An analysis of the library and information science (LIS) job market in South Africa

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Received: 03 April 2013
Accepted: 14 July 2013

This paper explores and discusses the library and information science (LIS) job market in South Africa through an analytical literature review and the content analysis of recent longitudinal newspaper scanning (2009 - 2012) of LIS job advertisements in the country. We note that the LIS job market in South Africa experienced steady growth from 2009 to 2011, but declined in 2012. The results reveal that the public sector is still the main employer of LIS professionals. We also note the growing number of new job titles and functions relevant to the information/knowledge economy. Furthermore, information technology (IT) has become an important skill for LIS professionals to possess. We conclude that the study could inform curriculum review in LIS schools in South Africa, and recommend that LIS schools explore and exploit new directions and ideas as they prepare students for the library and general information service sector. The paper is divided into three parts: i) an overview of LIS education in Africa; ii) the LIS job market in Africa and South Africa; and iii) job trends in South Africa. Suggestions for further exploration are provided.

Keywords: Adverts, content analysis, newspaper scanning, library, LIS, job market

1 Introduction

Market forces increasingly determine the nature and types of products and services that are delivered to consumers across all sectors. We believe that the library and information science (LIS) job market is no different, as it largely determines the type of skills, knowledge and abilities that the LIS student must possess and project after leaving LIS higher education institutions (HEIs). The LIS job market in Africa, as reported by several studies over the last twelve years (Ocholla 2000, 2001, 2005; Snyman 2000; Lutwana & Kigongo-Bukenya 2004; Minishi-Majanja & Ocholla 2004; Ocholla & Bothma 2007), is changing rapidly, with the emerging professions taking a significant portion of the market in countries where the job market increasingly relies on non-library employers. The aim of this study therefore was to analyse LIS job market trends in South Africa through a literature review and a newspaper survey of LIS job advertisements. It sought to answer the following question: what are the latest trends in the LIS job market in South Africa? – that is, to investigate LIS job market trends in South Africa.

The sections that follow provide an overview of LIS education in Africa and reflect on the LIS job market in Africa and South Africa.

2 Overview of LIS education in Africa

LIS schools in Africa emerged on the continent in 1938. By the 1980s, there were five main LIS schools based in Ghana, Nigeria, Senegal and Uganda, and eighteen in South Africa. By 2008, there were slightly more than sixty LIS schools in Africa (see Ocholla 2008). Although present LIS education in Africa does not exclusively target the training and education of librarians, original LIS schools' major focus in their education and training was librarianship. A significant growth in the number of LIS schools has been noted in Anglophone Africa, with a slight growth in Francophone and Arabic-speaking countries, and unknown growth in Lucophone countries (e.g. Angola, Cape Verde, Guinea Bissau, Mozambique and Sao Tome). Among the Anglophone countries, notable growth of LIS schools has been noted in Nigeria, Kenya and Uganda. In Southern Africa, at least one major LIS school can be found in each of the countries of Botswana, Malawi, Namibia, Zambia and Zimbabwe. There are no known LIS schools in Lesotho and Swaziland (Ndlangamandla & Ocholla 2012). Most LIS schools are located within HEIs or universities.

3 An overview of the LIS job market in Africa and South Africa

Several studies on LIS training needs or human resource development and curriculum development have been documented. Among these studies, follow-up or tracer studies have enjoyed popularity for LIS training needs/assessment analysis in popular journals (e.g. Rugambwa 1998; Marcum 1997; Loughridge, Oates & Speight 1996; Schumm 1994; Quarmby, Willet & Wood 1999; Alemna 1991). Over the past twenty-five years, follow-up studies of graduates for curriculum review have been conducted by Anadiran (1988) in Nigeria; Rosenberg (1989, 1994) in Kenya; Alemna (1991, 1999) and Kisiedu (1993) in Ghana; Rugambwa (1998) in Ethiopia; Aina and Moahi (1999) in Botswana; Lutwana and Kigongo–Bukenya (2004) in Uganda; van Aswegen (1997); Ocholla (2001), Stilwell (2004) and Shongwe and Ocholla

