Which Way for LIS Education and Training in South Africa? Some Considerations from Contact and Distance Learning¹

Mabel K Minishi-Majanja² Department Department of Information Science - UNISA Theo van Wijk Building, 10-186P.O. Box 392, Unisa 0003 - South Africa Tel.: +27 (0)12 429 6532; Fax: +27 (0)12 429 3792 <u>majanmk@unisa.ac.za</u>

1. Introduction

The changing patterns of social-economic interaction in society often mean that professions need to re-examine their premise and re-align themselves with current trends and perspectives. Of the latter, the most influential to Library and Information Science (LIS) education have been the democratization of information and the emancipation of the user (de Bruyn, 2007). The democratization of information points to the fact that access to information has long ceased to be the preserve of only a few - the elite because political forces and Information and Communication Technologies (ICTs) have effectively tackled the barriers to information. I hasten to add that this does not by any means imply that everyone all over the world has equal access, but merely assert that there are more opportunities to access information than there was 20 years ago. The emancipation of the user is a direct offshoot of both technology and globalization. New technologies not only increasingly provide information to the user whenever and wherever they are, but also employ more user-friendly formats such as sound, video and images (as opposed to text which has to be deciphered. Globalization permits information users to behave like international citizens looking for and being provided with information across borders, even though the issue of relevance has not been completely resolved.

Obviously, these changes have had profound impact on the provision of library and information services and hence LIS professionals. It is imperative that the type and quality of LIS education graduates should both reflect and

¹ A Key Note address delivered at the 10th DLIS Annual Conference, University of Zululand, 10-11th September 2009

² *Mabel K Minishi-Majanja*² (*DPhil*) *is* Associate Professor and Chair of Department Department of Information Science, University of South Africa.

be a reflection of the types of services provided in libraries and other information centres. Undoubtedly, trends in the development of ICTs in the world today are centrally significant. A further contributor to the course of LIS education has been the reforms or changes in higher education. In many countries, governments have recognized the need to reorganize higher education in order to match changing times and needs, thus affecting LIS education (Hallam & Calvert, 2009; Moniarou-Papaconstantinou & Tsatsaroni, 2008). Library and Information Science education and training in Africa, which bears the weight of providing qualified staff to the library and information professions, is currently challenged to ensure that graduates have competencies that align the profession with current trends and perspectives. Many LIS educators acknowledge that it is their responsibility to steer the profession towards new directions in response to the globally and locally changing information environment while simultaneously maintaining relevance.

LIS educators worldwide are preoccupied with the question of relevance. In a recent IFLA publication that scans the entire IFLA world (Abdullahi, 2009), the 'tunes' about the relevance of LIS education may differ because of different social political environments and cultures, but the 'lyrics' are the same, basically asking, which way for LIS education? The central theme is that of professional identity, especially in a world that now describes itself as the knowledge/information society. De Bruyn (2007:114) warns that technological development coupled with democratization in access to information are in fact major factors that threaten to erode the profession, inadvertently suggesting that the LIS profession is "sleeping with the enemy". The sub-themes of relevance in LIS education include:

- Levels and names of qualifications
- Curriculum approaches and focus (theory vs. practice; academic knowledge vs. technical skills)
- Teaching/learning methods and resources
- Quality

2. Levels and names of qualifications

In general, LIS schools in South Africa offer three levels of undergraduate programmes and four levels of postgraduate programmes (Minishi-Majanja & Ocholla, 2004). Undergraduate qualifications include certificates, diplomas and bachelors degrees, while postgraduate levels include the postgraduate diploma, honours degree, Masters degree and Doctoral degree. Kyriaki-Manessi (2008) observes that it is more productive to teach LIS at

postgraduate level because postgraduate students are bound to already have academic foundations and hence a better sense of the interdisciplinary nature of the profession. The trend in East Asian countries is towards graduate level education (Miwa, 2006); the same applies to Australia (Hallam & Cravert, 2009:293). But in most African countries, the need seems to be for lower qualifications, mainly because most LIS graduates are in low-paying positions and cannot afford the fee of postgraduate education. Turning the situation around is a developmental matter that requires appropriate legislation and public interest.

