampere University Library subscribes to journals of level 1, 2 or 3. As most of the titles in the Finnish Publication Forum database are in English, the same kind of comparison could possibly be done at UNAM Library.

Quality evaluation has not been done in the UNAM Library, but using both Scopus and the title list from the Finnish Publication Forum database would be a helpful method to start that process.

Mapping of e-books and databases

At Tampere University Library a subject-based collection includes different document types. In addition to print books, print journals and e-journals, the volume of e-books and databases of the field is counted. The databases comprise both full-text databases, e.g. Ebscohost Academic Search Premier and SAGE Journals Online (Premier), and reference databases like CIOS ComAbstracts and PAIS International. The titles of the e-book packages and the databases are listed in the collection description. For the present, the usage of e-books and databases is not recorded at Tampere University Library. The number of titles of different document types illustrates the development of electronic publishing in the field and in the subject-based collections, see Table 3.

Document types	Number of titles
Print books	4,952
E-books (Ebrary, NetLibrary)	about 500
E-reference works	24
Print journals (subscriptions)	13
E-journals	about 100
Databases (both full-text and reference databases)	10

Table 3. Size of the journalism and mass communication collection at Tampere University Library (2010)

The UNAM Library only received their first e-books in June 2012. Reference databases are not commonly found in UNAM's collections either and usage statistics are not maintained.

4. Conclusion

The principles, methods and techniques of collection mapping are manifold, and not all of these methods need to be followed in order to achieve measureable results. The UNAM Library can learn from its counterpart Tampere University Library how best to adopt the methods of collection-centred statistical method with usage statistics and shelf-scanning to achieve outcomes that will show the usage, balance, currency and physical condition of certain areas of the collection. In the UNAM Library statistics were gathered but only haphazardly and more to show the growth of the collections without interpreting the data for collection management purposes.

Lessons to be learned:
- do not attempt to map the entire collection; the process is time consuming
- rank the most frequently used titles of books as well as journal titles
- hand count the usage of print journals before shelving for an estimated turnover rate for material that is not borrowed
- include faculty staff when shelf-scanning
- after follow-up report when subject area is mapped, make possible changes to the collection development of that area and weed where necessary.

Certain background instruments like electronic resource management tools, history of statistics gathered on usage and prices, evaluation of quality journals, federated search options are lacking at the UNAM Library. In order to build better and more appropriate collections, collection mapping is one of the processes that should be started as soon as possible.

Collection mapping proved to be a successful tool for Tampere University Library to evaluate collections and use the information so

obtained to develop balanced subject collections. This exercise could only benefit collection management at the UNAM Library.

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Maria Forsman, Joseph Ndinoshiho & Eija Poteri

RESEARCH SUPPORT SERVICES
OF UNIVERSITY LIBRARIES: TODAY AND IN THE FUTURE

1. Introduction

The purpose of this chapter is to discuss and compare research support services in the Helsinki University Library Tampere University Library in Finland and in the University of Namibia Library. One of the main tasks and functions of university libraries is to create good conditions for research and support researchers in their work. Traditionally libraries have supported researchers by buying books and journals for their use, offering access to the material and providing information services such as information retrieval and training in information literacy. Since 2000 the role of libraries has been changing due to many profound changes in information technology, universities, Internet, in the new working cultures of researchers and also global changes. In this chapter we describe the present research support services in our libraries and consider the future and the role of libraries in research communities. This topic is important because it provides library managers with useful insights to consider when planning information services for researchers.

2. Diversity of research support services

Supporting research is a key issue in academic and research libraries. Library research support services can be viewed as specific information services provided by a particular library to promote research by meeting the unique information needs of the researchers within a particular institution. They include, for example, sessions where librarians provide instruction on data management software, information retrieval assistance from a new database or new features in a database already subscribed to by an institution, advice on open access and bibliometrics.

In providing these services, libraries are always mindful of the fact that researchers and their needs are not identical. Researchers in different fields of science and disciplines have different research cultures, different ways of using library resources and different information needs (Talja & Vakkari & Fry & Wouters 2007). For example, in science and medicine the research community is very international, while often in social sciences and humanities both research problems and communities may be national and local. When research support services are organized in university libraries, it is important and useful to know about the way researchers work and what kind of networks they have (Forsman 2005). Understanding this difference in research cultures between branches of science gives us better opportunities to develop research support services in university libraries.

For many years libraries have offered traditional research support services such as acquiring library materials (books, journals etc.) for ongoing research as well as preparing for future research. Libraries further afford researchers the opportunity to find and use library material. For this libraries have means like cataloguing, subject description and, finally, giving access to the material either by lending printed material or by offering access to e-material on the net.

Academic and research libraries also provide different information services for users. When users' own information searches of databases

were impracticable, information specialists offered them information retrieval services. User education and training in information literacy can also be seen as a traditional form of research support services.

Doctoral students and researchers may not be the easiest group to reach. Poteri (2007, 61–63) reported that researchers often seek help from colleagues before approaching the library. Similarly, they sometimes need advice or encouragement from a colleague before starting to use a new library service.

The problem of doctoral students abandoning their studies, and how the academic library may better support such students has been researched by Colleen S. Harris (2011). She found that library instructions do perceptibly improve doctoral students' research skills and performance. According to her literature review, doctoral programs and academic librarians were formalizing partnerships in many universities. The models of research skill instruction included online tutorials, one-shot workshops, course integration and one-on-one individual consultations. Individual consultations were also called "a personal librarian" or "a personalized research clinic". An important finding was that a tailored approach was essential for doctoral students, as class instruction was too advanced for some and not advanced enough for others.

While many students and researchers have learned themselves to conduct information searches on subject databases, new needs and challenges have emerged in the area of the information support services the library provides to researchers. Haglund & Olsson (2008, 52) argue that "to be able to further develop the functions of the university libraries, it is necessary to be attentive to the changing needs and methods of work of younger researchers, otherwise university libraries cannot contribute to the competitiveness of its university research". Meanwhile Hart and Keinveldt (2011, 40) also claim that "librarians need to recognize that different disciplines or domains have different requirements and that the expectations of senior established researchers might well differ from those of young PhD students".

These new needs relate, for example, research data management and archiving, bibliometric analyses and research evaluation, supporting publishing, likewise new forms of information literacy training for postgraduate students and researchers. Publishing and information literacy are discussed in more detail in other chapters in this book (Sisättö & Mäki & Heikkilä & Katjavivi 2012; Helminen & Katjihingua 2012). We therefore concentrate in this chapter on other aspects of and approaches to this issue. Table 1 illustrates library support for research communities (Forsman 2011).

Table 1. Research support services of university libraries

Research communities	Library support
Research problem and research questions	Earlier research available
Collecting research materials	Data services in various forms
Research process	Library as space and services
Writing up research results (book, article)	Supporting publishing (open access, e-archives, printed)
Research evaluation	Bibliometric services

3. Research support services at the Helsinki University Library

Helsinki University Library has gone through huge organizational changes during the 2000's (Sinikara 2010). In the 1990's there were more than one hundred faculty or department libraries at the University of Helsinki. As a result of international evaluations and effective planning processes by library staff, a new library organization called Helsinki University Library (HULib) was founded in 2010. It con-

sists of four campus libraries and joint services. HULib is the largest multidisciplinary university library in Finland.

One goal and result of these changes was to develop better research support services – both traditional and new. The idea has been to be reactive and also proactive to researchers' needs.

Research data – the role of library

In the last 10–15 years the question of research data has received more attention than before in the scientific world. There have been new demands from sponsors and publishers. Now, when most of the research data is in digital form, it should be archived and open to all. Thus working groups have been set up in universities in order to find solutions to this problem.

During the last couple of years there has been a working group at the Helsinki University Library that continued the work of a university level research data working group. One of the basic tenets was that different fields of sciences entail differing situations both in data archiving and in the type and extent of the data. Natural sciences and medicine are more international, and some of them – like astronomy (http://www.astro.caltech.edu/~pls/astronomy/archives.html) – have huge international data archives, while social sciences often address national research questions and also national data archives, like the Finnish Social Science Data Archive (http://www.fsd.uta.fi/en/). Moreover, these social science data archives engage in extensive international cooperation both in metadata production, data sharing and service development.

The research data group of Helsinki University Library conducted a pilot study with a research group for "Groundwater-surface water interaction at Lake Pyhäjärvi, SW Finland" (The Research data project of Helsinki University Library 2012). In the conclusions of the report the working group proposes for the role of Helsinki University Library the integration of data management services, coordination and support tasks connected with metada-

ta and interfaces of systems, some part in education, information sharing and services as well as preparation of learning materials. All this means new skills and new roles for information specialists.

Bibliometric services and research evaluation

The role of university libraries as an actor in bibliometrics has been discussed in recent years (e.g. Andrés 2009). Helsinki University Library (HULib) was asked to be a partner in the international evaluation of research and doctoral training at the University of Helsinki 2005–2010 (Forsman 2012). Bibliometric analyses – especially citation analyses – have given rise to much discussion and criticism among social scientists and humanists. The reasons have been that researchers feel that citation analysis is often unfair to these sciences, because it does not give a good enough picture of publishing in these fields of sciences. The coverage of citation databases – Web of Science and Scopus – of the main publications in these fields is poor. Also, in humanities and social sciences monographs continue to predominate, and monographs are not included in these article databases.

Thus at the University of Helsinki, researchers' opinions were taken into account during the research evaluation. The office for the international evaluation of research and doctoral training requested analyses by HULib of those research groups and fields of sciences that are weakly represented in the Web of Science. The research database TUHAT includes all the publications and other research activities that researchers have regarded as important. On the basis of this data information specialists of HULib made the following analyses:

1) Number of authors/publication/year as a table; a pie of authors/publication in the period 2005–2010

2) Language of publication/year; a pie of language of publication in the period 2005–2010

3) Articles/journal/year; journals have been compared by ISSN with the Norwegian, Australian and ERIH(2007–2008) journal ranking lists; number of articles in ranked journals

4) Publisher/monograph type (according to TUHAT database); the monographs were compared with the Norwegian publisher ranking list and then counted the number of monographs published by a leading scientific publisher (2) or a scientific publisher (1).

5) Conference publications (from TUHAT database) especially in computer sciences; compared with the Australian conference ranking list. These analyses complement the analyses and lists of publications of the research groups. If necessary, there are some additional analyses and notes concerning the publishing culture of the scientific fields. (Forsman 2012, 261.)

The HULib participation in the evaluation process was a new departure for the Library, resulting in novel cooperation between the Library and the University of Helsinki research administration. The HULib analyses were seen as a valuable, high quality resource. They emphasized the Library as a neutral partner for the research community, with sound experience of managing scientific information. The success was made possible by a network for bibliometricians from all four HULib campus libraries, sharing a learning process and pooling their expertise on disciplines with widely varying publishing cultures. (Forsman & Isaksson & Hakala 2012.)

Knotworking with researchers – a new approach

Knotworking could be described as a model of organized problem solving, which is more flexible than teams and projects, but its scope is broader than traditional information services. The library staff of HULib wanted to develop closer relationships with users and to experiment with new working methods for collaborating with users. The Library therefore mounted a common project with Professor Yrjö Engestöm and his research group. Professor Engeström developed the idea of knotworking as a method of collaboration and co-working. (Engeström 2008.)

The pilot project started in the Viikki Campus Library in 2009–2010 and continued in the City Centre Campus Library in 2010–2011. The aim was to create new kinds of partnership between libraries and research groups, knotworking. There were four different research groups from different fields of science: Finnish Language Studies, Gender Research, Cognitive Science, also Communications Law. The knotworking groups worked in such a way that the library staff co-operated in one group with Engeström and his team, then library staff worked together with research groups, and finally there was a steering group. (Karhula 2012; Engeström & Kaatrakoski & Kaiponen & Lahikainen & Laitinen & Myllys & Rantavuori & Sinikara 2012.)

The most important results of the knotworking projects were the extended range of services for researchers, changes in librarians' working methods, and a new organizational model for the campus libraries. The City Centre Campus Library continued to develop its services for researchers after the pilot project. Library personnel moreover applied the knotworking method in other projects, such as the bibliometric project.

4. Research support services at the Tampere University Library

The Tampere University Library is a multidisciplinary scientific library including the main library and two department libraries. It supports the whole University community and its goals by providing information, content and services for researchers, teachers and students.

"Book an Information Specialist" service

Teaching personnel and doctoral students often require individual assistance beyond that traditionally offered at a reference desk or taught in information literacy classes. Since 2009 the information specialists in the Department Library of Health Sciences of Tampere University Library have conducted research consultations called "Book an Information Specialist". Because these personal consultations became popular, the service was extended to the Department Library of Humanities and Education and to the Main Library.

University staff and teaching personnel, as well as students writing their master's theses can now book a free one-hour consultation on the databases or other information resources by completing a web form. "Book an Information Specialist" consultations are tailored to meet the needs of individual researchers or research groups. The goal is not to do information retrieval for customers, but to assist them in developing the information skills they need, and to empower them to independently go further in their information seeking. More experienced researchers may prefer presentations of new databases or new features in databases they have already used.

Table 2. Statistics on "Book an Information Specialist"

Tampere University Library: "Book an Information specialist" (2011)	Main Library	Humanities and Education	Health Sciences	Total
Doctoral students, researchers and faculty	24	7	39	70
Graduate students and other	27	11	71	109
Total	51	18	110	179

Table 2 presents the numbers of customers served in research consultations by information specialists in the Main Library, the Department Library of Humanities and Education, and the Department Library of Health Sciences in 2011. The year 2011 witnessed the introduction of the service in all the library sections. Over half of the customers were graduate students pursuing their master's theses or other studies. The researchers had not yet found the service as often as might have been desired.

"Book an Information Specialist" as a concept is a fairly new service but, of course, researchers have always consulted and sought advice in the scientific libraries. According to the international literature such a new service concept can be dated to the beginning of 21st century. For example, researcher consultations began at the Mississippi State University Libraries in 2001. The purpose was to provide advanced searching techniques for graduate students and an overview of resources for new faculty. Usage data from Mississippi State University reports that during the first year 2001–2002 the largest user group was graduate students, who requested 65% of the sessions conducted (Lee 2004, 170–179). This concurs with the results of the first year in the Tampere University Library as seen in Table 2. Graduate students were also the largest user group in Tampere. At the Tampere University Library the aim is to provide information seeking

classes in doctoral programs on a voluntary basis. However, personal consultations will still be needed in addition to classes.

The marketing and promoting of the research consultations were key issues considered at the Mississippi State University Libraries. A person-to-person approach gave better results than flyers or web pages (Lee 2004, 177). Graduate students especially seemed to market research consultations to each other, which increased the numbers of graduate students as customers.

Bibliometric pilot in Tampere

As in Helsinki, research support including research evaluation and bibliometric skills have also emerged as a theme at the Tampere University Library in recent years. They are emphasized in the strategy 2010–2015 of the Tampere University Library (Tampere University Library Strategy 2010–2015).

The University of Tampere will conduct a thorough research evaluation in 2014. This will likely be a process affording the University Library an opportunity to support the research community if the skills and know-how of librarians in the field of research assessment are sufficiently convincing. Traditionally, librarians have used citations databases, such as Web of Science (WoS), but they do not know as much about the bibliometric analysis used in most research assessments.

After a couple of bibliometric training sessions and contacts to the Helsinki University Library and to the Library in the Tampere University of Technology (TUT) in 2010–2011, a plan was made to carry out a bibliometric pilot at the Tampere University Library where the information specialists of the library could practise bibliometric calculations in proper conditions. The School of Information Sciences volunteered to be a subject of a bibliometric analysis. It was bilaterally agreed with the School that all peer-reviewed publications of the

School from the years 2008–2010 and the citations they gained during the years 2008–2011 would be included in the pilot. At the Library, four information specialists were chosen to carry out the project but soon an IT Expert was also needed on the team.