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(2011) in South Africa. In addition to follow–up studies, the assessment of LIS-related job advertisements in newspapers has also received some attention in the past (e.g. Rosenberg 1989; Snyman 2000; Ocholla 2001, 2005) and more recently (Ndlalangamandla & Ocholla 2012). Interestingly, despite different time spans, geographical locations, as well as the different national and international focus of the studies, libraries have consistently turned out to be the main employers of LIS graduates. This is rather paradoxical given the insignificant growth and development of libraries in Africa. Speculatively, this may suggest that: very few qualified librarians are produced by LIS schools; libraries are overstaffed; graduates find work in the emerging information market; graduates do not get employment; or a combination of one or more of these factors. There are cases reported where libraries in Africa, particularly academic libraries, are indeed overstaffed, as noted by Rosenberg (1997), but this situation does not seem to apply to most libraries (see Ocholla 2009), particularly public libraries (see Issak 2000) and school libraries which are few and far between in the region (Ikoja-Odongo 2009). For example, approximately 20% of South Africa's schools were observed to have school libraries in 2009 (Ocholla 2009). We believe that libraries alone have failed to provide job opportunities for LIS graduates because hardly any new libraries are being built; those that exist are unable to offer decent employment remuneration packages or salaries due to lack of funds; there is a shortage of appropriate posts or vacancies to accommodate college/university graduates; and library management structures do not prioritise library development. We have also observed a contradiction, particularly in South Africa, where on the one hand librarianship is considered to be a scarce skill, and on the other, professional librarians and staff with three year LIS qualifications are underemployed (this applies to some regions and libraries).

Aside from libraries, other information-related job opportunities are growing. The public and private sectors increasingly recognise the need for proper information services, which in turn demands knowledgeable and skilled information service providers. This recognition was noted in the late eighties and early nineties by Rosenberg (1989, 1994) in studies focusing on the LIS market in Kenya for the development of a new School of Information Sciences at Moi University; she found that 60% of the information-related positions in Kenya were available in the then-emerging market. Subsequent studies by Snyman (2000), Ocholla (2001, 2005), Stilwell (2004) and Shongwe and Ocholla (2011) focusing on the South African LIS market also reiterated employment in the emerging market. For example, Shongwe and Ocholla (2011) traced graduates of one LIS department to determine whether they were employed and the sectors in which they were employed. They established that most of the graduates were employed by public sector libraries. These studies indicate that libraries in the public sector still offer most information-related job opportunities, and also that non-traditional LIS jobs in the emerging market are on the rise, a trend that we believe is on-going. We cannot easily quantify with accuracy the nature and number of information-related jobs in the public and corporate sectors in South Africa because such data may be currently unavailable. We do, however, believe that job advertisements in the public domain provide a significant insight into the rapidly diversifying and expanding LIS market on the basis of which LIS teaching and training needs, curricula, levels of education, and market trends in South Africa can be determined. In this paper, we reflect on a 2009 - 2012 longitudinal survey.