Notably, the names and nature of LIS education programmes in South Africa have not been uniform because each and every higher education institution (HEI) determines its own, albeit with approval from the South African Qualifications Authority (SAQA). Glancing over the borders of any country, it is possible to confirm Rosenberg's (2000) observation that the lack of uniformity or consistency in names of courses vis-à-vis standards of content and length of study, while being a historical accident that is often perpetuated by national or institutional structures and practices, militates against the desire to participate in globalization. Achieving some uniformity can be useful for equivalence and the recognition of qualifications across institutional barriers, but also address Tammaro's (2007) concern that "more librarians are seeking employment and further education outside their own countries, yet there are no clear guidelines for determining the equivalency of degrees and certificates".

In South Africa, LIS education departments now have to operate within the new South African Higher Education Qualifications Framework (HEQF) [*see Figure 1*] which was signed into law in October 2007. This should bring about some uniformity within the country, but while seeking to streamline and standardize offerings across the many HEIs in SA, the HEQF has also succeeded in disorientating the understanding and relationship between LIS educators, students and employers. Gone are the old familiar qualification names such as the National Certificate, National Higher Certificate, National Diploma and Bachelor of Technology. The new names include Higher Certificate, Advanced Certificate, Advanced Diploma and Postgraduate Diploma. The new names are not merely direct replacements; nor are the qualifications thereof simply equivalents of the old. The new framework (NQF) levels that reflect quality. For example, both the National Diploma and the Diploma, as they were previously known, were relegated and

replaced with a new diploma that consists of 360 credits, with an allowance for only 60 credit transfers from a previous qualification. The NQF exit levels 5, 6, 7, 8, 9 and 10 are representative of the weighting and level of complexity of the content.



Figure 1: South African Higher Education Qualifications Framework. Source Havenga, 2007 (*reproduced with permission*)

Names of qualifications now need to have two or three basic components, i.e. the qualification type, the designator and the qualifier. Figure 1 above shows the various qualification types. A designator has to indicate the broad area of a study's discipline or profession and has to be used in naming the bachelors, Masters and Doctoral degrees only, using the link word "of", e.g. *Bachelor of Information Science*. A qualifier indicates the field of specialization using the link word "in", e.g. *Higher Certificate in Archives and Records Management* or *Bachelor of Arts in Library Science*. A further area of specialization may be indicated by another qualifier, for example *Masters in Information Science in Archival science*. However, the framework further specifies that "in order to use a qualifier, at least 50% of the minimum total credits for the qualification."

and at least 50% of the minimum credits at the qualification exit level must be in the field of specialization denoted by the qualifier" (Government Gazette, 2007:11).

Within this new framework, comprehensive universities such as Zululand and UNISA have the luxury of being able to offer qualifications at all levels and of all types. Non-comprehensive universities, on the other hand, can be selective both in terms of the levels and niche focus areas. Thus comprehensive universities run the risk of spreading themselves thin, while non-comprehensive universities run the risk of abandoning some important core LIS areas of practice. Because SA is a society in which equality, affirmative action and economic value are highly prized, it is imperative for educators to carefully balance the specifications of the HEQF, scholarship, employers' needs and students' needs. It is of concern that the vocational/technical route requires a total minimum of 720 credits compared to the academic/professional route which requires a total of 480 credits to achieve the NQF level of 8. The credit accumulation and transfer (CAT) rule allows students' previous achievements to be recognized and contribute to further learning. However, students may not transfer more than 50% of the credits either of a completed qualification or the qualification being pursued.

The implication of these changes is that LIS educators have the challenge of ensuring that their offerings and content are comparable without necessarily duplicating each other's programmes. Ostensibly, students should be able to move to a new HEI and carry the credits of an unfinished qualification from a previous university. Correspondingly, the employers have to redefine their career progression ladders including both the old and the new (HEQF) qualification descriptions. The old names have to stay because there are still individuals in the workplace who have the old qualifications. Meanwhile, as in the case of Greece, attitudes may prove the hardest to change (Kyriaki-Manessi, 2008).

3. Curriculum approaches and focus

There is no uniform approach to what is taught, let alone how it is taught (Ngulube, 2006). This has proved cumbersome considering the dearth of legislation or professional standards and the diverse institutional cultures and differentiated expertise. While collaboration could be beneficial, the increasing competition for students has often silently militated against it. Collegiality and professionalism have enabled South African LIS educators to share their developments, for instance in conference papers or symposium

presentations, but there is often sadly no forum for systematic or collaborative benchmarking.