The work carried out at the University of Helsinki (Forsman & Lahikainen 2011) and Tampere University of Technology (TUT Research Assessment Exercise 2011) gave good examples to follow. The content of the pilot was decided as follows:

- number of items published in 2008–2010
- co-authoring of publications
- publication types
- the number of citations drawn from Web of Science Wos), Scopus and Google Scholar (GS) (2008–2011), self-citations excluded
- citations per publication, self-citations excluded
- number of uncited publications
- number of self-citations
- 25 most used scientific journals and their impact factors, likewise their categories in the Finnish Publication Forum Project
- 25 most used conference proceedings and their categories in the Finnish Publication Forum Project

It was agreed that the analysis would be based on the affiliations of the researchers. The basic publication data were drawn from the publications register of the University of Tampere. It was also decided that fractionalization of citations was not to be used but that all the citations would be counted in full to the credit of the School in spite of any outside co-authors.

Already at the early stage of the pilot the team became convinced that the traditional WoS alone would not be good enough for the source of citations. Scholars in the field of information sciences typically publish in conference proceedings that are not covered in WoS. The team considered that Elsevier's Scopus would improve the number

of citations for publications. The bibliometric literature even presents Google Scholar (GS) very positively as a source for scientific citations (see for example, Bar-Ilan, 2010). Pauly and Stergiou (2005) also suggest that GS could replace WoS as a citation database. At the same time, we were acutely aware of weaknesses in the data and background information of GS. Lacking quality control and low scholarly value of some of the unique materials found in Google Scholar have been discussed in earlier surveys. (Meho & Yang, 2007.)

The results of citation calculations yielded interesting and valuable information to the School of Information Sciences. The significance of Scopus was proved because 98 citations were drawn from Scopus in cases when WoS did not include the publication in question at all. The opposite was true to only alimited extent: WoS included a dozen publications not included in Scopus, but only one or two citations were drawn from them. GS proved to be a laborious and unsure tool for citations. However, GS often included conference proceedings that the other two databases did not recognize. Meho and Yang (2007, 2115) state that GS identifies 53% more citations than WoS and Scopus combined in the field of library and information science. According to them (2007, 2123), although both Scopus and GS help identify a vast number of citations not found in WoS, only Scopus radically changes the ranking of authors.

5. Research support services at the University of Namibia Library

The University of Namibia (UNAM) is a relatively young university, established only in 1992 with the initial focus on undergraduate degree programs. However, the last ten years have seen an increase in postgraduate programs and research activities by university researchers. Consequently this has challenged the UNAM Library to take into

account the distinct information needs of the research community in planning information services and collections development. To remain relevant to this important group of users, the Library was compelled to address the challenging situation prevailing at that time.

Apart from traditional library services such as reference services, inter-library loan, information literacy training, and suggesting new resources for acquisition, the Library deemed it essential to establish particular information services for the exclusive use of researchers. The specific services instituted to support researchers include personalized consultation with subject librarians and literature searches, and selective dissemination information (SDI). Additionally, unlike the undergraduates, postgraduate students and academics are accorded certain privileges, such as longer lending periods to allow them more time to consult library materials.

Personalized consultation and literature searches

The subject librarianship concept was conceived in 2008 at the UNAM Library. As a result, each professional librarian was assigned a particular faculty to serve. This development came with a special emphasis on strengthening the library-faculty relationship. While the intention was to provide information support to each member of a given faculty including the undergraduates, some subject librarians took the initiative to better understand the specific information needs of researchers.

A research support service was established whereby researchers could seek librarians' assistance in conducting in-depth literature searches. Consultations with researchers are conducted away from the reference desk, which is heavily dominated by undergraduate students. Anecdotal evidence suggests that this service became popular among the research community, presumably because they saw its value in getting relevant materials for their research projects. It is, how-

ever, important to stress here that searching literature for researchers should be accompanied by intensive information literacy training. This would provide researchers with information skills essential for lifelong learning.

Selective dissemination of information

Another important research support service emanating from the strengthened library-faculty relationship is the selective dissemination of information (SDI). With this service, some of the subject librarians became proactive by learning more about researchers' activities. The intent was that once they knew the researchers activities then they could easily customize information delivery in accordance with researchers' specific information needs. For example, a librarian would search electronic resources on a regular basis and send the relevant information located to a particular researcher by email. Similarly, information about new acquisitions of books was conveyed to researchers. SDI proved to be a useful strategy in keeping researchers abreast of the latest developments in their respective fields of specializations.

The Library also organizes regular training workshops for researchers on the effective use of electronic resources, including the locally developed database for UNAM's dissertations and theses. However, the absence of an assessment strategy for such workshops means that it is not yet known whether they actually achieve the desired outcome. Furthermore, because of the improved relationship with the research community, it was possible for the Library to work closely with the University Research Unit in evaluating the usefulness of Science Direct and Scopus databases before subscription began in 2011.

New approaches in modern librarianship require librarians to incorporate users' perspectives into planning services. This means that the Library's services should be developed with users rather than for

users. An essential departure point of this approach is to be as much inclusive of the intended audience as possible. Thus, consolidating the relationship with researchers is an important step towards a better understanding of their information needs. Mantora (2001, 101) asserts that "regular communication with researchers will help the library to keep track of changes happening in the research landscape".

It is imperative that UNAM Library conduct regular investigations to determine the information needs of researchers, paying particular attention to what could distinguish their needs – be it different disciplines or novice versus experienced researchers. The UNAM Library is advised to firstly develop additional innovative information support service for researchers and secondly to institute a promotional strategy to create awareness of such services among the research community. As Harrison & Hughes (2002, 8) put it "the simple provision of services, however good, however relevant, does not mean the target audience will embrace them". Marketing of services is a prerequisite in making sure that researchers know what the library offers.

6. Discussion

The main idea of university libraries is to support academic research, teaching and studying. Traditional research support services have been acquisition of library material, its cataloguing, subject description and making it available to users. Recently new needs of researchers and means for services have emerged. Research data, bibliometrics, open access, information literacy teaching for researchers – all these are seeking their forms. New ways of working with library users, like knotworking, have also emerged.

The significance of new research services, such as "Book an Information Specialist" or bibliometrics is beyond their apparent benefit for researchers and libraries. Research services encourage researchers and librarians to engage in closer collaboration which in turn generates confidence and perhaps more collaboration. Thus research services can increase the value of library in the eyes of scholars and university administrators. New research duties can also be a source of empowerment for librarians and information specialists who may have already worked in a library for some time.

New forms of collaboration have already increased confidence between librarians and scholars. In the future, research services can increasingly be a source of empowerment and inspiration for librarians, and a source of productivity for researchers.

This chapter provides evidence to suggest that all the three libraries recognize the unique information needs and services for researchers, and attach great importance to research support services. However, the level and types of research support services in these libraries differ, albeit not significantly. It emerged from the discussions of each case that the libraries of the universities of Tampere and Helsinki offer more advanced services for researchers than does the Library of the University of Namibia.

Research support services such as bibliometric services offered at the libraries of the universities of Helsinki and Tampere represent a new wave in information services for researchers. Other distinct information services for researchers are knotworking at Helsinki University Library and "Book an Information Specialist" service at Tampere University Library. These differences can be attributed to various contextual environments such as the research development at each of the parent university, historical backgrounds, and economic situation, level of the library–researcher relationship, and also the level of expertise within these libraries.

The University of Namibia is a relatively young university, in a developing country, and its library relies mostly on traditional in-

formation services for researchers. As the case has revealed, research support services at the University of Namibia Library have not yet been subjected to rigorous assessment. However, this study gave impetus to introduce modern research support services at the University of Namibia Library.

The future of research support services within academic and research libraries will be characterized by more collaboration between researchers and library staff. Information professionals will play a more active role by guiding researchers in modern tools of information discovery and retrieval. Moreover, open access publishing will significantly influence research support services in the sense that information professionals have the necessary competence for the management of open access repositories. Information professionals will further continue to provide researchers with assistance relating to data management, applying new software. Other factors that will impact research support services include new and emerging information technology tools.

Information specialists operate in a dynamic environment, which requires adaptation to changes in technology and other developments. Thus the changes which may occur in research support services will be shaped not only by researchers themselves but also by the wisdom of information professionals.

When we look back over the history of libraries, we can see that many libraries were founded by scholars, and often scholars have also been librarians. Now it seems that we are facing the fact that librarians who are working with research support services should have both professional education and scientific knowledge. Are we coming to a new era of librarians who are also scholars?

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TEACHING INFORMATION LITERACY

Learning Center, Tampere University Library, Finland
Photo: Sonja Mattsson-Valtanen

Päivi Helminen & Mbenae Katjihingua

INFORMATION LITERACY MODELS IN ACTION – MISSION IMMENSE

1. Introduction

As information literacy (IL) is a process for fostering independent learning, it lays solid foundations for the goals of the higher education institutions. This paper describes the information literacy learning models of two universities: the University of Helsinki, Finland (HU) and the University of Namibia (UNAM). The paper starts by briefly presenting the information literacy models commonly applied in the higher education institutions and which we consider the most relevant in this context. In the main part of the article we introduce the University of Helsinki "Pick'n Learn" Information Literacy Learning Menu and the University of Namibia Information Literacy work. The paper discusses how the particular models or policies were developed in the two universities and what kind of challenges were encountered in the practical work. The paper concludes with a discussion of how the practical models chosen in HU and UNAM relate to the existing information literacy definitions.

2. Background

There are many definitions for information literacy and the information literacy concept is related to many other literacy concepts (Bawden 2001). Although many authors have defined information literacy in their own way, the numerous definitions contribute little new to existing definitions.

The most widely adopted IL model in the higher education sector is the ACRL standards (Association of Colleges and Research Libraries 2000) which is a shopping list style listing of the skills required by a university student. The skills are the same ones which have traditionally been part of academic curricula and therefore the listing provides no totally new elements in the higher education teaching. The standards are practical and applicable and therefore they appeal the community of IL practitioners in the academic libraries. The value of the standards is that it reminds us of certain neglected but essential aspects of academic professional expertise, such as copyright issues. The IL models help to make visible the expertise and contribution of the librarians in the higher education institutions. The Australian and New Zealand Information Literacy Framework (2004) is very similar to the ARCL standards but the framework elaborates the curriculum and learning implications.

In Britain, the Society of College, National and University Libraries, SCONUL, developed the seven pillars model initially in 1999 and it was updated in 2011. The SCONUL model includes the ability to identify a need for information, assess the scope of the current knowledge, plan strategies for locating information, gather and evaluate information, manage information professionally and ethically, and finally present information and create new knowledge. The model adopts the concepts already familiar in research processes. (SCONUL 2011.)

The Australian Christine Bruce developed the more learning oriented approach to IL even further. Her IL conceptualization evolved

from the seven faces of information literacy (Bruce 1997) to the six frames for information literacy education (Bruce & Edwards & Lupton 2006). The seven faces of information literacy model provides a progressive conceptualization of IL which consists of seven evolving faces or experiences: utilizing IT, using information sources, executing the information seeking process, information control, knowledge construction, knowledge extension, and wise use of information (Bruce 1997).

The six frames of information literacy education describe six different approaches to information or frames as Bruce et al. called them, namely content, competency, learning to learn, personal relevance, social impact, and relational frame, which views IL as a way of interacting with information (Bruce et al. 2006). The content frame which views IL as knowledge of the information world has been predominant in the academic community as it is viewed as measurable and transmittable. The learning to learn frame provides a more sustainable approach. The modelling of different approaches to IL education helps to understand and improve the faculty-library co-operation.

Thereafter Bruce turned even more to the learning aspects of information use and uses the term "informed learning" which she and her co-writers define like this: "The idea of informed learning represents and advances understandings of information literacy that incorporate the broader concept of using information to learn" (Bruce & Hughes & Somerville 2012).

The concept of information literacy has been criticized by many authors (e.g. Lloyd 2010; Huvila 2011; Nazari & Webber 2012) and as Andretta (2011) describes, some scholars and practitioners refuse to use the term. Nazari and Webber (2012) argue that IL is defined too narrowly and a more holistic view on IL would be appropriate in the e-environment.

Lloyd proposes a more holistic definition. She argues that information literacy research lacks theoretical framing and that the

concept has been too narrowly defined. Although higher education institutions believe that there are generic and transferable information skills which students can apply later in the workplaces, there is not enough evidence as to whether this really happens. Lloyd seeks to broaden information literacy beyond textual skills. Lloyd considers information literacy "not only the mastery of information skills but also the mastery of the information landscape". (Lloyd 2011.)

As Lloyd broadens the definition of IL, she introduces a new concept, information literacy practice, which she defines as follows:

> "Knowledge of information sources within an environment and an understanding of how these sources and the activities used to access them are constructed through discourse. Information literacy is constituted through the connections that exist between people, artifacts, texts and bodily experiences that enable individuals to develop both subjective and intersubjective positions. Information literacy is a way of knowing the many environments that constitute an individual being in the world." (Lloyd 2010.)

Huvila (2011) argued that information use is the neglected part of IL. This criticism is not relevant in the sense that information use has been present in the IL definitions. However, the information use aspect has been neglected most likely because IL has been predominantly taught by librarians, whose strongest expertise lies in information retrieval and not in the use of information.

The practical applicability of the different models is arguable. No matter how narrowly or how broadly the IL concept is defined, those conceptual deliberations yield relatively little substance to the practical work of university teachers and librarians. Therefore in this paper we adopt a pragmatic approach and do not go further into the discussion about different definitions.

The definitions are broad and all-encompassing and in that sense they do cover the IL of Finnish and Namibian universities. Yet

information literacy is culture and context specific (Tuominen & Savolainen & Talja 2005) although in the higher education context globally approved scholarly quality standards are applied.

In the IL community there is a lively ongoing discussion on IL models and how to integrate information literacy teaching into the curriculum (Orr & Appleton, & Wallin 2001; Andretta & Pope & Walton 2008; Corrall 2008; Wang 2010). Wang (2010) developed an extensive model to ensure a cumulative integration of IL teaching into the curriculum. However, in practice the applicability of complicated models is questionable and there is still a need for a simple IL integration scheme.

In Finland there has been a national project which has made recommendations for the integration of information literacy into the curriculum (Juntunen & Lehto & Saarti & Tevaniemi 2008). The Finnish recommendations are based on the ACRL standards (Association of Colleges and Research Libraries 2000). The recommendations describe the minimum IL objectives for the first year, bachelor's level, and the master's level studies (Recommendation for universities for including information literacy competency in the new degree structures, 2004).

The Finnish recommendations set the goals for IL teaching but each university has created its own ways to organize the IL teaching. The outcomes of the national IL project were evaluated in 2009 and the results showed the IL model has proven useful and is widely applied in Finnish university libraries (Kivilahti & Saarti & Sinikara 2010).

Information studies scholars and library practitioners have provided a vast amount of both theoretical and practical literature on the definition of IL and how IL has been applied. This yields a solid background on which to base the IL work in Finland and in Namibia.

The paper is descriptive with a practical approach. It describes the current information literacy models or policies of HU and UNAM. The paper also discusses the strengths and weaknesses of the current

practice and discusses how the UNAM Library is going to implement an IL instruction programme.

3. Information literacy teaching at the University of Helsinki

The University of Helsinki "Pick'n Learn" Information Literacy Learning Menu (Figure 1) is based on the need for a variety of methods in IL education. Therefore, Helsinki University Library offers both curriculum integrated and extracurricular IL courses. One example of the curriculum integrated IL teaching is described by Kakkonen and Virrankoski (2010) and the whole model by Helminen and Ruhanen (2010).

In Finland, the master's degree is considered as a basic degree and the students who enter the university are expected to accomplish the master's degree. The basic model of the curriculum integrated IL teaching includes 1.5–4 hours of teaching three times during studies: during the first-year studies and during the processes of the bachelor's and master's theses. The content of teaching is loosely based on the ACRL standards (Association of Colleges and Research Libraries 2000). The curricular courses vary by faculty and they are tailored to the needs of each degree programme.