4 Methodology

A longitudinal, mixed methodology approach (Bban, as cited in Ngulube 2010) was used to collect and analyse data for this study. Content analysis was adopted to scan and analyse LIS job advertisements in *The Sunday Times* and the *Mail and Guardian* weekly newspapers over a four-year period (from January 2009 to December 2012). Content analysis has been used previously in similar studies by Reeves and Hahn (2010), Adkins (2004) and Clyde (2002), among others. This period was chosen arbitrarily. For each edition of the weekly newspapers, the careers' sections were used to scan for LIS-related job adverts. These two newspapers were selected because of their popularity and widespread readership in South Africa; the *Mail and Guardian* has a readership of about 233,000 weekly while *The Sunday Times* has a readership of about 3.24 million people weekly ("The press in South Africa" n.d.) and is believed to be the most popular weekly newspaper in South Africa. We believe that most job advertisements in the public domain appear in these two newspapers. A total of 661 LIS jobs were advertised in the two newspapers over the four-year period. However, some job adverts appeared in both newspapers. There were fifteen such job adverts. The duplicated advertisements were then counted as one advert. In other words, if the advert appeared in both papers, only one newspaper was considered; the other advert was cancelled. We cancelled all duplications appearing in the *Mail and Guardian* and considered only those adverts appearing in *The Sunday Times*. If a job advert was labeled as a 're-advertisement', it was also omitted because we believed it was advertised earlier. There were only two cases of re-adverts. A total of 644 (661-17) LIS jobs were considered to be the actual number of jobs advertised in the two newspapers over the four-year period. The following criteria were used to select advertisements for analysis: i) if the job title contained the words 'information', 'knowledge', 'librarian', 'archivist' or 'archives', and 'records'; ii) if the job advertisement required a LIS qualification; iii) if the job was advertised by a LIS organisation or department (e.g. a library, LIS school, information center, etc.). IT adverts that required core IT qualifications (computer science, information systems, etc.) and skills (software development, information analysis, database design, etc.) were omitted from the study unless they were advertised by a LIS organisation or department. We noticed other job adverts such as financial information specialist, information communication and visibility support officer, aeronautical information manager and others which had LIS characteristics but did not require a LIS qualification and were not advertised by a LIS organisation or department. Such adverts were omitted. There were thirty-five such adverts.

The job title, job sector, educational requirements, salary structure, years of experience, and skills, knowledge and abilities for each job were recorded in an Excel spreadsheet. Qualitative and quantitative methods were used to analyse the data. Descriptive statistics (Hair et al. 2006) were used to analyse quantitative data and content analysis (Cukier et al. 2009; Elo & Kyngas 2008) was used to analyse qualitative data.

5 Results

The results are captured in sections 5.1. to 5.6.

5.1 The total number of jobs and categories advertised in *The Sunday Times* and the *Mail & Guardian*, 2009 - 2012

In total, 644 job advertisements were identified in the *Mail and Guardian* (M&G) and *The Sunday Times* (ST) newspapers from January 2009 to December 2012. The adverts were then grouped into five broad categories, namely: academic, archives and records management, information, library, and knowledge management (KM). Job adverts with the words 'library' or 'librarian' fell in the library category. Academic job adverts for professors, associate professors, senior lecturers, lecturers, junior lecturers and graduate assistants were placed in the academic category. The information category was for job adverts with the word 'information', except if it was a core IT advert (e.g. information technology manager). The knowledge management category grouped together adverts with the words 'knowledge' and 'knowledge management', while the records management and archives category grouped job adverts with the words 'records', 'records/document management', and 'archives/archivist'.

The library category advertised the highest number of jobs (315), followed by the information (161), knowledge management (seventy-nine), records management and archives (seventy), and academic (nineteen) categories. The results are displayed in Table 1.

Table 1 Total number of job adverts and categories advertised in the *M&G* and *The Sunday Times*, 2009-2012.

	Job category											
Year	**Academic**		**Archives and Records**		**Information**		**Library**		**KM**		**Total no of jobs**	
	M&G	ST	M&G	ST	M&G	ST	M&G	ST	M&G	ST	M&G	ST
2009	0	5	0	6	0	31	9	61	7	14	16	117
2010	0	5	1	11	4	37	10	79	4	16	19	148
2011	1	3	1	31	4	32	9	89	4	16	26	171
2012	1	6	1	21	5	51	11	52	8	15	26	145
Total with duplications	2	19	3	69	13	151	39	281	23	61	80	581
	21		72		164		320		84		661	
No of duplications	2		2		3		5		5		17	
Total without duplications	**19**		**70**		**161**		**315**		**79**		**644**	

The results indicate the significant dominance of libraries as employers of LIS professionals, which was expected. A strong growth in the emerging market and the information and knowledge management domain was also noted. It is encouraging to see new fields, such as knowledge management, featuring strongly as potential employers. But it is surprising to note that archives and records management does not feature strongly as a LIS employer, although there are many records management-related jobs in the public and private sectors.