Since politics may not be the main focus of LIS educators, one avenue open to them is the use of a learning outcomes/competencies approach, which can provide a form of communication between the stakeholders involved in the practice and lifelong learning of library and information professionals and those involved with the academic programs of education and training of library and information professionals. The IFLA Education and Training approaches, namely programme orientation, section suggests three educational process orientation and learning outcomes orientation (Tammaro, 2005). Programme orientation focuses on the provision of both a broad and core LIS elements. general education Most university-based qualifications in South Africa have tried to do this, emphasizing that an element of 'graduateness' must be instilled in every student. The educational process orientation is much more difficult to implement uniformly because of varying levels of resources such as lecturers, ICT, library resources, etc. Learning outcomes orientation focuses on what students should learn and are able to learn.

3.1 Core competencies

How do we conceive what students need to learn and how do we put it in the curriculum? Raju (2003) observes that the core of LIS education is elusive because of the constant/continuous evolution of the profession. The 10 "core elements"³ listed by IFLA (2000:2) are only the tip of the iceberg, not only because they are general enough not to be prescriptive, but also because by the same token, they are subject to interpretation (e.g. in areas of emphasis) and are often subject to the knowledge and expertise of the curriculum designers. IFLA suggests that LIS education departments "should refer to educational policy statements issued by government or professional associations that identify important knowledge and skill components. [Examples of such statements include those issued by the Institute of Information Science (UK), the Chartered Institute of Library & Information Professionals - CILIP (formerly the Library Association - UK the Special Libraries Association (US), the Medical Library Association (US), the Association of Library Service to Children (US), the Australian Library and

³ **IFLA Core Elements.** Core elements include: (1) The Information Environment, Information Policy and Ethics, The History of the Field; (2) Information Generation, Communication and Use; (3) Assessing Information Needs and Designing Responsive Services; (4) The Information Transfer Process; (5) Organization, Retrieval, Preservation and Conservation of Information; (6) Research, Analysis and Interpretation of Information; (7) Applications of Information and Communication Technologies to Library and Information Products and Services; (8) Information Resource Management and Knowledge Management; (9) Management of Information Agencies; and (10) Quantitative and Qualitative Evaluation of Outcomes of Information and Library Use.

Information Association (ALIA).]"Unfortunately, South Africa does not have clearly identified areas or guidelines as neither LIASA nor the government have made such provisions. Raju's (2003:235) survey in South Africa produced a list of 25 possible subjects for the South African market.

Meanwhile the diversity of fields that are considered to be core competencies continues to grow, which when pitched against the need for market-ready graduates, makes the task of preparing a curriculum difficult. For instance, the emergence of ICT as well as Knowledge Management (KM) disciplines, each jostling for core status, have greatly added to the relevant competencies of LIS graduates. Yet these disciplines are themselves interdisciplinary or adjoin other disciplines and are growing. While these new areas cannot be ignored, De Bruyn (2007) contends that the need to accommodate these new areas has resulted in a misconstrued situation which, coupled with the request for adequately skilled graduates, has adverse long term consequences for the profession. Considering the guidelines of HEQF, plus the reality that time for studying towards a gualification has a specific duration, 25 basic modules would prove difficult to fit in one programme. Employers who demand a workplace ready graduate are bound to be disappointed in the short run. This also means that specialization by students during their first qualification is unlikely to be take place. Stoker (2000) observes that there is no clear-cut solution to this problem and recommends that educators respond to the employment market by, for instance, offering some of these specializations as electives.

3.2 Continuing education

There is great need for continuous LIS education in South Africa because basic professional training is not enough to last five years, let alone a lifetime, in a fast-changing, hi-tech profession and world. Ocholla (2003) and Stoker (2000) rightly observe that no one skill will equip an individual at all stages of their career because knowledge and technical skills now have limited time spans or relevance. AACR2 changes to RDA, and Web 2.0 evolves into Web 3.0, requiring professionals to continually refresh their skills. Moreover, career development sometimes tends to force individuals to change focus, for example a career change from reference librarian to a systems librarian. Additionally, employers and employees are no longer finding it affordable to allow full time study leave. Thus there is an obvious need for continuous education programmes that specifically focus on desirable competencies. For this to be effective, it is necessary for educators and practitioners to collaborate, especially at the level of identifying training needs, and also by including and facilitating the training. In Australia, the association ALIA has formalized continuous education by launching a Professional Development (PD) program (Hallam & Cravert, 2009), while in some European countries, LIS schools provide systematic continuous education; in other countries, it is larger organizations, such as professional associations, that provide it (Kajberg, Horvat & Oguz, 2009). In planning continuous education programmes, educators, employers and practitioners need to remember that the content of continuous education may not always need to add up to complete programmes or enhanced qualifications. Desirable and beneficial as higher qualifications may be, in some cases the acquisition of relevant knowledge or skills may be achieved in a simple module that is related to a new development, either in the profession or specific work environment. The development of continuous education programmes of diverse type, form and duration is imperative, including pegging them to specified NQF levels for recognition.