Hence there are both independent IL courses administered by the Library and IL instruction integrated into other courses offered by the faculties. The content of the courses is planned together with the teachers of the respective courses in the faculties. The responsibility for the teaching of IL is shared by the librarians and the teachers in the faculty. Information use is the responsibility of the teachers in the faculty and is not a neglected area as Huvila argued (2011). The curricula contain an extensive amount of learning goals which could be classified as information literacy skills, although they are not called or defined as information literacy skills in the curricula. Therefore

the authors of this article acknowledge that there is a need for discussion on whether the concept of IL is relevant in higher education (Andretta 2011).

As not all students are able to attend the curricular courses or they need refresher courses, extracurricular courses are offered on a regular basis. Students and staff attend the same courses although some courses are tailored to students' needs, such as the basic course in information seeking, and some to researchers' needs, such as the course on bibliometric analysis tools.

Self-study material is available on the web pages and in the Moodle virtual learning environment. However, more material has been requested by students and there is a definite need to provide more self-study material for different study levels and on various topics.

Individual or group counselling by appointment is also offered and tailored courses for staff and students on taught on request. Counselling for the teaching staff has been part of the IL menu for many years, but it is seldom used. The teaching staff would most likely benefit from cooperation with Library staff as they design assignments and plan teaching material and therefore the Library staff should offer their expertise more actively and trust in their own expertise.

This IL learning menu constitutes a complex entity. However, there is no alternative because the University is multidisciplinary and needs differ. One size does not fit all. The ultimate question to be asked in every situation is which IL elements and what kind teaching benefit the learner, be that learner a first-year student or an experienced researcher.

The University of Helsinki
"Pick'n Learn" Information Literacy Learning Menu

Continuing education

Curriculum integrated teaching

Open courses

Open self-study material on the web pages and in Moodle virtual learning environment

Doctoral studies

Tools for information searching and management, such as RefWorks - reference management software, bibliometric analysis tools, current awareness tools

Guides for specific tools

Master's studies

Broader information seeking courses by subject fields, eg. Biosciences, behavioral sciences, law, humanities

Subject specific learning materials in Moodle

Bachelor's studies

Basic level: Basic course on information seeking

ICT Driving Licence: Basics Of Information seeking

Beginning of studies

Figure 1. The University of Helsinki 'Pick'n Learn' Information Literacy Learning Menu.

Information literacy work is not limited to teaching the students. As, for example, Pierce (2009) has noted that the teaching of faculty members is an effective way of spreading information literacy know-how. IL work includes numerous activities which enable clients to use information effectively, such as metadata and the design of user interfaces.

An important aspect is also collaboration with academics and other teaching staff by participating in various committees and teams. Figure 2 illustrates the various collaborative levels which the IL teachers utilize, many of which have already been mentioned this article. In addition to the cooperation partners at the University, there are important actors on the national and international level to be taken into

account. Such actors include the Ministry of Education and Culture, which is an important source of funding. Therefore it is important to communicate and illustrate the educational work done in the libraries. The national and international library networks provide peer support and opportunities to share best practices which help to develop the IL work in one's own university.

IL collaboration on various stages

University level
-e.g. the planning process of the strategy of the university

National level:
Ministry of Education and Culture,
national networks

International level:
international networks,
e.g. IFLA, IL standards and research,
peer support of the IL community

Campus level
- campus council
- staff training on campus

Student
- the owner of her/his own learning process
- academic expertise

Faculty level
- teaching development councils
- various teams
- teaching and IT professionals: educational IT support person, university pedagogical lectures

Department level:
- teacher meetings

Course level:
Teachers and librarians
- Planning
- Teaching
- Assessment

Figure 2. IL collaboration at various stages

4. Information literacy teaching at the University of Namibia

At the University of Namibia, information literacy teaching has been offered for a number of years in various ways on different campuses: some subject librarians teach information literacy to undergraduate and postgraduate students. The initiative for teaching often comes

from the lecturers. Students also request individual tutoring on the use of e-resources and the library catalogue. However, there is still room for improvement in the delivery of IL teaching, such as the even distribution and quality of the IL teaching on various faculties and campuses, the sharing of teaching materials and best practices and the assessment of learning outcomes.

At UNAM, the planning of information literacy teaching is still under consideration. IL is one of the themes of the cooperation project between Finnish and Namibian university libraries. The Finnish and Namibian IL teachers have benchmarked the IL teaching practices and this has yielded new ideas how to develop IL teaching, but these ideas have not yet been put into practice.

The UNAM Library is currently drafting information literacy policy and planning how to develop and implement the policy. These issues will be worked on collaboratively during the project of the Finnish and Namibian university libraries. In October 2012, the participants of the study visit to Finland will focus on writing an IL policy and a practical implementation plan. Therefore we have not yet been able to provide more detailed information in this article.

5. Conclusions

At UNAM, the situation in IL teaching resembles the situation in HU in many ways. However, HU and UNAM have very different histories and HU has had a longer time frame during which to develop IL teaching, thus the current IL practices can partly be seen as a result of the different history. There are many similarities and universities can learn from each other.

In many cases IL teaching still concentrates on the information resources and information retrieval techniques which resemble the content frame described by Bruce and co-writes (Bruce et al. 2006).

The IL teaching could be shifted towards the learning to learn approach, but this would require further training of the library staff and close collaboration with the teachers in the faculties and experts in university pedagogy.

Questions which need to be discussed while the IL plan at UNAM is developed include the roles of different staff groups: the library staff, the teaching staff in the faculties, and other support and administrative staff, such as experts in IT and pedagogy. If all the relevant actors in the universities collaborate, the students will develop sound information literacy practices which they learn through people, artefacts, texts, and bodily experience (Lloyd 2010).

Ensuring that the whole teaching community of the university knows and acknowledges the expertise of all the members of the academic community is an essential task. The paramount issue is how to ensure enough resources for IL work and focus on the staff resources for IL teaching in a cost-efficient way. The amount of teaching is not significant as only the quality of learning matters. The same applies to HU and therefore collaborative development of IL services will be fruitful.

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Janika Asplund, Jakobina Mwiiyale, Siegfriede Karsten & Saija Tapio

DEVELOPING INFORMATION LITERACY EDUCATION FOR FIRST-YEAR STUDENTS AT TWO UNIVERSITIES

1. Introduction

Information literacy (IL) is considered to be an important part of the skills acquired by university students during their studies, and university libraries have developed their instruction to help students achieve this.

Tampere University (UTA) Library follows the national IL recommendation (See Recommendation for Universities) in its teaching. In the recent curricula change of the University the Teaching council stipulated IL as a compulsory subject for all students of UTA. All UTA students now have equal opportunities for IL education during different phases of their studies. This has entailed modifying an existing IL course into one more suitable for teaching larger numbers of students. Information specialists of the Library have also participated in university pedagogy training, which has served to strengthen the theoretical basis of their own work and also occasioned substantial changes in the course.

The University of Namibia (UNAM) Library is in the process of developing and harmonizing their IL education. Since Finland is

regarded as one of the leading countries in IL matters (UNESCO 2005, cited in Walton & Hepworth 2011), we wanted to share our experiences of developing IL education and thus contribute to the knowledge base of academic libraries, and more specifically to see if there was something useful to be learned from the experiences of UTA Library's development of an IL course for first-year students.

In this chapter we introduce the IL course for first-year students at UTA and the teamwork model we used to develop it. As a theoretical framework, we found it especially useful to apply the principles of constructive alignment in our pedagogical developments in IL education. We also discuss whether some of the content and teaching methods of this course could be applied to the present Namibian academic context.

2. Literature review

Constructive alignment in higher education

In viewing Biggs' theory on constructive alignment, two main concepts need to be clarified: alignment and the constructivist definition of learning. In Biggs' theory, alignment refers to what the teacher does: sets up a learning environment that supports the learning activities appropriate for achieving the desired learning outcomes (Biggs 1996, 347). Alignment model refers to planning the course, choosing the teaching methods, implementing the course and choosing assessment methods so that they are aligned and work towards the same goal.

According to the constructivist definition, learning is constructed as a result of the learner's actions. The student is not merely a passive recipient of information but rather assumes an active role as a learner (see Richardson 2005, 675). What needs to be focused on are student activities and students' construction of meaning (Biggs 1996; Biggs

2003). Adult learning is always cumulative; new information is constructed on what you already know (Biggs 1996, 348).

Biggs combines these two ideas, constructivism and aligned model of teaching:

> "'Constructive alignment' represents a marriage of the two thrusts, constructivism being used as a framework to guide decision-making at all stages in instructional design: in deriving curriculum objectives in terms of performances that represent a suitably high cognitive level, in deciding teaching/learning activities judged to elicit those performances, and to assess and summatively report student performance." (Biggs 1996, 347.)

According to Biggs, creating a study module involves four phases. First, defining the intended learning outcomes. The formulation of a good learning outcome includes a verb describing what the learner is expected to be able to do by the end of the course. Teachers should also be very clear about what they want students to learn. Secondly, creating a learning environment using teaching/learning activities that are likely to bring about the desired outcome. Thirdly assessing students' actual learning outcomes. Finally, comes arriving at a final grade. (Biggs 1996, 360–361.)

Information literacy: more than technical skills

Learning is not just about acquiring and adopting information content, remembering and managing pieces of factual information. It is also about understanding the meaning of things as an interpretative process, learning the attitude and growing as a person. (Marton & Dall'Alba & Beaty 1993.) Learning is also affective, meaning gaining the self-confidence to act. This aspect is important to keep in mind, because IL teachers should support the student on both the cognitive

and affective levels (Iivonen & Tevaniemi & Toivonen 2007). A third component can be added to the learning process: regulative learning activities. It means planning, monitoring and evaluating your own processes. (Vermunt & Verloop 1999, 259.)

Information literacy is not merely a technical skill, and teaching it is not just about presenting the finer points of various electronic databases; it needs to be appreciated in a wider context. As Albrecht and Baron (2004) point out: "Rather, librarians now find themselves in the position of bolstering the larger academic mission [of the university] to hone critical thinking skills and help students build a foundation for lifelong learning." (Albrecht & Baron 2004, 76.) They also define this as a shift in library training: "The emphasis has moved from information provision and point of need training to the acquisition of skills that are more lasting." (Albrecht & Baron 2004, 76.)

The more lasting skills are also emphasized by Walton and Hepworth (2011), who conducted a study of changes in learners' cognitive states. They say that at the end of the session the intended learning outcome is that the student is able to transfer the searching skills to other appropriate resources (Walton & Hepworth 2011, 455).

Teaching information literacy to first-year students

Various studies have addressed first-year students' information behaviour and library use. Scoyoc (2003) points out that library instruction is needed for first-year students, since starting college studies is an overwhelming experience for many: they feel uncomfortable with everything new surrounding them, and even experience library anxiety when first coming to university library. According to her, face-to-face instruction reduces library anxiety more effectively than a computer-based tutorial, where students read and learn things by themselves. (Scoyoc 2003, 329,337.)

First-year students moreover often tend to overestimate their own IL skills. A study conducted by Gross and Latham (2012) gives an example of college students' miscalibration between self-views of skill and actual skills in pre-test and post-test situations. They claim: "Post-test estimates of performance by proficient students demonstrated a stronger correction in self-estimates than was demonstrated by below-proficient students." Some students do not even realize they have performed poorly. The findings of their study confirm the need for IL education for first year students. (Gross & Latham 2012, 581.)

Ellis and Salisbury (2004) say that it is important to ascertain what first year students already know and build upon their prior knowledge. Before beginning library instruction, students have problems interpreting reading lists and, for example, finding book chapters or journal articles in library databases.

Nowadays students also have a tendency to use Google as their starting point. Corbett (2010) says that searching via Google forms a "mental model" for them. They should be taught what is different and what is similar about searching in Google and in the databases provided by the library. The conceptual idea behind Boolean logic also needs to be explained, not only the technique. (Corbett 2010.)

Fain (2011) evaluated the effectiveness of an information literacy programme for first-year students and argues: "[…] students showed statistically significant changes on questions that dealt with resources or services that they were required to utilize as part of their research assignment." (Fain 2011, 113.) She also claims that first-year students preferred electronic journals over printed ones in class assignments (Fain 2011, 116).

In the information literacy model GeST developed by Lupton and Bruce (2010), IL is viewed through three windows: the generic, where information literacy is seen as a set of skills used to find and manage information, the situated, where the information skills are more contextualised and discipline specific/based, and the transformative, where information literacy is something used to transform the

learner and society. The different windows are not incompatible with each other; the transformative window also includes the situated and generic ones, and the situated includes the generic window. (Lupton & Bruce 2010, 14–15.)

Nevgi and Lindblom-Ylänne emphasize the qualitative perception of learning: When students learn new information, the information they have absorbed earlier is also evolved into more multilayered and more comprehensive understanding (Nevgi & Lindblom-Ylänne 2009, 149).

3. The UTA Library case: Basics of Information Seeking

Introduction to the course

IL education is compulsory for all the first year students of UTA. The University consists of 11 Schools and the course in question is obligatory for students in four of these: the School of Information Sciences, the School of Management, the School of Social Sciences and Humanities and the School of Communication, Media and Theatre.

Basics of Information Seeking (BIS) is a compulsory 1 ECTS credit course graded pass/fail. The course consists of 7 hours of contact teaching (1 hour lecture, 3 x 2 hours of hands-on-keyboard sessions in the teaching lab), and the students have weekly online assignments in information seeking, as well as reading tasks of the online learning material. The course takes four weeks.

We have chosen our teaching methods mindful of the alignment principle. We use a variety of methods to enable deep learning. The initial lecture covers the information seeking process as a whole and the ground rules are explained to the students clarifying what is expected of them to pass the course. The three hands-on-keyboard

teaching sessions are held in a computer lab. When the teacher is demonstrating the use of databases, the students can look at the screen and follow using their computers. During the sessions there are group discussion tasks e.g. how to evaluate scientific literature, how to differentiate between a popular journal and a scholarly journal and the ethical use of information.

We believe that "learning by doing" is the way to acquire information literacy. We therefore set the students assignments, as these encourage the students to take a more active role. The quality of learning has also been shown to be better in assignment-based courses (Gibbs & Simpson 2004–2005, 7). Towards the end of the session the students start working on their assignment and they are expected to finish them online at home. The teacher also comments on the common mistakes at the beginning of the next session and repeats the core points if something seems unclear. The online tutorial is likewise intended to support the students even after the course. The course includes an active feedback form encouraging the students to reflect on their learning process and supporting the students' learning.

The team work model

Our aim is that all our teaching sessions on the Basics of Information Seeking (BIS) course are of even quality and meet the quality requirements. To ensure this we implement a team work model. The IL coordinator and team of information specialist create a general manuscript for the whole course, individual sessions and assignments, as well as mutual learning objectives. Each of the information specialists is then responsible for modifying the teacher's manuscripts slightly to fit the disciplines' needs. The assignments are renewed annually. The materials are handed to the teaching librarians, coming from different library positions, and they are committed to familiarize with them before instruction takes place.

Teamwork is the key to success, with well defined responsibilities and timetables. The IL coordinator is responsible for giving the opening lectures, reserving teaching labs and lecture halls, as well as training any new teachers. The coordinator collaborates with the library management and faculty administration on the curricula and timing issues, and with the university learning technology and library web service staff on the technical solutions for online assignments, signing up, feedback forms and the online tutorial. It is also important to communicate with the library acquisition staff to find out changes in subscriptions of library-licensed resources.

The coordinator organizes a meeting for everyone involved in teaching BIS before the course starts to set the ground rules, and also after the course to reflect the students' feedback to see whether the learning objectives have been achieved. The teaching experiences of the teacher librarians are also discussed.