The results also indicate an increase in adverts in both newspapers from 2009 to 2011. There were 117 adverts in 2009, 148 in 2010, and 171 in 2011 in *The Sunday Time*s, with a drop in the number of job adverts (145) in 2012. A similar trend can be noted in *the Mail and Guardian*: sixteen adverts in 2009, nineteen in 2010, twenty-six in 2011, and twenty-six again in 2012.

5.2 Advertised job titles

A number of job titles exist in the LIS profession. As discussed previously, the advertisements were divided into five broad categories. In all five categories, the titles could either be senior or executive, middle management, or junior job titles. Senior titles include director (D), deputy director (DD), executive director (ED) or senior manager (SM), chief executive (CE), senior lecturer (SL), professor (P), associate professor (AP), chief executive (CE), senior librarian (SL), general manager (GM) and chief information officer (CIO). The distribution of senior titles is depicted in Table 2.

Table 2 Senior job titles advertised

Category	Academic			Archives and Records				Information						Library				KM		
Titles advertised	P	AP	SL	D	DD	C	SM	D	DD	CIO	GM	CE	SM	D	DD	SL	SM	D	DD	CE
Total	1	0	6	1	6	0	3	8	7	22	2	4	4	10	8	13	2	9	9	3

There were seven senior titles advertised in the academic category, ten in the archives and records management category, forty-seven in the information category, thirty-three in the library category, and twenty-one in the knowledge management category. The results indicate that the information category was the main advertiser of senior positions, especially the position of CIO. This suggests that CIOs are highly sought-after. The library category also advertised several senior positions, in particular senior librarians, directors, and deputy directors. The rest of the categories followed with a few advertised senior positions.

Middle management and junior job titles were the most highly advertised in all the categories. Because the list of titles is very long, we decided to include only prominent titles that appeared more than three times each year starting from 2009 - 2012. The titles are listed in Table 3.

Table 3 Prominent middle management and junior titles

Category	Job titles
Academic	Lecturer, junior lecturer, graduate assistant
Archives and Records	Archivist, records manager, records controller, records officer, documents officer/controller, records and archives officer
Information	Information specialist, information manager, information analyst, information officer
Library	Librarian: cataloguing/circulation/branch/assistant/ information/principal/IT/systems/acquisitions NB: All library titles were advertised more than thrice
Knowledge Management (KM)	Knowledge manager/specialist/practitioner/officer

A number of new information communication technology (ICT) related titles were identified, especially in the library category. Adverts such as systems librarian (eleven adverts), e-repository administrator (two adverts), electronic resources librarian (two adverts), library web services developer (two adverts), and library technology application specialist (two adverts) were identified.

We noticed that some job titles were named after specific jobs, for example tourism research and information manager; scientific manager: resource quality information; manager: management information and budgeting and planning; information and communication services director; aeronautical information manager; and spatial data and information manager, among others. While such job titles had LIS characteristics in that they contained the word ‘information’, they did not require a LIS qualification and were not advertised by LIS organisations or departments, and they were therefore omitted. There were thirty-five such adverts.

5.3 Sectors that advertised LIS jobs

Different sectors of the South African economy advertise LIS jobs. Key among them are the public and private sectors and non-governmental organisations (NGOs). In the context of this study, the public sector includes government departments at national, provincial and local levels, parastatals (part public and part private organisations), academic institutions, and foreign embassies in South Africa. The results indicate that the public sector was the main advertiser of LIS jobs over the four-year period. The jobs were mainly advertised by academic institutions, national, provincial and local government departments, parastatals, and foreign embassies. Academic institutions and the national government were the biggest advertisers in the public sector. It would appear that there are limited LIS job opportunities in the private and NGO sectors. The reason for this could be that these sectors do not advertise their jobs in the public domain, e.g. in newspapers.