4. Teaching and learning methods

The integration of new technologies in teaching and learning is said to be a significant factor in the promotion of academic innovation and transformation, hence influencing the teaching and learning paradigm & Roig, 2002). The new paradigm requires university (Morales professors/lecturers to have skills in instructional technology in addition to their subject expertise. Academic staff need to be cognizant of and use a new variety of learning styles, such as active learning, learning to learn, collaborative learning, problem-solving, role playing, etc; which are easily facilitated by ICTs. They (professors) need to adjust their instructional methods to incorporate the use of ICT-based tools such as tutorial software/courseware, and learn to develop content for each course by increasingly using ICTs as integrated instructional devices that foster greater hands-on learning, richer simulations, provision of exploratory environments and flexi-time learning, in addition to automated pedagogy (Burbules, 2000). Presently, the virtual classroom, transcending time and space; the supported self-learning model, allowing a learner to strategize, access core content and respond; and the *collaborative learning* model, involving dynamic horizontal information flow between learners, enabling them to share experiences; are all fully operational. This paradigm presupposes the availability of relevant ICTs and ICT support services. Generally, South African HEIs have sufficient levels of ICT diffusion. The main dilemma is the students' uptake of these tools as many students have not yet fully developed efficient ICT-based learning skills and many more do not have access to ICTs. LIS educators have to balance incorporating modern teaching methods while not marginalizing some students.

4.1 Distance vs contact delivery

Contact or in-class delivery of an education programme has long held prominence, offering both the learners and the educators opportunities to interact and influence each other in very beneficial ways. Many successful professionals have fond memories of professors whose manner both in and out of class greatly influenced their professional development. Face-to-face interaction is invaluable. Furthermore, the impartation of content, knowledge and skills are more easily managed in contact delivery. But the prospect of earning a gualification without having to relocate or put the rest of one's life on hold is appealing to many students, especially at higher degree levels. Owen and Leonhardt (2009) observe that distance learning/teaching has gained new ground with the introduction of ICTs, and growing enrollments attest to this. It is now increasingly feasible to offer excellent LIS education through synchronous, asynchronous or even hybrid distance education. Considering the economic reality of many South Africans, the latter should be explored further by LIS educators. However, by the same token, distance learning presents huge challenges to the student. For example, a typical UNISA student is someone juggling a wide range of personal circumstances that militate against success. Such a student could be a working mother/father or wife/husband and parent. Such a student could be from a poor background, both educationally and socially, having little or no resources for proper learning. Then there are the ever present barriers of language proficiencies, self discipline, textual literacy and the absence of positive role models. If a student is at the wrong end of the above, then distance delivery becomes less of a solution and more of a further barrier. Bringing such a student to campus would alleviate some of these challenges, especially access to resources. But it is no panacea since absence from family is a double-edged sword.

Thus it is clear that both distance and contact delivery have their merits and demerits. The important factor is quality assurance strategies, such as appropriate preparation of teaching/learning materials and the reorganization of content and access, which need to be put in place to maximize learning. Indeed, whether distance learning and/or contact delivery, the operative words should be efficiency and throughput. There is also the great possibility of blended learning.

4.2 Work Integrated Learning (WIL)

Some learning is best acquired through real-life experiences, and LIS offers such occupations. Such learning is traditionally known by many different

terms, such as experiential training, work-integrated/based learning, cooperative education, clinical training, professional practice, supervision, internship, candidacy, etc. In some disciplines, students studying towards a gualification cannot graduate without the successful completion of the prerequisite in vivo learning module, often accomplished in a related organisation. Many organisations regard the hosting of students for their life learning as a significant element of the provisioning strategy, with higher acceptance ratios and better yield. Likewise in LIS education, as commented by John Budd (in Peirce, 2009:24) at the recent ALISE conference: "If skills and practices are part of the outcomes we want, practitioners are part of the picture". In a recent survey of South African public libraries' training needs, Meyer (2009) found that the different, if not outright poor library background of library workers is a setback for appointees because the whole environment and ethos is often very unfamiliar to such workers, rendering it an uphill task for them to make sense of general work, let alone professional tasks. To support their sense-making in the work-related context, library supervisory staff increasingly prefer library workers who have some basic understanding of library-related tasks and orientation before they embark on a career in LIS. Similarly, LIS education would greatly be enhanced by including a component that enables students to familiarize themselves with real situations. Meyer (2009) observes that "libraries that can support WIL are scattered across the country", but there is no audit of these libraries at present. The fact that many public libraries would be willing to participate (Meyer, 2009) suggests that South African LIS educators need to make an audit of these libraries and then enter into agreements with them with respect to the logistics of WIL. In accordance with the Department of Education Government Notice No 928 (Government Gazette No. 30353, 2007), as policy in terms of the Higher Education Act, South African HEIs are obliged to seek hosting partners for the prerequisite life learning of students.