The impact of university pedagogy training on IL education

Nearly all information specialists of UTA Library have attended the Basics of University Pedagogy course and some have attended the Advanced University Pedagogy course. Participating leads to professional growth in the sense of professional self-reflection: university pedagogy training makes university teachers more aware of their approach to teaching and of their teaching methods as well (Postareff & Lindblom-Ylänne & Nevgi 2007, 567). Teaching in higher education is affected by the conception of teaching we have, whether it is teacher-centred and content-oriented or student-centred and learning oriented (see Richardson 2005, 677). In UTA Library we have tried to move towards student centred teaching methods.

Two information specialists working in the Main Library attended the Basics of University Pedagogy course in the academic year 2007–2008. This had an impact on the overall development of IL

education in the Main Library. There were many concrete changes and developments in the Basics of Information Seeking course to make our IL education more student-centred and constructively aligned and to find the most appropriate teaching methods for the course (see Tevaniemi & Valovirta & Tiitinen 2009).

In planning the course a thorough core content analysis was made to define the core information content for each teaching session and for the course as a whole. Learning objectives were determined with more detail for each teaching session and for the course as a whole, which also helped the teaching librarians to understand the main points they were required to deliver. Transparency is very important in course design, for both students and teachers.

We tried to be student- and learning-centred in selecting teaching methods and delivering the education. Earlier the students found it difficult to see the course as a whole and understand the relevance of IL skills to their studies in the different phases of their academic career. Therefore, a picture representing the course content was added to the website and the course content, learning objectives and the requirements to pass the course were explained to the students in first session/lecture. Learning objectives for each week were presented at the beginning and repeated at the end of each session.

The assignments were also designed to be more student-centred. The students were encouraged to conduct searches on their own topics related to their disciplines and asked to compare information resources in their own research fields. If the students see the teaching/course as meaningful for their studies it motivates them and encourages deep learning (Biggs 2003, 16). We also gave the students brief written feedback on the assignments, since "[…] frequent assignments and detailed (written) feedback are central to student learning" (Gibbs & Simpson 2004–2005, 8).

Group discussions were added to the sessions (e.g. on analysing differences between academic journals and popular journals, ethics in

information use). A peer assessment task was also added (the students compared notes on their subject terms on the chosen topic).

Moreover, to ascertain the effectiveness of the group work method as a teaching or learning method, we piloted a comparison of regular groups and group work groups in 2008. Group work learning methods were used extensively in the latter groups. In the pilot, the teachers found that the group discussion method worked really well in some areas, such as discussing ethics in using information. However, teaching and guiding team work tends to be more demanding for teachers. (Tevaniemi et al. 2009.) Although piloting required extra work from the information specialists in planning and teaching, the results were effectively used to develop our IL education, and some of the group work elements were merged into the regular groups the following year. The combination of group work and regular teaching methods resulted in the most consistent learning results among the students (Tiitinen 2011).

We also paid attention to assessment methods. Self-assessment tasks were added to all weekly assignments with the final question: "What is the most important thing you have learned today?" (Inspired by Biggs 1995, 355). A peer assessment task was added to the class (the students evaluating subject terms on the chosen topic). The teachers also gave their students collective feedback during the course, not only at the end (on giving feedback during the course see Gibbs & Simpson 2004–2005, 8–9).

Feedback on the course had been previously collected as part of the quality system of the Library. However, due to lessons learned on the University Pedagogy course, we revised the feedback forms to reflect the learning objectives of the course, and changed wordings to measure student learning and student contribution, not only the teachers' or library's performance. We added questions such as: "What are the three most important things you have learned during the course? How would you assess the importance of your activity and

contribution with regard to your learning process? and How did the working methods used in the course support your learning?"

In the feedback forms, the students are asked to evaluate their IL skills after the course in areas such as finding books on a specific topic, finding e-journals in their research field and finding international research articles on a certain topic. They are also asked to grade their overall IL skills before and after having attended the course. Most students assess that their skills have improved during the course.

One might question the value of students' self-assessment. Gibbs and Simpson have an answer to this: "Much of the literature on the use of self- and peer-assessment is about the reliability of such marking, and assumes that self- and peer-assessment is primarily a labour-saving device. But the real value may lie in students internalizing the standards expected so that they can supervise themselves and improve the quality of their own assignments prior to submitting them." (Gibbs & Simpson 2004–2005, 20.) When asking the students to assess their learning process in both weekly assignments and course feedback we help them to internalize the standards and take responsibility for their own learning.

As a more general result of the university pedagogy course, we have paid extra attention to the self-reflection of the teachers and of those planning the teaching. To improve and ensure the overall quality, we organize a meeting before and after the course. The reflective meeting offers us a forum to discuss course feedback from the students and the teaching librarians.

Recent changes in the course and plans for the future

From 2005 until 2011 the Basics of Information Seeking (BIS) course consisted of 11 teaching hours and carried 2 ECTS credits. In 2012 as part of the curricular reform of the University, it was reduced to 7 hours and 1 ECTS credit. The course is now compulsory for more

students than before. Due to the reduced teaching hours, the core content analysis was rerun to make sure that we still teach all the relevant content but do not cram the sessions too full. As Nevgi and Lindblom-Ylänne (2009, 146) say, the emphasis must be on teaching the core content, and only if there is time left can complimentary or specialized content be taught. They also say that core content analysis is crucial to make the workload suitable for the students.

During spring 2012, the BIS course team first created a general template for the course, sessions and exercises. Each information specialist was then responsible for their own unit's detailed teaching manuscript and the exercises for their unit. The first session is dedicated to introducing the library database, the union catalogue for Finnish university libraries and Finnish article databases. The second one introduces international electronic journal databases and reference databases and the third e-books and electronic reference works.

During the course we also teach the process of information seeking, from planning the search and conceptual analysis, practising search strategies and evaluating search results to using information in an ethical manner. In each session we pay attention to some of these points. Due to the reduced teaching hours, we include complementary teaching material in the online tutorial that students can read during and after the course as recommended by Blanchett et al. (2012, 117). This is consonant with the fact that the students are responsible for their own learning even after the course. Since we have had encouraging experiences of students' self-assessment questions in the assignments, we have retained them in the programme.

Sometimes a teacher is tempted to add more and more content to a course she has taught for many years, especially if she is an expert in the field and conversant with the content (Nevgi & Lindblom-Ylänne 2009, 144–146). This is also true of the BIS course. Every year we must ensure that if we add new content we also take something out. We must not "show off" everything we know, because that would be confusing for the students; we must be content with the basics.

When teaching large numbers of students there is sometimes a clash of pedagogical principles and practical realities and we need to compromise. Gibbs and Simpson say (2004, 10) "writing comments on assignments, however, remains a major component of teachers' workload in higher education" and this also applies to us. As a result of feedback from the teaching librarians, we have made the workload lighter for them; instead of marking the assignments thoroughly, we decided to give the students collective feedback at the beginning of each session.

Giving feedback to the students during the course is needed because it supports their learning and motivates them, but we try to do it in a way that does not burden the teachers. Currently we also pay attention to giving the students encouragement so they feel empowered after having attended the course. This kind of generic feedback can be given along with the collective feedback on the assignments.

A library tour is no longer on the course programme. Instead, we have created a virtual tour of the library with the social media tool Flickr, with important spots and functions in the library presented in pictures and explained in texts. We do still offer library tours at the beginning of the semester but participation is voluntary. Creating the virtual library tour takes time, but saves staff resources in the long run.

Every year the BIS course also entails a huge administrative effort to organize everything. In the future it will be interesting to compare the student feedback with that of earlier years. Using the teacher's diary as a professional reflective method (see Biggs 1996, 355) could be useful in the future.

4. First-year students at the University of Namibia Library

The current situation in IL education

At the beginning of the year, the Dean of Students organizes the academic orientation for new students, and the Library is given a "slot" to address students on a specific topic and two hours for a library orientation/tour. The Library being part of the official academic orientation programme plays a major role in the students' minds as they become aware of the importance of the Library.

Representatives of the respective faculties bring students to the Library. Library staff members orient new students by faculty. It only takes about 10–15 minutes to go through the library building and staff members explain the library registration process, opening hours, library rules and regulations, the type of services, facilities and the resources available. This is a mere tour with little interaction to convey information to students and sometimes very congested due to some faculties having more students than others. During the orientation, students are informed about the in-depth IL classes which will be arranged with their lecturers.

In mid-March, subject librarians liaise with teaching academics requesting them to book IL classes using the library training lab. Since there is no formal IL programme or model to be followed, each subject librarian teaches students what she thinks is important. This includes searching for books using OPAC, how to search for journals, how to use the Internet etc.

Some lecturers sacrifice their teaching slot on a timetable or in some cases, they send students when they themselves are not available. This is not hands-on-keyboard training, because the training lab only accommodates up to 25 computers. No assessment is done, only a registration form is filled (for reporting and record keeping). There is no uniformity in what subject librarians teach and it also depends on how active one is.

Comparison of the Namibian model to the Tampere model

A large number of students enter UNAM without prior knowledge of what a library is and how to operate a computer. One of the reasons is that they may have completed their high school education in remote rural areas where there are no computers available (nor indeed access to electricity) or even a functioning school library. Some schools, especially private schools and some schools in urban areas, offer a library skills subject called Basic Information Science.

Given such a situation, the University makes computer literacy a prerequisite or core subject for all first-year students (this applies to those without computer literacy background). Therefore, the IL education for first-year students should be very basic content wise. The information seeking processes and ethics in using information should be emphasised. Some of the content existing in the Tampere model could be taught later on. The supportive element and reducing library anxiety is important in the Namibian context. A library tour is needed, but it could be renewed with activating elements.

When viewing existing teaching materials similarities are apparent between the UNAM and UTA Libraries: Library catalogue, subject terms and ethics of using information are taught fairly similarly. However, some emphasis could be given to planning search queries and electronic resources, to reflect the recent acquisitions of electronic journals and e-books in the UNAM Library. There are some differences in timing issues as to the content of the teaching. Some of the content in the UTA model could be taught later on to Namibian students, including more elaborate searches in e-journal databases, subject term searches in e-journals, peer reviewed journals etc.

However, exercises need to be completed in a classroom, since not all students have a computer at home. At present completing online assignments is not feasible because most of the students are still experiencing problems using online for practice but maybe in the future this method could work.

Interactive teaching methods will work well for the Namibian students because they provide the students with an opportunity to learn from the discussion. It can boost their confidence, especially when they learn from one another, are able to share experiences and also assist each other. Students usually like to learn from their peers (Biggs 2003, 111). Currently there is a growing number of students who own or use laptops. We are able to create tutorials, and videos demonstrating how to perform a task or search, and group work will help users to learn fast.

The team work model in planning teaching could provide opportunities to share experiences and ensure even quality and provide systematic learning objectives for each level course. It might be a good idea to create an assessment form in order to reflect upon the effectiveness of the course. There is also a possibility to pilot a teaching module and use it to demonstrate the need for an IL programme for the University administration. A credited course with multiple teaching sessions would motivate the students to work harder.

5. Conclusion

We believe that information seeking needs to be taught gradually in universities, first the basic, generic skills of scientific information seeking during the first year. Then the students can build on this knowledge during the subsequent IL education in discipline-based seminars. First-year students may have good technical skills, but they still need to be introduced to academic resources and academic information seeking right away. In the two universities, UTA and UNAM, we are in different phases in our IL education development process. The experiences and IL practices we have had at UTA could be utilized with slight modifications in the Namibian context. A course could be piloted to ascertain the elements that work in UNAM.

At the UTA Library, university pedagogy training has been useful in developing the Basics of Information Seeking course as a whole, in designing the course content, selecting teaching and assessment methods and in professional self-reflection. We have had tools to develop ourselves as IL teachers and develop the quality of education and methods for professional self-assessment as well. First-year students receive special attention when they have just joined the academic community. Teamwork has proven crucial in planning and administrating the IL course for a large number of students.

The UNAM Library offers well organized orientation for new students. Finnish experiences can be used when further developing an IL course for first-year UNAM students. Assessment methods, assignments and group work elements could be developed as part of the IL education planning process at UNAM. The course content could be slightly altered to cover the basics in the first year and maybe have some advanced elements and content taught later on. Teamwork methods and positive feedback from the teacher to the students could be utilized to boost the students' self-confidence.

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SCOLARLY COMMUNICATION AND SCIENTIFIC PUBLISHING

Tampere University Main Library, Finland
Photo: Marianne Partanen

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UNIVERSITY LIBRARIES IN THE ARENA OF SCHOLARLY COMMUNICATION

1. Introduction

University libraries are important actors in the arena of scholarly communication. Their visible and well-known role has always been to provide access to scientific knowledge via the research publications in the library collections. Earlier research publications were available in the university libraries in printed form. Nowadays, it is typical for university libraries to offer access to a huge amount of electronic research publications via the networks. Further, the landscape of scholarly communication has changed because of the dual model of scientific publishing, where both traditional commercial publishing and open access play crucial roles. Therefore university libraries face various challenges in acting in the arena of scholarly communication.

However, university libraries do not only provide access to published research knowledge. They play a more active role in various knowledge processes inside the universities, aiming to support scholarly communication at various stages. Quite often university libraries act as publishers and/or participate in open access publishing, taking

care of the parallel publishing of the university. In some cases, the vision of the university library also encourages librarians to carry out research and embrace the research engagement as a core professional and institutional value (see e.g. Schrader & Shiri & Williamson 2012). Further, the university libraries have quite often been asked to produce bibliometric analyses, which not only visualize the diffusion of scientific knowledge but also offer the instruments for scientific evaluation. (See Figure 1.)

SCHOLARLY COMMUNICATION
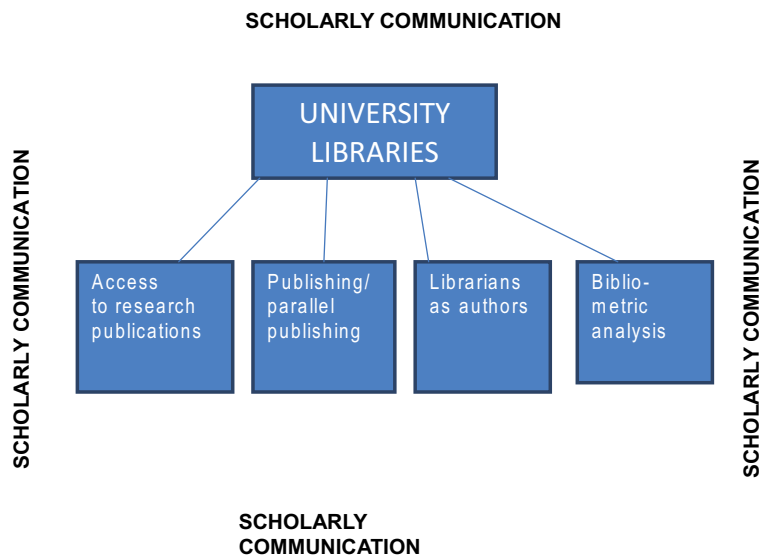
Figure 1. University libraries in the arena of scholarly communication

In this chapter we present scholarly communication as a social and cultural concept. In addition, we describe what role the university libraries play in various knowledge processes of the university. Further, we contemplate the role of the University of Namibia (UNAM) Library in the arena of scholarly communication. We do not consider in detail the role of university libraries as publishers or the university

librarians' own research activities, because these topics are covered by other chapters (Sisättö & Mäki & Heikkilä & Katjavivi 2012; Lehto & Matangira & Shatona & Kahengua 2012) in this book. Nor do we examine in detail bibliometric analysis as a relatively new role of the university libraries in the arena of scholarly communication, because that topic has been described with good examples in another chapter in this book (Forsman & Ndinoshiho & Poteri 2012). The university library has a multifaceted role in scholarly communication. We believe that it could be made even more visible. As Morrison (2009, 66) states, "library is a key support for scholarly communication".

2. Scientific communication – scholarly communication – science communication

Scientific communication is the basis of science and the growth and diffusion of scientific knowledge. It is studied in different fields of science: the sociology of science, communications studies, information studies, science studies. Scientific communication has been studied from different viewpoints in different fields, such as knowledge production, action, language, adoption… In information studies, when we talk about communication, we also talk about concepts like data, information, knowledge, wisdom.