There were 591 jobs advertised by the public sector, thirty-seven by NGOs, and only sixteen by private organisations. The results are presented in Table 4.

Table 4 Sectors in which LIS jobs are advertised

Sector								
		Public				NGO	Private	
Academic institutions	Foreign Embassies	National Govt.	Provincial Govt.	Local Govt.	Parastatal			Total
295	1	210	28	17	40	37	16	644

Academic institutions advertised the most LIS jobs (295), while we had expected the government to advertise more posts. However within the government, the national government advertised a substantial number of jobs (210), meaning that the national government is also seeking LIS skills. We believe that the local and provincial arms of government and parastatals have the capacity to employ many LIS professionals, although they have not advertised many posts over the four-year period. It was also surprising to see the private sector with such a small number of adverts. In fact, we believe that the private sector should be hiring more LIS professionals because of the importance of information and knowledge in the private sector. We assume that they may be using other means of advertising (employment agencies, internal advertisements, head hunting, etc.).

5.4. Qualifications

Qualifications are divided into two: senior, and middle and junior positions

5.4.1 Senior positions

For most senior positions (director, deputy director, CIO, chief executive, etc.) the educational qualification requirements were a Bachelor's degree, an Honours degree, a Master's, an MBA, or a PhD. For some library posts, the advertisements required a non-LIS undergraduate qualification (Bachelor's degree) and a LIS postgraduate qualification (postgraduate Diploma, Honours degree, or Master's/PhD in LIS). For senior positions in knowledge management, the requirements were postgraduate studies in LIS, knowledge management, information management and information technology. Other adverts required educational qualifications that were not LIS-related, such as qualifications in marketing and economics. For academic positions, a PhD in LIS was the minimum educational requirement, while for senior positions in the information category, the educational requirements were mostly IT-related (computer science, information systems and information management, and MBA). The position of Chief Information Officer required a strong IT background and less of a LIS background. For senior positions in records management and archives, the educational requirements were postgraduate studies in records management and archival sciences respectively.

Knowledge, skills and abilities

The knowledge, skills and abilities differed depending on the category, for example the knowledge and skills required in the information category differed from those in the library category, and so forth. We observed that, however, general skills, knowledge and abilities that were required across all five categories (academic, information, library, KM, and records and archives). All senior positions required in-depth ICT knowledge and skills (ICT principles, ICT infrastructure, software implementation, ICT policies, electronic records management systems, management information systems), communication skills (written and verbal), people management skills, leadership skills, interpersonal skills, problem solving and analytical skills, financial management skills, project management skills, change management skills, time management skills, and administrative skills. Government senior positions required mostly in-depth knowledge of government policies and procedures. Senior positions in the private sector required mostly in-depth business knowledge. All senior positions required the following abilities from the applicant: team player, credibility, confidence, diplomacy, honesty, and integrity.

5.4.2 Middle management and junior positions

The academic qualifications required for middle management and junior positions also differed according to category. LIS jobs required a high school certificate, a national certificate, and diploma, Bachelor's and/or Honours or Master's degree in LIS, information science, information management, records management, archives and records management, and knowledge management. Other adverts had popular LIS titles but required non-LIS qualifications in statistics, economics, computer science, information systems, political science, marketing, and general social science. This was widely observed in positions in the information and knowledge management categories. In the library category, some job adverts required a non-LIS first degree and a postgraduate diploma or postgraduate certificate in LIS.

Knowledge, skills and abilities

Some knowledge, skills and abilities were essential in all the advertised middle management and junior positions, in particular basic IT skills (MS Suite, internet, webpage design and management, multimedia, and databases), communication, customer focus, research, and writing skills.

Specific skills in the different categories were also identified. In the library category, the knowledge and skills that were identified include collection development, cataloguing and classification, electronic resources, library systems, teaching or training, report writing, abstracting and indexing, AACR2, LCSH, MARC21, Dspace, digital asset management system(s), LC rule interpretation, metadata schema, SABINET, OCLC, integrated library systems, USMARC, bibliographic formats, UNICON, SACat, WorldCat, OPAC, RDA, library Web 2.0, millennium system, and INNOPAC.