4.3 Mentoring

Mentoring is a relationship in which a more experienced person -- a trusted friend, a guide, counselor or teacher -- nurtures and supports a less experience person, novice or student, to learn the profession and gain confidence and expertise through the interaction. Underwood (2009) observes that a mentor should be a person who is knowledgeable and able to pass this learning to others, approachable (accessible, friendly and open) and responsible. He further emphasizes that "at the core, is a relationship of trust by the organisation and by the protégé". Mentorship is one of the most important developmental tools for professional progression, often closely linked to productivity, career advancement, and professional satisfaction. In

a keynote paper delivered at a recent symposium, Underwood (2009) likened mentoring to a 'bridge' that can enable students to safely cross the 'chasm' between non-knowledge to professionalism. According to Castiglioni, Bellini & Shea (2004), mentoring studies focusing on family medicine, general surgery, pediatrics, and physical medicine and rehabilitation residency programs, showed that mentoring is important for personal growth, defining career goals, research productivity, and the pursuit of academics.

Even though it is essentially a work environment process, mentoring may be used in two types of relationships within LIS education, i.e. educators' mentorship of students and experienced professionals' mentorship of student workers. However, it is important to note that not everyone has the necessary skills and motivation to be a mentor. The mentoring load can also be too heavy for the few who have the aptitude. Secondly, as Underwood (2009) underscores, the rewards are entirely through self-motivation, but the quality and success of experience for both mentor and protégé can contribute positively to organisational objectives. Mentoring as a teaching and learning method needs to be explored and adapted appropriately.

4.4. Critical resources

Most studies on LIS education and training tend to focus on curricula and content, often neglecting the question of resources. At the August 2007 IFLA conference in Durban, South Africa, a heated debate started regarding the relative importance (and possibly the ranking) of the curriculum versus academic staff versus students as factors that influence the quality of LIS education. The debate came to no specific conclusion but it was clear that each of the three components bears significance towards successfully producing good quality LIS graduates. What did not feature strongly in the discussion was the role of resources (e.g. the library and ICT infrastructure and facilities), perhaps not because these are of lesser importance, but more because the three were sufficient variables to contend with. Two of the most critical and influential resources in the quality of LIS education in Africa include quality academic staff and state-of-the-art ICT resources.

5. Quality assurance and benchmarking

Many professions have an accreditation process that is either focused on individuals who must qualify to join the ranks, or focused on the 'initiation' process. LIS's accreditation is usually based on the latter, that is accreditation of the education and training programmes. The ALA considers 7 criteria, namely course design, curriculum content, student assessment,

staff resourcing, quality assurance mechanisms and infrastructure. The American Library Association(ALA) accreditation programme includes Canada and Puerto Rico and has developed 6 standards that form the basis of evaluation every 7 years. These include the mission, goals and objectives; curriculum; staff; students; administration and funding; and resources and facilities (Owens and Leonhardt, 2009:555). Sadly, there are no accreditation programmes in Africa, let alone South Africa.

6. Other Challenges

The challenges facing LIS education in South Africa are neither new nor unique to the country. Among the most prominent are higher education imperatives, professional identity and curriculum issues.