When we talk about scientific communication, we can see it as scholarly communication and science communication. Scholarly communication is an umbrella term used to describe the process of academics, scholars and researchers sharing and publishing their research findings so that they are available to the wider academic community and beyond. Meadows (1998) states that scholarly communication is targeted at 1) scholars of the same field; 2) scholars of other paradigms; 3) scholars of other fields: and 4) students (young scientists). All these groups could be called professionals in science.

Science communication means something like **public media aim-ing to talk about science with non-scientists**, e.g. "societal interaction". The target groups may be 1) **specialists in various fields with scientific** education (medical doctors, high-level specialists like librarians, teach-ers, lawyers etc.) who may also have professional mobility between science and practical work. These groups could be called amateurs of science (Meadows 1998). 2) Specialists in various fields without scientific education (professional education) who may need scientific information in their work. 3) The wider public or "the man in the street". Everyone can belong in this group, and the communication channels are newspapers, magazines, radio, TV, and the Internet.

Research as a communication process includes information seek-ing and reading, discussion in scientific communities, interpretation, analysis and ordering of information, production of new information and knowledge, publishing, and finally, evaluation of research. Scholarly communication has traditionally been divided into formal and infor-mal communication. Formal communication includes books, journals, research reports and articles. Peer review gives a certain credibility on publications. When we talk about informal scholarly communica-tion, we often mean "invisible colleges", or networks of researchers, correspondence, conferences, unofficial discussions, email, discussion groups, scholarly blogs, social media, oral communication. In both types of communication there is a printed and digital environment. Nowadays, in the age of the Internet, it is often difficult to classify different types of publication.

3. Scientific publishing from the first scientific journals to e-journals

In 1665 the first scholarly journals in the world were published: on 5 January in France *Journal des Scavans* and two months later in

England *Philosophical Transactions of the Royal Society*. More journals followed soon after these two. The first scholarly journals were made possible by the invention of the printing press with the postal system for distribution. These factors shaped the development of the journal (Morrison 2009, 21–22).

Now in 2012 the number and form of scholarly journals have changed a lot. According to the global serials directory database Ulrichsweb there are 59,000 scientific journals in the world, about 15,000 available online, 3,600 only electronically, and about 42,500 (72%) in English. Of these about 28,000 are peer-reviewed journals, about 11,000 (39%) are available online, about 2,000 only electronically, and about 27,000 (96%) in English.

The extent of English scientific journals indicates that scholarly communication is now more global than ever. Many researchers aim to write to the researchers in other countries. Further, the scientific journals can aspire not only to an international audience, but also to international authorship. Kortelainen (1999) studied the diffusion of a Finnish scientific journal using bibliometric methods. Her results show that the character of a scientific journal can change from national to international, although the change may take time.

However, probably a more effective change in scientific publishing is related to the development of information technology. During last 10–15 years a really transformative change from printed to electronic (digital) publishing has occurred. This certainly has an influence on scholarly communication and, as Willinsky (2006) describes, presents new opportunities to the researchers of those countries that do not have a long tradition in publishing. Open access scholarly journals especially may have an enormous positive effect on research work in Namibia and other African countries.

Discussion about open access publishing and its different modes in scientific communication began internationally with the new millennium. In open access publishing two main directions can be discerned, green and golden. The green route means that the author can

self-archive at the time of submission of the publication whether the publication is grey literature (usually internal non-peer-reviewed), a peer-reviewed journal publication, a peer-reviewed conference proceedings paper or a monograph.

In the golden route the author or author institution can pay a fee to the publisher at the time of publication, the publisher thereafter making the material available free at the point of access. These two are not incompatible and can co-exist.

As Jeffery (2006) states, the green route makes publications available freely parallel to any publication system but is not, itself, publishing. The golden route is one example of electronic publishing.

One dimension to be distinguished is the timing and quality aspect: pre-prints are pre-peer-review articles, post-prints are post-peer-review and post-publication articles while e-prints can be either but in electronic form.

Another dimension in this is white/grey literature. White literature consists of peer-reviewed, published articles while grey consists of pre-prints or internal "know-how" material.

In any case, open access makes research work and its results more visible. Both the University of Helsinki and University of Tampere support open access to research publications. In Helsinki researchers have been required to self-archive copies of their research articles in the University open repository since 2010. In Tampere researchers have been requested to self-archive copies of their research articles in the open institutional repository of the University from January 1st 2011 onwards. The University of Namibia in 2006 established DSpace, which is an institutional repository where UNAM staff deposit their publications and grey literature to promote institutional research output.

4. Knowledge processes at the universities

Universities are knowledge-intensive organizations. Their core function is to create new knowledge which diffuses through scholarly communication and scientific publications. In the creation and dissemination of new knowledge, various processes can be recognized. The university libraries participate in these processes in numerous ways. (Huotari & Iivonen 2005.)

Knowledge processes can be divided into generative, productive and representative knowledge processes (Wikström & Normann & Anell & Ekvall & Forslin & Skärvad 1994; Huotari & Iivonen 2005). In *generative knowledge processes* new knowledge is created and innovations are produced. Research is a very typical generative knowledge process, where people's knowledge and understanding are combined with external information and knowledge. Scientific research is at the heart of scholarly communication because it is based on the findings of earlier studies and produces new knowledge and ideas to be discussed and utilized in forthcoming research.

University libraries enable access to research publications both in printed and electronic form, and advise on searching and selecting publications. As Forsman, Ndinoshiho and Poteri (2012) describe elsewhere in this book, university libraries utilize various methods of supporting research and the creation of new knowledge. University libraries also try to develop new methods and new approaches to work together with researchers, like knotworking. Thus they form an important link in the continuum of scholarly communication.

University librarians can themselves act as the producers of new knowledge and innovations. However, as Lehto, Matangira, Shatona and Kahengua (2012) point out in this book, there are still many obstacles and challenges when librarians consider publishing their research results.

In *productive knowledge processes*, the new knowledge is used for providing and maintaining a new product. In scholarly communica-

tion writing and finalizing publications are very typical productive processes. It is essential to get new knowledge and ideas into the form of research publication because this enables their diffusion. Nowadays the international diffusion of research findings has been emphasized by many research policymakers, including the Finnish Ministry of Education and Culture (Laadukas… 2011). Although international conferences offer a forum for the diffusion of new scientific knowledge, research publications still play a more crucial role in international scholarly communication.

Writing and finalizing publications are very time-consuming processes. Therefore in many universities there is a need and desire for the libraries to support more scientific writing processes. Many university libraries worldwide already offer online research management, writing and collaboration tools such as RefWorks and train researchers to use them. These tools are designed to help researchers to easily gather, manage, store and share all types of information, as well as to generate citations and bibliographies.

In *representative knowledge processes* new knowledge is manifested and transferred to the users. Publishing is a good example of representative knowledge processes in scholarly communication. When the researchers have created new knowledge and produced new publications (articles, monographs…), there is still a need to publish them and put them on the market. Usually researchers do not do this by themselves; other actors are needed.

As described elsewhere in this book (Sisättö et al. 2012), university libraries have for some time already been involved in the publishing processes in the universities. Open access publishing will create new challenges for the university libraries. Nowadays many university libraries take care of the parallel publishing and open institutional repositories of their own universities. Conventional publishing models are changing towards multiple models and in many universities the university presses and libraries have joined forces (Sisättö et al. 2012).

Bibliometric analysis is another good example of representative knowledge processes in scholarly communication. Other researchers are definitely the users of scientific publications but so also are those actors, for example, who make decisions on research funding. They may be university administration personnel or high-level decision-makers (Ministry of Education and Culture). Decision-makers usually do not want to read scientific text as such but need bibliometric data on scientific publications. Today it is increasingly common for university libraries also to be involved in bibliometric analyses.

Bibliometric analysis is a representative knowledge process, which makes scholarly communication visible in another form. Bibliometric analyses provide both quantitative and qualitative information about the final results of research work, e.g. publications. Bibliometric analyses are useful both to researchers and research groups for their self-evaluation. They are also valuable to research administration when planning research policy and making decisions about research financing. As Forsman, Ndinoshiho and Poteri (2012) demonstrate in another chapter in this book, librarians may have professional skills for bibliometric analyses and services, and so take a major role in producing bibliometric data for different purposes.

5. The University of Namibia Library in the arena of scholarly communication

As described earlier, in a developed country there is a long history of scientific publishing and printed scholarly communication. In developing countries like Namibia this history is shorter. This implies many challenges but also many opportunities. In developing countries university libraries can make the leap of a tiger in building their partnership with the academic community and promoting scholarly communication in many ways.

The UNAM Library is a relatively new university library, established in 1992. The University did not have a strong research orientation until recently, when postgraduate programmes were introduced with a marked emphasis on teaching, research and publishing. The role of the Library as a partner in scholarly communication has developed during the years and this has been acknowledged by the University.

One of the university libraries' main roles in scholarly communication is to offer access to the findings of earlier studies. It is only natural that the printed collections of the UNAM Library are not yet very extensive. However, we believe that electronic publishing, and especially the diffusion of open access publishing, will improve the library's ability to provide access to published scientific knowledge. The library has a critical task in teaching researchers, teachers and students to seek scientific information in an electronic environment.

The UNAM Library has already been involved in developing publishing processes at the University. It was active in initiating the re-establishment of the University of Namibia (UNAM) Press in 2009. Although the UNAM Press operates today as an independent unit at the University, it remains a brainchild of the Library, and this symbiotic relationship is acknowledged and respected. In addition, the UNAM Library has established a digital repository as an open access publishing option for its research output. This undertaking complements UNAM Press and broadens the scope of scholarly communication.

A significant proof of the esteem in which the UNAM Library's is held in scholarly communication throughout the structure of the University is that the Library is represented on the Research and Publications Committee, the Postgraduate Committee, the Research and Academic Forum and has six seats in the University Senate. Although the role of the Library is valued and appreciated in these various committees, it can play a much bigger role. It could do more by supporting the various stages of knowledge processes at the University than

it is currently doing. For example, it is not yet in a position to offer bibliometric analyses of UNAM's scholarly output.

Because university librarians usually have an academic education, they have the ability to read and write scientific texts. However, from experience we know that writing skills, for example, develop only by writing over time. Therefore it is important that the UNAM Library encourage its staff members to learn academic writing by doing it.

6. Discussion

University libraries have always had an important role in the chain of scholarly communication. By focusing on various types of knowledge processes we can even ensure that the university libraries' role in scholarly communication continues to grow and assumes new forms. However, we emphasize that libraries and librarians should make their role more visible. They should take an initiative and participate in the discussions in various arenas of scholarly communication and proudly show their own expertise. In most cases, university librarians have the academic education with the special field of know-how, which, combined with the knowledge of researchers, will benefit the whole academic community (Iivonen & Huotari 2007).

Likewise, the librarians should listen and learn from the researchers about their work. University libraries can support researchers in their scholarly communication better if the librarians understand well enough how researchers work, what their research culture is like, and how they seek and produce information. In addition, focusing on scholarly communication may also enhance the librarians' own self-confidence when they understand how important their own role is in the long chain of scholarly communication.

Scientific work itself is changing and acquiring new forms. It is more global and more collaborative. It also is carried out more in a

networked and digital environment. Researchers can work anywhere with their laptops or tablet computers. They are not confined to a certain space – like a library building – when making information searches, sending their texts to colleagues by e-mail or working on some common platform. E-research, e-science, e-social science and e-humanities, for example, are terms used in describing the changes of scientific work. Managing research data and outcomes (publications) is a real challenge in e-research. University libraries can take an active role in this process. This is a similar challenge for university libraries in developed and developing countries alike, both in Finland and Namibia.

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UNIVERSITY PRESSES AND UNIVERSITY LIBRARIES AS PUBLISHERS: NEW MODELS AND BENEFITS

1. Introduction

There has been a revolution in the use of information during the last decade. In this challenging environment, the university presses and libraries are trying to find new ways and models to accomplish their task of disseminating scholarly knowledge. The aim of this chapter is to describe how the presses and libraries have found synergies and forms of collaboration, and created new publishing models benefiting from the new information technology.

In the beginning we briefly describe the traditional field of publishing, and the university presses' role therein. The chapter continues with some descriptions of new models the presses have adopted to survive in the challenging environment (Whitney & Cohn & Faran & Jensen & Kiely & Underwood & Wilcox & Brown & Givler & Holzman & Keane 2011). Changes have also inspired librarians to create an active role for themselves in the publishing process, to reduce the cost of books and offer their customers better service. We

describe the survey made by the **Association of Research Libraries** (Hahn 2008), which verifies how libraries have taken up this new role. We continue with cases where the university press has joined forces with the library, and found benefits from doing so (Bargheer & Schmidt 2008; Clement 2011).

The university presses and libraries publish journals and books. In **this chapter we focus on book publishing. The method we use is a** literature review combined with two cases closely related to the authors: Tampere University Press (TUP) and the University of Namibia Press (UNAM Press). University presses have different histories and resources in different parts of the world. Moreover, it is very important to give a picture of the university presses operating in the developing countries in Africa. African university presses have very different missions from those of the West. This section concludes the chapter, and in the concluding remarks we combine the findings described.

2. The traditional field of scientific publishing

Scientific publishing is a process in which knowledge should be testified, qualified, saved and distributed to the audience. The process is efficient if an actor takes care of the quality of the publications, marketing and distribution. **These tasks traditionally fall on the publishers.** The whole publishing sector is by tradition divided into *trade* and *academic – profit* and *non-profit* – publishers. **University publishers** traditionally make a similar distinction, between the so-called *Oxford-type* publishers which make a profit and the *German-type*, which follow a service-based non-profit model. (Givler 2002, 108; Leinikka 2005, 17, 33–34.)

The main task of the Oxford-type publisher is to **promote the** name of the university, and at the same time do **profitable business.** The German-type university publisher produces publications, especially

dissertations of the publisher's own university. Making a profit is not the main goal, but due to the economic difficulties of the universities, German-type publishers are also forced to find some help through the commercial market. (Leinikka 2005, 33–35; Clement 2011, 516.)

Why are universities publishers?

Universities started publishing mainly because profit-making trade publishers were not interested in scientific publishing. The audience for scientific books is small, and for this reason it is difficult to make a profit. Universities also started publishing because they wanted to be sure that all the research and the new knowledge created by the university was efficiently distributed, absorbed and learned. The university publisher also offers a forum for academics to increase discussion and work together in the university. The university publisher brings merit and visibility to the university and its researchers. (Givler 2002, 108–110; Leinikka 2005, 32–33; Clement 2011, 508–512.)

We can list a few special features of scientific publishing. The audience for scientific literature is limited. The editions even in major language areas are small. There are few big international publishing companies, and many small local ones, publishing a lot of titles. Two essential parties in the publishing business – the authors and the reading public– usually act inside the scientific community. (Leinikka 2005, 12–13.)

3. From the traditional publishing model towards multiple models

Publishing in different electronic forms is increasing; for journals this has already increased dramatically. The same will happen with books

in the very near future. Open access publishing and self-archiving in open institutional repositories are also becoming more popular (Ferwerda 2010, 137). Libraries reduce purchases or even make it superfluous to buy journals and books in print if electronic versions are available (Faran 2011; Tampereen yliopiston kirjaston kokoelmien kehittämisohjelma 2011).

For university presses, the most immediate problem has been that unit sales of scholarly monographs have declined in a very dramatic way. This has happened globally (Look & Pinter 2010, 92). According to Thompson (2005, 92), the unit sales of the U.S. university presses have declined by 75 % since the 1970s. The same development is also apparent in Finland. Tampere University Press (Rajala 2011) kept a detailed sales record of its doctoral dissertations over a two-year period 2009–2011. The sales of these dissertations were very low: 47.8 percent of the total 205 titles that came out between 1 August 2009 and 31 July 2011 sold between zero and five books per title. During the same period, 21 percent of the titles sold 21–50 copies, and only 8.3 percent sold more than 51 copies per title. Over 90 percent of these dissertations are also published in the open institutional repository of the University of Tampere. Downloading dissertations is very common: 77 percent of them have been downloaded 1,000 times or more.