In the academic category, research and teaching skills proved to be essential, while in the knowledge management category, IT skills seem to be very important. IT knowledge and skills such as web development (HTML, PHP, JavaScript), databases (mySQL), data warehousing and multimedia were highly sought after. In the information category, IT skills also appeared to be essential. Almost all the jobs required advanced IT skills such as Microsoft Solutions, management information systems, and special software skills such as SAP.

The records management and archives' advertisements required in-depth knowledge and skills in electronic records management, electronic content management systems, and records' retention schedules. All four categories required communication skills and interpersonal, leadership, analytical and financial management skills. They required the same abilities from the applicants, such as flexibility, the ability to work under pressure, passion, customer focus, and honesty.

5.5 Salary structures

We assume that salaries play a vital role in the recruitment and retention of professionals in any sector. Salaries are usually used to entice professionals to the profession. We therefore analysed the top ten earners in the LIS market. In the senior management category, the highest paid was a deputy director with an annual package of R1,025,133. The position was advertised by the national government. The lowest paid was an assistant director with an annual package of R192,539. This was also a government advert. The results are shown in Table 5.

Table 5 Top ten senior earners

Senior positions top 10 earners		
Job title	**Salary package p.a. in ZAR**	**Sector**
Deputy Director: Information Society and Research	R1,025,133	Govt: national
Director: Information Services	R 976,317	Govt: national
CIO	R 905,538	Govt: national
CIO: Director Research and KM	R 830,502	Govt: national
CIO	R 790,953	Govt: national
Content and Information Services Manager	R 690,535	Govt: national
Manager KM; Senior Manager: Library Services	R 685,200	Govt: provincial
Director: M-IKS; Director Info. Management	R 652,572	Govt: provincial
Director: KM	R 615,633	Govt: national
Chief Knowledge Specialist	R 450,000	NGO
Lowest Paid Senior Position		
Assistant Director: Cataloguing	R 192,539	Govt: national

In the middle and junior categories, the highest paid was a program officer with an annual package of R531,790.00. This post was advertised by an NGO. The lowest paid was a librarian with an annual package of R94,326. This post was advertised by the national government. Table 6 summarises the results.

Table 6 Top ten middle and junior position earners

Middle and junior positions: top 10 earners	Salary package p.a. in ZAR	Sector
Program Officer: KM and Leadership Development	R 531,790	NGO
Information Architect	R 528,333	Govt: national
Research and Information Manager	R 395,131	NGO
Researcher: Information Services	R 379,437	Academic
Regional Information Support	R 378,456	Govt: national
Archivist: Multimedia Productions Unit	R 351,142	Govt: national
Librarian: Cataloguing and Metadata	R 277,768	Govt: national
Assistant Manager: Info. Management/Records	R 250,035	Govt: national
Librarian	R 240,318	Parastatal
Assistant Manager: Cataloguing	R 240,292	Govt: national
Lowest Paid Junior Position		
Librarian	R 94,326	Govt: national

The results indicate that the national government pays LIS professional higher salaries than the other sectors (NGOs, private and parastatals). The government dominates the list of high earners. We therefore conclude that the government pays LIS professionals well. Whether this is because job adverts from the private sector did not indicate salary structures, or the government advertised a lot more jobs, is not clear. It is surprising though to note that the government pays well.

5.6 Experience

We assume that experience plays a vital role in any employment position. We therefore sought to find out what years of experience the employers required. The adverts indicated the minimum and maximum number of years of experience that an applicant must have. All senior positions required five years of experience or more. Middle management and junior positions required a minimum of no experience to four years experience. It is encouraging to note that some middle and junior positions required no experience at all. We believe that this approach significantly eases LIS graduates' entry into the job market.