6.1 Competition and the political economy of Higher Education

A twist in the tale of LIS education survival has been the commercialization of higher education, where universities strive to operate as a corporate business with financial viability, if not profit, as the bottom line. This poses the danger of eliminating the so-called non-performing departments or programmes, of which LIS may fall victim. Nonperformance refers to, among other things, the financial viability of a department or programme according to cost units. Cost units are essentially calculated from the number of students - therefore fees received - versus the expense in terms of facilities, resources and human capital expended to run the programme or department. Departments/programmes with few students are usually in danger of being unviable, and this is why LIS departments in many parts of the world have had to merge with other departments in order to survive. By nature of LIS work, the profession cannot be defined as a large one, at least not until the government legislates the establishment of libraries in every sector and locality. Thus LIS programmes in SA are striving to become more competitive and attractive to students if they are to survive. This often means an increase in ICT modules and the enhancement of management modules at the expense of traditional LIS modules such as classification and cataloging. While this solution is not necessarily bad, it may inadvertently further erode the core that shapes the profession's uniqueness or identity. It is no wonder that some of the departments previously known for LIS education have totally changed focus and/or even their names. Nevertheless, as Ribiero (2008) observes, universities should be made aware that the opportunity to educate/train an information professional is essentially an important service because such a professional will most likely be very useful in the information society.

6.2 Professional identity

The recognition of a discipline or profession is important for survival in both academic and social contexts. It is instructive that the ALIA presents as the first characteristic of the LIS workforce, "promoting and defending the core values of the profession" (Hallam & Calvert, 2009:289). Professional identity is in part a function of quality assurance and monitoring through accreditation and approval. These can be accomplished using a verification process of the credibility, authenticity and transferability of the qualifications. In countries where this has been successful, professional associations, such as the American Library Association, Australian Library and Information Association, the Chartered Institute of Library and Information professionals (CILIP), act as the standard bodies for education and training. The challenge for South Africa is to enhance LIASA's mandate and standing in order to get appropriate leadership that aims to foster professional identify and quality assurance. Many other professions, including nursing, accountancy, engineering and social work, have set standards that are influential in curriculum development and the education of their professionals. While appreciating the nobleness of academic autonomy, LIS education would also greatly benefit from direct contribution from one of the two major stakeholders, the body of professionals.

6.3 Needs of the employment market

Traditional employers such as libraries require market-ready professionals who will "hit the ground running", meaning that they not only know the ins and outs of information work, but also have excellent knowledge and skills. Yet the complexity of what librarians do, especially in this era, makes it difficult for education and training programmes to prepare such a 'jack of all trades' who is also highly specialized. However, the issue has to be addressed, otherwise LIS educators will lose students with further dire consequences for the various programmes, discipline and profession. The other facet of this problem is the new market of employers who require a new caliber of professionals, such as knowledge managers, information managers, etc; each of which may incidentally have diverse meanings and interpretation. Such 'specializations' are currently attractive but are still to stand the test of time and prove their worth as professional areas. But while they last, LIS educators have to respond to the need.

6.4 *Curricula, educators and students*

As mentioned earlier, there are diverse areas of core competencies, augmented by the expanding new disciplines. Besides this dichotomy, there is the issue of the digital divide, especially of important constituencies of LIS

education such as remote/rural/under-resourced libraries and students. Students' learning styles and competencies are subject to educational background, which in most cases is quite diverse. Even in a well resourced country such as the USA, a recent study by the Educational Testing Service (2006) reported that college freshmen lacked essential information literacy skills that were requirements for success in their studies. Generally, there is a slow rate of instructional integration of technology and related skills, such as digital literacy, even in the richer (economic or/and technological) countries. Thus the more the curriculum and pedagogy leans toward the new media and world trends, the more certain constituents are marginalized. Should LIS education be bothered about these?

A more hidden problem concerns the educators themselves. LIS educators experience both extrinsic and intrinsic obstacles. Extrinsic obstacles are often institutional and structural while intrinsic obstacles are more in the domain of the individual, such as self efficacy. Hardly anyone undergoes training to become a university lecturer or professor. Most of the skills are acquired on the job and by attending relevant forums of discussion. Thus a high level of knowledge on a particular subject, even though an important ingredient, does not always translate into good teaching of the subject. Additionally, few LIS educators have experience as students in a technology-infused environment to enable them to perceive the best way to deliver content.

7. Opportunities in Collaboration

The LIS educators' fraternity needs to forge more collaboration. It may be instructive to consider the efforts by European LIS educators for intensified consolidation and partnerships as a way of countering the Higher Education reforms and commercialization of universities (Kajberg, 2007). The European Association for Library and Information Education and Research (EUCLID) obtained funding from the EU to address, among other things, issues of comparability and the equivalence of qualifications. The LIS education project, which was completed in 2005, has been instrumental in charting the course for European LIS education co-operation and convergence. South African LIS educators can draw from this example by forming a stable association or chapter within LIASA and working together to apply for NRF funding for projects and/or research. Some of the projects could centre around curricula issues while others could focus on manpower planning for the information sciences.