In this new situation, university presses have developed new strategies to survive. Few presses can count on new subsidies from their host institutions. The most common strategies have been to reduce costs, increase prices, change publishing strategies, alter the list, expand marketing, or publish other kinds of books. Some of these strategies have been more successful than others, but recent years have confirmed the inability of the old business model to sustain the publishing of scholarly monographs. (Givler 2002, 113–115; Ferwerda 2010, 137; Clement 2011, 513–518.)

Many scholars and students assume that a Google search is a first step when conducting research, that multimedia is an integral part of a narrative text, and that content will be available in a variety of

formats and devices, with the accompanying tools and functionality to enhance its use. The implications of these changes are causing a transformation of strategies for disseminating scholarly content. The question is, what role will university publishers carve out for themselves in this new world? (Wittenberg 2010.)

More open and digital publishing

The Association of American University Presses (AAUP) appointed a taskforce to investigate the questions: How are university presses evolving today, and how are they thinking about the future? The taskforce's report *Sustaining Scholarly Publishing: New Business Models for University Presses* includes a roundup of new business model activities already underway in the university press community. The AAUP taskforce identified a range of essential university press functions that might be grouped into two categories: ensuring and signifying quality and promoting broad readership.

For most university presses, the shift to digital means relying on digital publishing for books. The taskforce surveyed *new model* activities and identified four general categories for these new activities:

- publishing open digital editions of books combined with paid print using print-on-demand methods
- publishing primarily via open access
- issuing e-books for sale
- experimenting with digital publishing projects

In most cases, university libraries provide hosting services to the presses free of charge. Without this level of institutional support, these programmes would not be possible. It seems clear that most new business models for university presses will involve more open content and more subsidized funding. According to the AAUP report, most

of the university presses have already moved from the world of a single business model to a world of multiple, shifting, models. (Whitney et al. 2011; Faran 2011.)

Innovative models

Kate Wittenberg (2010) suggests that innovative thinking is necessary for university presses to develop new models for shaping and disseminating scholarship. She says that the current environment demands risk-taking, new approaches, innovative models, and a workforce willing and able to engage in these activities. The university publisher needs to establish a small group within the press that will focus on helping scholars develop innovative models of scholarly communication, emphasizing new thinking about content, technical functionality and tools, and strategic partnerships. In this model, the press becomes more of a research centre that plays a role in leading innovation in a scholarly discipline, in addition to serving a production and dissemination function. Wittemberg emphasizes that some of the publishers' traditional skills, such as identifying, assessing and editing the best scholarly work, remain as valuable as ever.

One innovative model for making academic monograph publishing sustainable, is called the *consortium publishing model*. It is in use at Bloomsbury Academic Publishers. The basic principle in this model is to collect a consortium that agrees with the publisher that the content of the monograph's digital file is made available on a Creative Commons Non-Commercial licence. An example of how it might work: if 1,000 libraries contribute 10 dollars for open access rights to a book, the publisher gets 10,000 dollars. This is enough to cover the costs of the first copy of the book (author's costs, publishing selection, managing the peer review process, the cost of editing and proofing, design, typesetting and uploading to a website). For

the consortium libraries, the 10-dollar fee is cheaper than the average cost of a monograph. (Look & Pinter 2010, 94–97.)

4. The new role of libraries in scientific publishing

The Association of Research Libraries (ARL) surveyed its membership in 2007 to gather data on the publishing services they were providing. The survey verified that research libraries are rapidly developing publishing services. According to the responses, 44 percent of the libraries reported that they were delivering publishing services. Twenty-one percent were in the process of planning publishing service development. Only 36 percent of responding libraries were not active in publishing services. These libraries are publishing many kinds of works, but the main focus is on journals; 88 percent of publishing libraries reported that they were publishing journals, compared to 79 percent which publish conference papers and proceedings, and 71 percent which publish monographs.

The survey also verified that libraries are focusing on the capabilities and prospects for new models rather than duplicating or simply automating traditional models. Peer reviewed works dominate library publishing programmes and editors or acquisitions committees typically maintain their traditional roles in identifying quality content. Libraries often provide technical support for streamlined peer review workflows, but do not provide peer review. There are pressing demands for information and advice about issues such as moving print publications into electronic publishing, discontinuing print in favour of electronic alternatives, publishing works with limited revenue-generating capability, revenue generation, standards of various sorts, mark-up and encoding, metadata generation, preservation, contracting with service providers and copyright management. (Hahn 2008, 13, 16–17, 19, 27.)

What is the difference between traditional and library publishing?

Libraries' products resemble many publications produced by traditional publishers, but they are largely electronic-only and basic in their design. Limiting services to purely electronic publications offers some significant advantages over print-oriented publishing. Costs are kept low by simplifying production and design and relying on open-source software.

Online full-text publishing enables discovery by a wide range of search engines and full-text searching, reducing the need for marketing. Workflows tend to be streamlined and almost all services are highly automated once production commences. For many publications, the goal is to keep publishing costs low enough to be managed as core library services. Publishing services are not usually treated as an isolated operating unit as a university press might be. They are typically embedded in an emerging programme of related services – digital repository development, digitization programmes, copyright management advising, etc. (Hahn 2008, 14–17.)

5. Integrating the university press and the library

There are many examples where university presses and libraries have united. Göttingen University Press has been a part of Göttingen State and University Library since its founding in 2003. Göttingen University Press belongs to the new generation of university presses, whose aim is to add value to publications and publish them as freely as possible. Göttingen University Press has increased its share of full open access books to more than 80 percent.

Göttingen University Press sees many benefits from integration into the library. The library's subject specialists advise and provide

contact lists for the press. The institutional repository is integrated into the library catalogue services. The press offers independent consultancy on publishing, both on legal and economic aspects. The aim of this consultancy is to find the best publishing solution for the author, not necessarily a publishing contract with the Göttingen University Press. (Bargheer & Schmidt 2008, 134–137.)

Richard W. Clement (2011, 508) also suggests closer collaboration between the library and the university press. Clement notes:

> "Though these two entities have differing business models, partnerships have much to offer each, and integrating the press into the library organization and aligning its business plan with the library's plan offer a viable solution to the crisis of contemporary university publishing. Library/press integrations have the potential to be extraordinarily significant in the future development of publishing in this area."

This kind of a development is already on its way in U.S. universities. At the end of 2010, at least 16 out of 90 or so university presses had reporting lines to libraries. In 2007, the number doing so was only six.

USU Digital Monographs becomes the fundamental initiative in transforming the press and truly aligning it with the library. Rigorous peer review is maintained. Publication is open access using Digital Commons, the library's institutional repository. Options for print on-demand and various eReader formats are or will soon be available at a reasonable cost. The press continues to make these eBooks available through non-exclusive agreements to eBook vendors and aggregators, and these modest revenue streams enable the press to pay royalties. The press is now part of a much larger collaborative effort, led by the library, to capture, develop, and distribute the information, the scholarship, and the research produced at Utah State University. (Clement 2011, 502–523.)

The need for a publishing strategy

Daniel Greenstein (2010) suggests that the universities develop and implement a coordinated publishing strategy. Greenstein's idea is that the university's publisher takes a leadership role in developing and implementing a coordinated publishing strategy for the university. It emerges as something much more than a stand-alone business entity with some level of central subsidy. It collaborates with a range of partners, including libraries, research units, scholarly societies and cultural institutions as many university presses already do. But there is a critical difference. The university's publisher has a wider scope of decision-making and budgeting authority over the sum-total activities that contribute to its implementation of the university's publishing strategy.

6. The Case of Tampere University Press

Tampere University Press (TUP) was established in the Tampere University Library in 1994. TUP is a department of the Library, with five staff members. TUP publishes dissertations and other kinds of academic publications from various fields of study. It publishes approximately 100 doctoral dissertations and about 20 other scientific books annually. Over 90 percent of the dissertations are published online.

TUP produces publishing services mainly for the researchers and teachers of the university. The service aspect is very prominent, especially in publishing the doctoral dissertations. Profit-making is not the main goal of TUP, but the continuity of the publishing means that more than half of the publishing costs have to be financed by revenue. To cover a part of the publishing costs, TUP usually requires some advance order organized by the author's research group or the School of the University.

In spite of providing publishing services mainly for the researchers and the teachers of the University of Tampere, **anyone can submit a book proposal to Tampere University Press if the manuscript being submitted contributes new and interesting information. The publishing** decision is based on peer review, and taken by the Chief Librarian. TUP keeps an online list of the peer reviewers who have given permission to publish their names. **The aim of this is to provide more transparency** in the academic publishing process.

TUP has an advisory board. The task of the board is to make suggestions for developing TUP and also to act as reviewers or help to find experts to review the manuscripts submitted. The members of the board are mainly directors, professors and researchers of the University. The first vice rector chairs the board.

TUP has a tradition of online publishing since 1999. It is natural for the staff of the press to promote open access. TUP also takes a very positive view of the right of researchers to self-archive their research articles published by TUP in the institutional repository of the university. In collaboration with the other library units TUP has been very active in implementing new repositories for doctoral dissertations, theses and other scientific publications. The benefit of this collaboration is in achieving better results by combining the different expertise of press and the library staff.

TUP is on the right path if we compare the way TUP acts to that suggested in research reports and articles described in this chapter. There is still a need to develop a new publishing strategy for TUP, or still better, for the whole of the University of Tampere to face the challenging future.

The task of the university press is to **promote the name of the** university and its researchers. In these days this means publishing as much as possible open on the Internet. The audience is there – the readers and users. The more easily the readers can find and freely use the publications, the more they cite and use them in their studies and research. This promotes the university best.

7. University presses in Africa

Universities and university presses in Africa are relatively new institutions. In many African countries, universities were only founded after the attainment of political independence from colonial rule in the mid-1960s, and scholarly publishing is therefore a more recent phenomenon.

University presses in Africa, as elsewhere, aim to publish the results of scientific research at their institutions, and have produced important works on local history, culture, languages and approaches to developmental issues that challenge the societies in which they exist. However, the amount of scholarly publication in Africa is very low compared to other parts of the world.

The United Nations Institute of Statistics presents the scientific publication output in Africa as a whole for the years 1981–2000 (UIS 2005, 3). According to this study, Africa accounted for 1.4 percent of the worldwide publication output in 2000. At the same time, North America's world share in scholarly publications was 36.7 percent and Europe's was 40.2 percent. A more recent study shows similar results: Ajaz Wani and Gul (2008) made an analysis of the publications found in the SCOPUS database in January 2008. According to their analysis, the share of African scholarly publications cited was only 0.63 percent of scholarly publications worldwide.

Scholarly publishing and university presses in Africa face many challenges. One of these is language, which is a perennial issue for African publishers, whether scholarly, educational, or commercial. GNK Vukor-Quarshe and Emmanuel K Oseifuah (2010, 84) identify market availability, distribution, lack of funding, lack of editorial experience, poor quality of research, underdeveloped ICT, and the lack of a common indigenous language as key factors in the decline in scholarly publishing in Africa since the 1980s, as well as "a dependency on developed countries for knowledge creation and dissemination".

The tradition in former times was for scholarly and literary authors to publish with international publishing houses outside Africa, mostly in English or French, but this produces books that are not accessible to much of the population in the countries concerned. As there are more universities in Africa, the need to publish in African languages increases. However, some African languages are only spoken by communities that are few in number, so publishing is not commercially viable. (Nkolola-Wakumelo 2010.)

Darko-Ampem's (2005) case study of the practices and policies of six African university presses identifies low sales and non-specialized areas as deficiencies. According to this study, African university presses lack written policies and cooperation with each other. However, as a successful scholarly publishing model cooperation between African publishing presses and international publishers has occurred. James Currey (2010, 283) has suggested "that modern technology will offer … a new form of co-publishing which will transform the way publishers of academic books in the different countries of Africa can work together. For the universities, print on demand (POD) may well be as transforming as the cellphone has been for ordinary day-to-day trade."

Some African publishers are taking advantage of technological developments and use digital printing for small print runs and print-on-demand publishing, but in many countries Internet connections and bandwidth are still not good. According to the African Books Collective (2012), which received donor support in the 1990s and early 2000s to distribute books from Africa internationally, it has also over time, "adapted itself to changing markets and methodologies" and now concentrates on print-on-demand distribution, using printers in the countries where orders are generated.

Inadequate technology, socio-political factors, environmental and economic factors and the invisibility of scholarly publications from the region are impediments to scholarly knowledge production and scholarly publishing in much of Sub-Saharan Africa. Print on

demand, online journals, and open access publishing could be seen as solutions to many problems of scholarly publishing in Africa and could enhance the access to publications and knowledge in Sub-Saharan Africa. (Ondari-Okemwa 2010.)

8. The Case of UNAM Press

The University of Namibia (UNAM) started to publish under the name of UNAM Press in 2002, and twelve titles were published between 2002 and 2006, but no more after that for some years. In 2011 the University established a UNAM Press publishing unit to further develop its publishing. After a period of consultation with different faculties and centres of the University, a policy document to guide UNAM Press was adopted by the University's Senate at the end of 2011. This defined the vision of UNAM Press, which is "to be the leading publisher of scholarly research and innovation in Namibia" (University of Namibia 2012a).

Housed in 2011 within the Library and reporting to the University Librarian during this period of development, UNAM Press is now an independent unit reporting to the Pro Vice Chancellor for Academic Affairs and Research. It is guided by a UNAM Press Senate Committee made up of representatives of each faculty and autonomous academic centre, with a sub-committee that is the UNAM Press Editorial Board, empowered to approve or reject manuscripts. Manuscripts go through "a rigorous peer review process" (University of Namibia 2012b).

According to the UNAM Press policy document, UNAM Press aims to transform knowledge creation and dissemination, for example by developing best practices in scholarly publishing, improving academic authorship at the University, increasing the number of UNAM publications and publishing opportunities for UNAM staff, establishing publishing guidelines and procedures, and improving

the peer review process for university publications. UNAM Press is the official publishing unit of the University of Namibia and UNAM staff members are encouraged to publish with UNAM Press as a first option. (University of Namibia 2012a.)

The Namibian population is only just over 2 million, and only a small number of people within the country buy and read scholarly publications. UNAM Press therefore does not aim to cover all its costs from sales revenue. It has aligned its strategic objectives with those of the University, receives a subsidy from the central University budget, and hopes to augment that with sales revenue. Distribution arrangements are being developed in Namibia, South Africa and internationally. UNAM Press books are available through the African Books Collective (ABC), which now also manages the digital distribution of the content of UNAM Press titles, through MyiLibrary and Ebrary. This enables UNAM Press books to reach markets that they would not have reached if they were relying solely on print editions.

A Scholarly Communication in Africa Project (SCAP) is ongoing between the Centre for Educational Technology at the University of Cape Town and four southern African universities, including the University of Namibia. This is developing a digital repository for the UNAM Faculty of Humanities and Social Studies (FHSS), with the involvement of UNAM Press and the Library (Scholarly Communication in Africa, 2012). UNAM Library staff are being drawn into the indexing of documents that will be in the repository, and thus into one part of the publishing process. Although SCAP is a pilot study, it is hoped that it will lead to the development of a digital repository for the whole of the University of Namibia. Open access to documents is also being widely discussed at the University of Namibia. Collaboration between the University Library and UNAM Press may therefore develop further.