6 Discussion

The results from the South African case study indicate that there was steady growth in the LIS job market for over three years (2009 - 2011), before a decline noted in 2012. The drop in the number of job adverts in 2012 may be a reflection of the greater troubles of the current global economy, referred to by some as the "new normal" economy. The number of advertised LIS jobs grew each year by approximately sixteen percent from 2009 to 2011, possibly caused by growth in the South African economy and/or the recognition of the role of the information/knowledge economy by organisations. Several job titles in the broader arena of information services or the emerging market that feature in these results also featured in previous studies (Snyman 2000; Ocholla 2001). However, it would appear that new LIS job titles are also starting to emerge. These new titles represent strong ICT elements and show the influence that ICT has on the LIS job market. It also suggests a growing need for critical information and knowledge management skills in the public and private sectors.

Librarianship-related job titles remain eminent (315 over four years). The increase in the number of library-based titles could be attributed to the growth of the knowledge economy and the gradual growth and development of librarianship in South Africa. We believe that different sectors are employing librarians to increase the level of access to knowledge. Generally, there has been significant growth in the number of job titles in the emerging information sector. We noticed a significant increase in senior information and knowledge management positions than was reported in previous studies. Correspondingly, while there are jobs that specify information-related qualification requirements, we also noted the gradual increase in information-related jobs that are open to all degree holders, including to those without LIS degrees or qualifications.

The public sector, specifically academic institutions, government departments and parastatals, were identified as the main advertisers of LIS jobs in South Africa (591 adverts, or approximately 92% of all job adverts). We assume therefore that the public sector is the main employer of LIS professionals in South Africa. These findings are consistent with the

results of Reeves and Hahn (2010) and Shongwe and Ocholla (2011), who all found that the government is the major employer of LIS professionals. The LIS profession is not considered to be a high-paying profession, but as the results show, it is not a low-paying profession either. Salaries for LIS professionals have increased over the years, a trend that is attributed to regular salary increases (at least 6% each year) in the public sector in South Africa. South African salaries also compare favourably with overseas salaries (Reeves & Hahn 2010).

The knowledge and skills required by LIS professionals are changing. IT seems to be the skill required in today's LIS job market as more and more information services become IT or e-access and e-service dependant. The knowledge and skills that are required could be obtained through a well-designed learning programme in various courses in the LIS field. Some of the knowledge and skills could perhaps be obtained from other academic programmes, such as computer science, information systems, informatics and other related fields. Students may be encouraged to enrol for such courses at some point during their studies. Apart from hard skills (technical skills), such as cataloguing, classification or computer skills, soft skills (people skills) such as teamwork are also still relevant.

7 Conclusion and recommendations

Information obtained from this on-going South African case study seems to provide lessons for others in other regions with similar conditions. In South Africa, the public sector, in particular academic institutions and the central and provincial governments, dominate the LIS segment of the employment market in the country. It is evident that the LIS job market is growing in South Africa. Significantly, depending on the newspaper(s) scanned (e.g. local, regional, national or international), job advertisements have the potential to provide well-balanced data based on which decisions about employment and curriculum review can be made. However, the triangulation of related methods in a study, such as follow-up or tracer studies, reviewing the existing curriculum, reviewing existing literature, consulting with colleagues (including the use of Delphi's technique), observing national and international trends, and organising focus groups for academic programme development, is also essential.

We are already experiencing diverse information-based job opportunities in South Africa. The need for competitive information-oriented knowledge, skills and abilities in the information market therefore calls for LIS schools to explore and exploit new dimensions, directions and ideas. We have to take our challenges and opportunities – beyond what is presented here – more seriously. The unknown growth of LIS education in some parts of Africa is a challenge that needs to be addressed; more forums in which the Arabic, French and Portuguese-speaking African countries can converge, network and share knowledge should be encouraged and lessons from their experiences widely shared. If librarianship is a "scarce skill", as recently mentioned at a LIASA (Library and Information Association of South Africa) conference, then the LIS profession has to use the available LIS graduates economically and optimally because the information services of a qualified information professional are still highly valued, and our graduates should not be underemployed.

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