8. Conclusion

It is well accepted that the role of librarians and other information workers in mediating technology and community dynamics in order to offer good information services needs to be continually scrutinized. Using new technology effectively to enhance and support communities is a core component of good service. In countries where there is a vibrant LIS profession or at least growing interest in LIS services, there is corresponding growth in education programmes. Often, this growth or vibrancy is a factor of government and public interest rather than professional attractiveness, alongside dedicated professionals. Unlike many professions that ride on the crest of the public's absolute need for them, e.g. health and engineering, the LIS profession does not always command government and public buy-in without serious promotion and marketing. Likewise, education and training in information professions requires a mix between an ardent focus on understanding market forces in order to attract students and produce employable graduates, and a dogged determination to uphold a noble profession in spite of encroaching competition. The significance of a strong professional association cannot be underestimated. In South Africa, such an association would be instrumental in nurturing government and public interest as well as developing a strong profession. The association could then assist in attempts to bridge the gap between LIS education and LIS practice.

Bibliography

Abdullahi, I. (editor). 2009. *Global Library and Information Science: a textbook for students and educators. IFLA Publications 136-137.* Munchen: KG Saur

Burbules, N. C. (2000, April). Universities in transition: the promise and challenge of new technologies. *Teachers College Record*, 102 (2), 271-294.

Castiglioni, A, Bellini, LM and Shea, JA. 2004. Program Directors' Views of the Importance and Prevalence of Mentoring in Internal Medicine Residencies. *Journal of General Internal Medicine.* 19(7): 779–782.

De Bruyn, T. 2007. Questioning the focus of LIS education. *Journal of Education for Library and Information Science*. 48(2):108-115.

Educational Testing Service. 2006. *College students fall short of demonstrating the ICT literacy skills necessary for success in college and the workplace*.

http://www.etsliteracy.org/portal/site/ets/menuitem.c988ba)e572bada20bc47c 3921509/?vgnextoid=340051e5122ee010VgnVCM10000022f95190RCRD&vgn extchannel=d89d1eed91059010VgnVCM10000022f95190RCRD.

Government Gazette, Number 303535, (see South Africa, Department of education, 2007).

Hallam, G and Calvert, P. 2009. Australia: LIS Education. In I. Abdullahi (editor). 2009. *Global Library and Information Science: a textbook for students and educators. IFLA Publications 136-137.* Munchen: KG Saur, pp288 -303.

Havenga, P. 2007. *Higher Education Qualifications Framework:* a presentation made to the University of South Africa Senate, at Unisa, Pretoria on 12 November 2009 *(unpublished).*

Hikwa. L. 2006. Integrating information and communication technologies in LIS curriculum in Zimbabwe: A paper presented at the IFLA workshop on integrating ICTs in LIS curriculum in Africa. 21-23 November 2006 at Safari Court Hotel, Windhoek – Namibia.

IFLA. 2000. Guidelines for professional library/information educational programs – 2000. Available <u>http://www.ifla.org/VII/s23/bulletin/guidelines.htm</u>.

Ikoja-Odongo. 2006. Integrating ICTs into LIS curriculum in Uganda. A paper presented at the IFLA workshop on integrating ICTs in LIS curriculum in Africa. 21-23 November 2006 at Safari Court Hotel, Windhoek – Namibia.

Kajberg, L. 2007. The European LIS project: an overview. Journal of Education for Library and Information Science, 48 (2):68-81.

Kajberg, L, Horvat, A and Oguz, ES. 2009. Europe: LIS Education. In I. Abdullahi (editor). 2009. *Global Library and Information Science: a textbook for students and educators. IFLA Publications 136-137.* Munchen: KG Saur, pp343-363.

Kyriaki-Manessi, D. 2008. Divergence and convergence within Greek library education: an applied vs a theoretical approach. *Education for Information* 26:77-84.

Mambo, HL. 2000. Africa: focus on current library and information training needs and future patterns. *Library Review*, 49 (8):387-391.

Manda, PA. 2006. State of ICTs in LIS curriculum in Tanzania. A paper presented at the IFLA workshop on integrating ICTs in LIS curriculum in Africa. 21-23 November 2006 at Safari Court Hotel, Windhoek – Namibia.

Meyer, HWJ. 2009. Training of general library workers: challenges facing learning institutions: a paper delivered at the *Annual LIS Research Symposium*, 30-31 July 2009 at the Unisa School of Business Leadership in Midrand, South Africa.