9. Conclusions

In this chapter we have described the current situation where university presses are in the changing field of academic publishing. There have been some suggestions as to how the presses can change their traditional models towards new and innovative models of publishing. Many university presses have already taken steps towards doing this and have started new publishing projects, often with other partners. At the same time, the libraries have taken on new tasks in the scientific publishing field – often in collaboration with university presses. Libraries do not have long-standing publishing traditions. It is therefore much easier for them to start publishing, benefiting from the new technology, using open access and the new ways to make knowledge accessible to their customers in the university, and at the same time to a wider audience.

We can draw some conclusions from this development. University presses and university libraries have much in common. They can work or in some cases even join forces to better serve their host academic community. It is clear that demands for open access will continue to grow. The more that content is open to all, the smaller the sales revenue will be. This means that university presses will need financial support from their universities to cover the costs of selection, peer review, editing and typesetting the first copies of their books. The libraries will also need extra financing and human resources, especially during the establishment of new open access publishing services.

University presses in African developing countries have a very different role and mission compared with the U.S. and European university presses described in more detail in this chapter. African university presses are essential to fulfill a major aspect of the university's mission, and fit into the university's overall strategy. If the western university presses with their collaborative partners keep publishing more online in the future, this will also benefit universities in developing countries. They will get the same access to the most recent

scientific knowledge that their colleagues in other parts of the world have enjoyed for decades. This will allow a greater sharing of such knowledge and the growth of local research capacity.

We can list a few common aspects in all new publishing models already established or proposed for the university presses and libraries. Whatever the publishing model or actor, the publisher's most important task is to identify, assess and edit the best **scholarly work of the publica**tions. This is one of the key principles of the presses' old publishing models, and has been maintained in all new models that the presses and the libraries have adapted. Quality has been the leading idea in all library activities, so it is very natural for library staff to adapt it into their new publishing models.

Moving toward open access is the second common phenomenon of the new publishing models the presses and the libraries have adapted. Both parties have understood that the more easily the readers find the **scholarly publications, the more they will use and cite the** text. This adds to the impact of the author of the publication, but it also gives more impact to the publisher, and indeed to the host university.

The third common aspect is the use of new printing technology and distribution channels via the Internet. They reduce the publishing, marketing and distribution costs. This is very important, **particularly** during the present global **recession. Maybe the most important com-**mon phenomenon has been the rise of collaboration. Both parties in the publishing field, the libraries and the presses, need each other's expertise to survive and further develop their mission in the rapidly changing scientific publishing field.

We can see these four aspects also as main publishing principles in two cases, TUP and UNAM Press, described in this chapter.

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OBSTACLES TO SCHOLARLY PUBLISHING BY ACADEMIC LIBRARIANS

1. Introduction

Supporting scholarly communication is an elementary task of university libraries. Library collections, services and facilities fuel research and the creation of new knowledge conducted by faculties. Research results are communicated through publishing, mostly through journals. These are disseminated by library subscriptions and made available to the academic community to enhance research.

However, it is not common that librarians by themselves participate in scholarly publishing as authors. For the general public the idea of librarians as researchers is not familiar (Sitienei & Ocholla 2010). The role of academic libraries in scholarly communication is traditionally presented as purchasers of scholarly publications. In addition, academic libraries have been regarded as depositories where researchers can have access to information published in the past. (Meadows 1997.) Crumley and Koufougiannakis (2002) have suggested that the biggest obstacle to finding library research output is that librarians usually do not publish their research.

This survey investigates scholarly publishing activities of professional library staff at three universities, the University of Namibia (UN-AM), the University of Tampere (UTA) and the University of Helsinki (HU). The aim was to find out more about librarians' perceived barriers to scholarly publishing and to find recommendations as well as solutions to encourage and motivate them to write and publish. This will not only strengthen the knowledge base of the library and information science (LIS) community but also improve the sharing of their results to the benefit of colleagues and thus enhance evidence based librarianship (e.g. Powell & Baker & Mika 2002; Booth 2003; Iivonen & Namhila 2012).

To accomplish the research objectives of this exploratory study a survey was conducted in all three universities involved. The research questions in the study were as follows:

1) Do librarians read LIS research literature?
2) Do librarians conduct work-related research?
3) Do librarians publish the results of their research in scholarly journals?
4) What are the perceived obstacles that prevent librarians from publishing?
5) How could the obstacles of publishing be overcome to enhance librarians' publishing activities?

2. Literary review

Scholarly publishing

The word "publish" originates from the Latin "publicare", to make public (Day 2007, 19). Making information public is nowadays very easy through various digital dissemination channels, formal

and informal. However, in this paper the authors describe scholarly publishing as only the formal dissemination of research results by publishing articles in scholarly journals or books. The concept of scholarly publishing has intentionally been chosen in the paper instead of "scientific publishing". The function of scholarly publishing in the academic community typically includes quality control by peer review, dissemination and preservation of research results. As research is always built on earlier research, the authors decided not only to examine the librarians' scholarly publishing but also to consider their habits of reading LIS literature, professional publishing activities as well as their work-related research practices.

Evidence based librarianship

We claim that reading of LIS literature, conducting research and publishing the results are prerequisites for evidence based librarianship (EBL). EBL is an approach that provides a powerful tool applicable as a basis for university library decision making on different levels. EBL as a method has been described in another chapter in this book (Iivonen & Namhila 2012).

Eldredge (2000) emphasizes that EBL encourages communicating research results, preferably through peer-reviewed journals or other forms of authoritative dissemination (Eldredge 2000). Communicating results is of great value for several reasons: first, for colleagues struggling with similar questions in their professional practice; second, to build the LIS knowledge base; and third, to enhance interaction between LIS academics and practitioners in order to bridge the research-practice gap (see e.g. Booth 2003; Haddow & Klobas 2004; Sitienei & Ocholla 2010). Haddow and Klobas (2004) have found 11 forms of gaps between research and practice in LIS: knowledge, culture, motivation, relevance, immediacy, publication, reading, terminology, activity, education and temporal.

University libraries as part of the universities need to be closely aligned with the needs of the community they serve (Eldredge 2006). Accordingly, librarians need to have a more profound understanding of the different phases of the research process, including scholarly communication, in order to be able to support researchers in the optimal phases of their research and to develop new services for the faculty and administration, e.g. institutional repositories and bibliometric analysis services. For these reasons, the authors suggest that librarians should be more involved in the field of academia through writing and publishing.

Reading research literature

Librarians' research-related reading has been studied, for example, by Powell et al. (2002). The results of their study showed that over 89 percent of LIS practitioners in the United States and Canada regularly read at least one research journal and almost 62 percent read research-based articles in those journals on a regular basis (Powell et al. 2002). However, Haddow and Klobas (2004) found from the LIS literature that researchers and practitioners do not read each others' publications and have concluded that there is a reading gap.

Academic librarians' scholarly publishing

Studies on academic librarians' scholarly publishing have approached the subject from several points of view. Many quantitative studies have addressed academic librarians' publication records. Weller, Hurd and Wiberley (1999) for example, investigated U.S. academic librarians' contributions to peer-reviewed LIS journals from 1993–1997 and replicated the survey in the period 1998–2002 (Wiberley & Hurd & Weller 2006). Comparing these two periods, the authors found

that there was a decline in the total number of peer-reviewed articles produced by academic librarians (Wiberley et al. 2006).

Accordingly, Sitienei and Ocholla (2010) studied through biblio-metric and content analysis methods the research publication records from 1990–2006 of academic librarians in eastern and southern Africa. Interestingly, UNAM Library was one of the 46 libraries included in their study. The study indicated that southern Africa was the most pro-lific region with 199 publications by 89 academic librarians; whereas east African academic librarians only contributed 75 publications. The University of Namibia together with the University of Lesotho Library shared the sixth position in the ranking by publication frequency both with 11 publications. (Sitienei & Ocholla 2010.)

In their study Sitienei and Ocholla (2010, 46) recommend that regular research and publishing should be a criterion for the promotion of librarians to encourage them to engage in research and publishing.

Librarians' relation to research and their assessment of their re-search skills have been studied e.g. by Powell et al. (2002), and recently by Schrader, Shiri and Williamson in the University of Saskatchewan (Schrader & Shiri & Williamson 2012). In the latter, the idea was to assess the research learning needs of the academic librarians to develop additional educational activities and support that would enhance their knowledge and skills.

Barriers to scholarly publishing in the field of LIS and reasons for publication choices have been studied by Klobas and Clyde (2010). Prior to the study at hand, a pilot study was conducted at the UNAM Library by Matangira, Shatona and Kahengua (2011), where the obstacles experienced by academic librarians for scholarly publishing were elicited. The main issues raised by respondents in the survey centred on the themes of time, motivation, purpose of research, pub-lishing forums, exposure, collaboration, training, Internet connections, knowledge of theoretical frameworks and research methodologies as well as the use of the English language. Some respondents stated that they did not know where they could publish their research findings,

while others pointed out that there is a lack of collaboration with experienced researchers who would identify research problems, thus they needed guidance. (Matangira et al. 2011.)

Co-authorship is one of the important characteristics of the research literature. Wiberley et al. (2006) have noted that in general, co-authorship has increased notably in LIS since the 1970's. Nevertheless in their studies on publication patterns in U.S. academic librarians they found 58.9 percent of articles from 1998–2002 were single authored. Moreover, they reported that the proportion of refereed co-authored articles had to some extent declined between 1993–1997 and 1998–2002 (Wiberley et al. 2006).

3. Methodology

Survey

This study uses an exploratory approach to examine scholarly publishing and related activities of librarians using the survey method of gathering information. Similar online or print questionnaires were sent out to librarians at UNAM, HU and UTA, in May–June 2012. The target population of the survey included chief librarians, library directors, librarians, information specialists, planning officers and assistant librarians employed at the three university libraries. The questionnaire survey was conducted anonymously. At UTA and HU, E-lomake-software was utilized to administer the questionnaire.

An invitation email to participate and the link to the web-survey form were sent to the professional library staff at UTA and HU on 7 May 2012 and the online survey questionnaire was open until 20 May. At the UNAM Library the survey questionnaire was sent due to technical reasons as an attachment by email to the target librarians and was open between 30 May and 8 June 2012.

Table 1. Number of responses and response rates in the survey

	UTA	HU	UNAM	TOTAL
Total library staff (working in 2011)	70	241	92	403
Target population* of the survey N	46	95	28	169
Responses n	34	36	18	88
Response rate %	74	38	64	52

*Number of academic librarians incl. titles: chief librarian, library director, librarian, information specialist/subject librarian, assistant librarian, planning officer or equivalent.

Altogether, 88 responses were received; 36 from the HU Library, 34 from the UTA Library and 18 from the UNAM Library. The institutional response rates were higher at UTA and UNAM than at HU. As the total number of the target population was 169, the total response rate was 52 percent. No sampling method was applied as the target population was relatively small and heterogeneous. Furthermore, as the responses were anonymous, the respondents were free to suggest development ideas in their own words.

At the HU Library there were many employees with a university degree who were not included in the target population as their title was library secretary. For example, in 2011 at the HU Library the most common title was library secretary (83 employees) followed by library assistants (48 employees). These groups were not included in the study. Further, respondents in the HU Library might have been confused about the target population as the invitation was sent on a list to all 250 employees or so as no other means of distribution was available because of the limited time of the survey.

The questionnaire included both closed and open questions to invite respondents to communicate their ideas in their own words as well. It included basic demographic questions about gender, age group, the highest level of education and working experience. The language of the questionnaire was English in Namibia and Finnish in Finland. Accordingly, the Finnish results were translated into English for the purposes of this paper.

The responses of the survey were analysed using both quantitative statistical methods, especially for the data derived from the closed questions, and content analysis methods which were applied to analyse the textual parts in open-ended questions.

Respondents

The demographic background information on the respondents is presented in Table 2.

Table 2. Background information of the respondents (%)

	UTA	HU	UNAM	TOTAL
Respondents	n=34	n=36	n=18	n=88
GENDER				
Female	94	83	72	85
Male	6	17	28	15
Total	100	100	100	100
AGE				
- 30	0	3	6	2
31-40	15	14	41	20
41-50	29	42	35	36
51-60	47	33	18	36
61-	9	8	0	7
Total	100	100	100	100
EDUCATION				
Vocational education	6	3	0	4
Bachelor's degree	6	8	43	13
Master's degree	82	78	57	76
Licentiate or PhD	6	11	0	7
Total	100	100	100	100
WORKING EXPERIENCE IN THE FIELD				
- 2 years	0	0	0	0
2-5 years	3	8	22	9
6-10 years	12	17	17	15
11-20 years	27	36	33	32
20 years -	59	39	28	44
Total	100	100	100	100

The demographic information about the participants showed that more than 85 percent were female. Most of the respondents, i.e. 79 percent, were over 40 years old. However, the modes for the age groups

varied between universities as follows: UNAM: 31–40 years, HU: 41–50 years; UTA: 51–60 years. Accordingly, the respondents from UNAM were somewhat younger than their Finnish colleagues.

The most frequent level of the highest formal qualification was master's degree, which was reported by 76 percent of the respondents. The second most common degree was bachelor's degree by 13 percent. In addition to these, other educational qualifications were reported, for example college-level qualifications, a licentiate degree and a doctorate. The Namibian respondents also specified their honours degrees and postgraduate diplomas. The Finnish respondents were more highly educated than the Namibians.

All the respondents had at least two years of working experience in libraries or information services and 44 percent had more than 20 years of working experience in the LIS field.

Limitations

The limitation of this study is that it is based on a relatively small (88) number of survey results from three universities in two socioeconomically different countries: Namibia and Finland, thus the results are not applicable to academic librarians in general. Furthermore, the method of collecting publication data by self-reporting also has limitations compared to bibliometric studies, where publication records have been retrieved from authoritative databases, even though these have their limitations as well.

4. Results

Reading of LIS research literature

The reading of research publications is elementary to build further on research and scholarly publishing.

Table 3. Reading of LIS research literature (%)

Reading	UTA (n=34)	HU (n=36)	UNAM (n=18)	Total (n=88)
Regularly	27	36	33	32
Sometimes	62	50	56	56
Seldom	9	14	11	11
Never	3	0	0	1
Total	101	100	100	100

Table 3 shows that reading was quite a common activity among participants. Similarities were found between Finnish and Namibian librarians as in both groups the majority read research literature at least sometimes. There was only one respondent who reported not reading LIS research literature. In the open-ended commentary, the respondent communicated that research was not needed in his/her job.
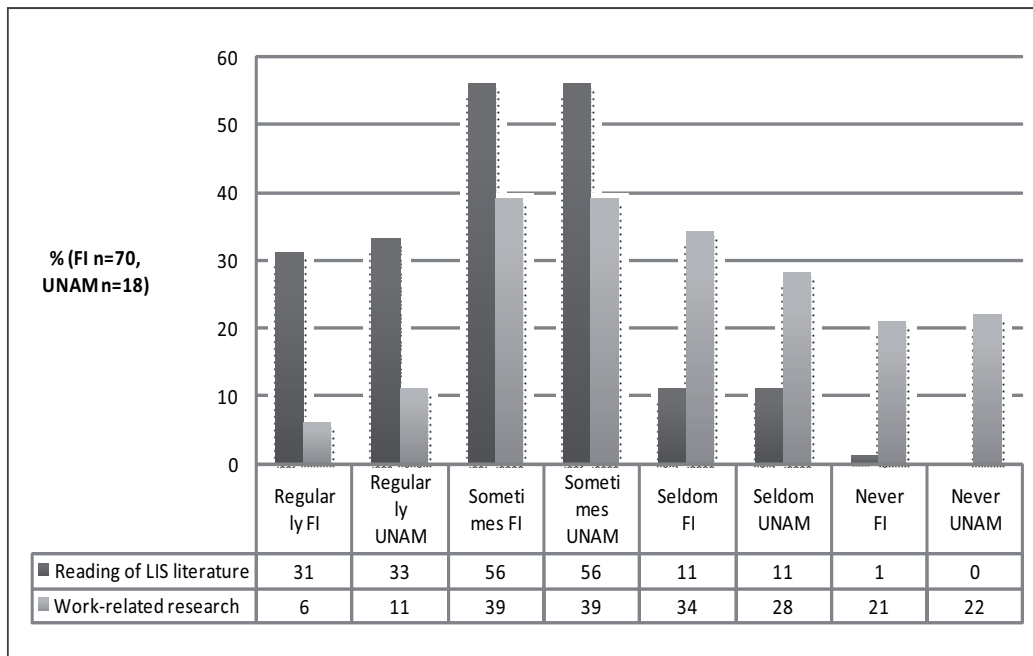
Conducting work-related research

The participants were requested to state how often they conduct work-related research.