Minishi-Majanja, MK. 2003. Mapping and auditing information and communication technologies in library and information science education in Africa: a review of the literature. *Education for Information*, 21:159-179.

Minishi-Majanja, MK. 2004. Mapping and auditing information and communication technologies in library and information science education in sub-Saharan Africa. (Unpublished thesis), University of Zululand.

Minishi-Majanja, MK & Ocholla, DN. 2004. Auditing information and communication technologies in library and information science education in Africa. *Education for Information*, 22:187-221.

South Africa, Department of Education. 2001. *National plan for higher education in South Africa*. Government Printer: Pretoria.

Miwa, M. 2006. Trends and issues in LIS education in Asia. *Journal of Education for Library and Information Science*, 47(3):167-180.

Moahi, KH. 2006. The Integration of ICTs in the LIS curriculum: department of LIS, University of Botwana. A paper presented at the IFLA workshop on integrating ICTs in LIS curriculum in Africa. 21-23 November 2006 at Safari Court Hotel, Windhoek – Namibia.

Moniarou-Papaconstantinou, V & Tsatsaroni, A. 2008. Library and information science education in Greece: institutional changes and current issues. *Education for Information*, 26:85-100.

Morales, L. & Roig, G. (2002). Connecting a technology faculty development program with student learning. *Campus-wide Information Systems* 19 (2), 67-72.

Ngulube, P. 2006. The state of ICTs in LIS curriculum in South Africa. A paper presented at the IFLA workshop on integrating ICTs in LIS curriculum in Africa. 21-23 November 2006 at Safari Court Hotel, Windhoek – Namibia.

Ocholla, DN. 2000. Training for library and information studies: a comparative overview of LIS education in Africa. *Education for Information* 18:33-52.

Ocholla, DN. 2003. An overview of information and communication technologies (ICT) in the LIS schools of Eastern and Southern Africa. *Education for Information* 21 (2-3): 181-194.

Ocholla, DN & Bothma, T. 2007. Trends, challenges and opportunities for LIS education and training in Eastern and Southern Africa. *New Library World*, 108 (1/2):55-78.

Owen, I and Leonhardt, T. 2009. North America: LIS Education. In I. Abdullahi (editor). 2009. *Global Library and Information Science: a textbook for students and educators. IFLA Publications 136-137*. Munchen: KG Saur, pp549-563.

Pierce, JB.2009. LIS educators reflect on past and present trends. *American Libraries*, March.pp24.

Raju, J. 2003. The core in library and/or information science education and training. *Education for Information*, *2*1:229-242.

Raju, J. 2005. LIS education and training in South Africa: a historical review. *South African Journal of Libraries and Information Science*, 71(1):74-84.

Ribiero, F. 2008. LIS education in Portugal between academia and practice. *Education for Information*, 26:33-42.

Rosenberg, D. 2000. An Overview of education for librarianship in Anglophone sub-Saharan Africa. In Wise, M. (editor), 2000. *Education for Librarianship and Information Science in Africa*. Denver: International Academic Publishers, p 11-33.

Rugambwa, I. 2001. Information science education in sub-Saharan Africa: an analysis. *International Information and Library Review* 33:45-67.

South Africa, Department of Education. 2007. The Higher Education Qualifications Framework: Higher Education Act, 1997 (Act No. 101 of 1997). *Government Gazette, Number 303535*, [and] *Government Notice No. 928, 05 October 2007.*

Stoker, D. 2000. Persistence and change: issues for LIS educators in the first decade of the twenty-first century. *Education for Information*. 18 (2/3): 115-123.

Tammaro, AM.2005. Report on quality assurance models in LIS programmes. IFLA:Education and Training Section. Available: <u>http://www.ifla.org/VII/s23/index</u>.htm.

Thapisa, A. 1999a. Developing lasting competencies for a twenty-first century information economy workforce in Africa. *Library Management* 20 (2), 90-99.

Thapisa, A. 1999b. Training for the real working world in the information economy. *Library Management.* 20 (2), 84-89.

Underwood, PG. 2009. On either bank: can mentoring help us? A keynote a paper delivered at the *Annual LIS Research Symposium*, 30-31 July 2009 at the Unisa School of Business Leadership in Midrand, South Africa.

Weech, TL & Tammaro AM. 2007. Feasibility of International Guidelines for Equivalency and Reciprocity of Qualifications for LIS Professionals. Available at <u>http://www.ifla.org/VII/s23/projects/23-project-outlines.htm</u>.