Table 4. Conducting work-related research (%)

Research	UTA (n=34)	HU (n=36)	UNAM (n=18)	Total (n=88)
Regularly	3	8	11	7
Sometimes	38	39	39	39
Seldom	38	31	28	33
Never	21	22	22	22
Total	100	100	100	101

Table 4 shows that although work-related research is not part of the regular duties for the majority of the respondents, nevertheless 46 percent of the respondents at least sometimes carried out work-related research. Still, over half of the respondents had only seldom conducted research or had never done any. The patterns of the results are surprisingly similar between the Finnish and Namibian librarians.

% (FI n=70, UNAM n=18)	Regularly FI	Regularly UNAM	Sometimes FI	Sometimes UNAM	Seldom FI	Seldom UNAM	Never FI	Never UNAM
Reading of LIS literature	31	33	56	56	11	11	1	0
Work-related research	6	11	39	39	34	28	21	22

Figure 1. Comparison of the Finnish (FI) and Namibian (UNAM) participants' reading of LIS literature and conducting work-related research

Figure 1 illustrates that reading of scholarly LIS literature was a more frequent activity than conducting work-related research among participants. The results were similar between Finnish and Namibian librarians, with exactly the same percentages in many cases. Furthermore, in both groups there were about 20 percent who had never conducted work-related research.

Librarians' publishing output in scholarly publications

The respondents were asked about both scholarly and non-peer-reviewed professional publishing. This distinction was made to make the respondents consider the scholarly nature of the publications they had published in. In addition to requesting the participants to report the frequencies of their publication output, the questionnaire elicited if they had written the publications alone or together with one or several co-authors. Some respondents reported difficulties in remembering their publication frequencies and a few respondents did not indicate the number of publications.

Table 5. Publishing of scholarly articles/publications (%)

Publishing	UTA (n=34)	HU (n=36)	UNAM (n=18)	Total (n=88)
Yes	24	25	22	24
No	77	75	78	76
Total	101	100	100	100

The respondents were asked if they had ever published a scholarly article or publication. The similarities between results from all three universities are striking with no differences between Finnish and Namibian librarians.

Table 6. Publishing of scholarly and professional articles/publications

	Scholarly publications n>1	Scholarly publications n=1	Scholarly publications n=0	Total
Librarians % (n=87)	13	10	77	100
Scholarly publications % (n=127)	93	7	0	100
Scholarly publications /librarian Mean (Mode)	11 (3)	1 (1)	0 (0)	1 (0)
Professional publications % (n=301)	70	7	23	100
Professional publications/ librarian Mean (Mode)	19 (5)	2 (0)	1 (0)	3 (0)

In Table 6, the frequencies of scholarly publishing are used as an entry point and the percentages of scholarly and professional non-peer reviewed publications are given as well as the mean values and modes of publication frequencies. The modes are given as there were a few highly productive librarians and counting only mean values would not describe the data adequately.

Considering scholarly publishing, 45 percent of participants who had published scholarly papers were one-time publishers. The results showed that the four most productive librarians had published 79 percent of the scholarly publications reported. The number of scholarly publications per scholarly publishing librarian (n=20) was significantly high – 6 publications, yet the mean value for all librarians was lower (1).

The number of scholarly publications reported by the Namibian librarians was somewhat lower than that reported by the most productive Finnish librarians. It could also be stated that professional non-peer reviewed publishing was not common among Namibian librarians. However, professional publishing is not dealt with in detail in this paper.

Looking more closely at those librarians who had published more than one scholarly publication (n=11) shows that seven of them read LIS literature regularly and four read it sometimes, further reporting more research-related activities than other respondents. Librarians who had published only one research article (n=9) reported that they read either regularly (n=2), sometimes (n=5) or seldom (n=2) and they were less regularly involved in research activities.

The participants were moreover asked if they had written the scholarly publications alone or with one or several co-authors. The majority, 65 percent of those who had published scholarly papers, reported that they had experience of writing scholarly papers together with several co-authors; 45 percent reported having written together with a co-author and 60 percent reported their experience of writing alone.

Perceived obstacles that prevent librarians from publishing

The reasons why librarians do not publish the results of their research and development on a regular basis were elicited.

N=88, multiple responses
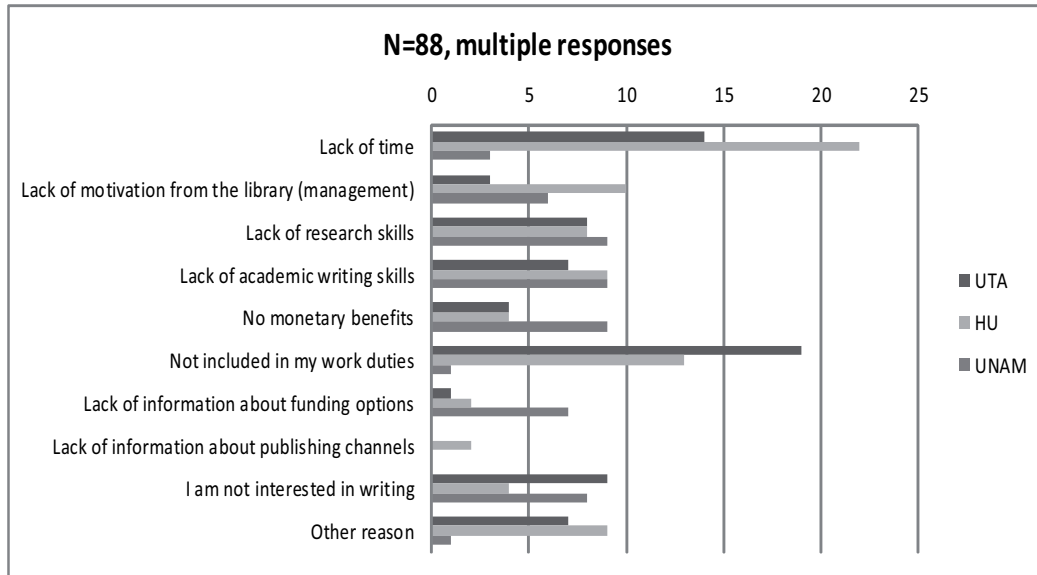
Figure 2 Frequencies of participants' perceived obstacles of writing and publishing

Figure 2 indicates that academic librarians' experienced obstacles to writing and publishing varied between universities. *Lack of time* was given as a major obstacle by Finnish librarians. However, at UNAM *Lack of time* was not among the most common barriers. At UTA the most common obstacle was *Not included in my work duties,* which at HU was the second most common barrier. The three most common barriers reported by 50 percent of UNAM participants were: *Lack of research skills*, *Lack of academic writing skills* and *Lack of monetary benefits*. Thus there were clear differences between Finnish and Namibian librarians' experienced obstacles.

In the institutions studied, the overall most common obstacle was *Lack of time* (reported by 39 participants) followed by *Not included*

in my work duties (33 responses) and thereafter *Lack of research skills* and *Lack of academic writing skills,* both of which were reported by 25 participants.

Other reasons the participants reported included in Figure 2 were for example:

1) Difficulties to formulate a work related theme that might be of interest to others
2) Personal reasons
3) Reasons related to the educational background
4) Reasons related to the organization
5) Difficulty of writing in English

Overcoming the obstacles of publishing to enhance librarians publishing activities

The question of how the perceived obstacles could be overcome was approached from two viewpoints. First, the respondents were asked to give suggestions on how the employer could further support their scholarly writing and publishing activities. Second, they were asked suggest how they themselves could enhance their scholarly writing and publishing.

Suggestions to the employer to support librarians publishing activities

There were altogether 56 responses on how the employer could support the scholarly writing and publishing.

Lack of time was the most frequently reported barrier to writing and publishing in the survey. Suggestions on how to improve the conditions for writing and publishing concerning the temporal gap

were numerous (n=20). The most common suggestion was simply that the employer should allocate time to research and writing. It was also commented that the duty to conduct and write up research should be clearly specified and made transparent to all employees. Many respondents were aware of the time-consuming nature of research and writing, and commented that if these would be included in the work duties, something else should be then be taken out. There was a comment about the need to switch from the daily work duties to more conceptual thinking, which needs time. One respondent commented that management should openly state that employees can use their working hours to conduct job-related research and writing.

Not included in my work duties was the second common obstacle. The respondents made suggestions (n=6) that writing and publishing could be included in the work duties when appropriate. However, several respondents commented that research and writing should not be included in the duties of all staff members as not all librarians are interested in or motivated to engage in research and writing. There were also some critical responses commenting that doing research is not a basic task of the library.

Lack of research skills and Lack of academic writing skills were both the third common barrier to the participants. Suggestions (n=8) to the employer concerning lack of research skills included: organizing training, mentoring, and starting a study group. According to the respondents there is a need for platforms, seminars, workshops, and meetings to share knowledge, skills and ideas, as well as to give feedback on research activities. There were also other practical suggestions about setting up a collaborative platform or page on the Intranet to share links to interesting articles. Suggested actions (n=8) for the employer concerning lack of academic writing skills were organizing training in academic writing, and motivating reading of the scholarly publications for example by starting a Journal Club. More training in written English was suggested as well.

Other suggestions concerned creating a research and writing friendly/intensive culture. Motivation from the library management was of utmost importance to the respondents. Motivation through monetary benefit was important to some of the librarians, who stated that remuneration systems should be introduced for research and writing activities. There were also very simple suggestions to the employer such as "positive attitude". Furthermore, enhancing collaboration between the research community and librarians was suggested.

Suggestions to the librarians to enhance their own publishing activities

There were a total of 48 responses on what they by themselves could do to improve their writing and publishing activities. Most of the suggestions were on problems concerned with *Lack of time* (n=12), *Lack of research skills (n=11)* and *Lack of academic writing skills* (n=13).

Suggestions for overcoming the problems of *Temporal gap, Lack of time* were "improving my time management" or by "reorganizing my tasks". Librarians' ideas on how to bridge the educational gap concerning *Lack of research skills* involved suggestions such as "applying for training or mentoring", "practice makes perfect, the more one writes, the more one improves but the environment should be an enabling one", "participating in a course on academic writing" and by "reading scholarly publications". Other suggestions included: "applying for a study leave", "applying for funding", "being persistent", "not giving up", "not being afraid of feedback from the peer reviewers". Moreover, many suggestions included a social approach to enhancing publishing activities, e.g. "searching actively for co-authors".

Several participants moreover commented that the topic of the survey was of great importance and extremely topical. Another suggestion was that a research committee should be established to coordinate the research activities of library professional staff.

5. Discussion

The results in this study indicate that the majority of academic librarians at the institutions investigated regularly or sometimes read LIS research papers. Thus we can conclude that there is no reading gap (Haddow & Klobas 2004, 31). Interestingly, the percentages of respondents reporting regularly or sometimes reading research publications was at UTA and UNAM exactly the same (89 %) as in the study by Powell et al. (2002).

Also concurring with the results of Powell et al. (2002), the percentage of librarians who regularly or sometimes carry out work-related research was more than 40 percent. Yet over half of the respondents had only conducted research seldom or never. Thus we could say that there is an activity gap (Powell et al. 2002; Haddow & Klobas 2004). The comparison of the reading and research practices revealed that reading of scholarly LIS literature is a more frequent activity among participants than conducting work-related research. This is also very similar to the findings of Powell et al. (2002).

The majority of the respondents (76 %) had never published a scholarly paper. The survey indicated that 45 percent of the participants who had published scholarly papers were one-time publishers. According to a common formula in bibliometrics called Lotka's law, the proportion of all contributors that make a single contribution to a field is about 60 percent (Lotka 1926, 323). In this study, the percentage of one-time contributors was lower and not aligned with studies reporting that the majority of academic librarians are one-time contributors (Sitienei & Ocholla 2010).

Sitienei and Ocholla (2010) found that publication per librarian was about two publications in the African regions they studied when they investigated publications by librarians in databases. The different setting must be considered, as in this study, the entry point was not a publication record, but published and non-published librarians' self-reported scholarly activities. The scholarly publication per published

librarian was as high as six publications. However, the scholarly publication per librarian in the study was only one when all non-published librarians are included.

As Meadows (1997) stated, researchers who are more active readers than average, are often also more research-active. In this study 64 percent of those who had published more than one scholarly paper also read LIS literature regularly and reported more research-related activities than other respondents.

The results on co-authorship in this study show a slightly different pattern than in earlier research as co-authorship was more common among respondents (e.g. Sitienei & Ocholla 2010).

There are several reasons considered by librarians to be obstacles to publishing their research results. *Lack of time* was given as a major obstacle by Finnish librarians. However, at UNAM *lack of time* was not among the most common barriers reported in the survey. Lack of time was also reported by Klobas and Clyde (2010) in their study as the most common barrier to publication and research.

The question of how the perceived obstacles could be overcome was approached from two viewpoints. First, the respondents were asked for suggestions on how the employer could further support their scholarly writing and publishing activities. There were many similarities in the suggestions to the ideas expressed by librarians in earlier studies (e.g. Matangira et al. 2011; Schrader et al. 2012). Altogether 56 responses were received, which provide a huge potential to improve the support for librarians' scholarly publishing and research related activities. Second, the respondents were asked for suggestions on how they themselves could enhance scholarly writing and publishing. Ideas from the participants are valuable in the future development of the institutional policies towards a more research-intensive and research-friendly culture based on EBL. Enhancing collaboration both with librarians and also between the research community and librarians was also suggested. A similar idea was reported by Matangira et al. (2011).

In this survey no respondents mentioned fear as a reason not to publish. It is common that people cite fear as a reason or excuse not to publish. They fear to submit for publication because their manuscripts or research findings may be rejected. Lack of confidence and fear that their writing may be considered shallow is another factor. Subjecting one's paper to peer review creates fear that prevents publication. Here one comes to terms with fear by learning from the guidance of the reviewers. (Day 2007.)

Several comments in respondents' own words were received in the survey, where the respondents expressed their appreciation for taking the issue under discussion and commented that the topic was of great importance and extremely topical. For example, it was suggested that a research committee should be established to coordinate the research activities of all library professional staff. Thus, the possibility of establishing some kind of supportive or coordinative structure needs to be considered in the university libraries studied.

6. Conclusions

Academic librarians' scholarly publishing and the experienced barriers to publishing were investigated in this paper. The survey was conducted at three different university libraries, two located in Finland and one in Namibia.

First, the librarians' experiences of reading LIS literature and conducting work-related research were investigated. The results indicate that academic librarians read more LIS literature than they conduct work-related research. Second, the scholarly publishing output of the librarians was elicited. The method of self-reporting the frequencies of publication has its limitations but gives information about the extent of the publishing activities.

Third, the obstacles to scholarly publishing were studied. The most common obstacle was lack of time, followed by the fact that scholarly writing and publishing were not included in the work duties. The third most common barriers were related to lack of research and academic writing skills among librarians. Finally, suggestions on how the situation for writing and publishing could be improved were received in the survey. The results of the survey indicated a generally positive attitude to and interest in scholarly publishing and related activities among academic librarians.

The authors conclude that librarians would benefit from conducting work-related research and writing scholarly articles because it has proved useful to experience the effort of research and writing a scholarly article and thus gain valuable insight into the nature of scholarly communication, including the use made of library facilities and resources as well as scholarly publishing.

The authors point out that there is a need for more thorough research on academic librarians' research activities both in Finland and Namibia as studies on this subject are lacking.

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