LIS qualifications in an African context: considerations from a South African study[1]

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It is important for countries in Africa to blaze their own unique paths in terms of adopting LIS qualification models that would be realistic and relevant to the local African context and, importantly, add value to their library and information services which have a crucial role to play in growth and development. As a contribution to this end, a research project is currently being undertaken in South Africa where, as part of the project, work environments in other disciplines such as journalism, health care and engineering are being empirically investigated and compared with LIS services in terms of job functions and higher education qualification types required to fulfill these job functions. The intention is to see if perhaps there are any innovations, lessons or best practices that the LIS profession can draw from these disciplines in terms of staff structures in LIS services, job functions of incumbents, and qualification requirements defining these structures and functions. The purpose of this paper is to report on some of the preliminary findings in an initial and novel comparison involving public, academic and special libraries, and engineering firms, newspaper houses and health care services in an African city. The findings, in the main, reveal that other disciplines seem to embrace vocational institutions, such as universities of technology, in the work place much more than the LIS work environment. The paper concludes that while there are significant aspects of western developed qualification models that continue to be useful in developing contexts, LIS qualification models in these contexts do not necessarily have to travel the same route as done in the West. The development of such qualification models should be guided by African realities. The paper recommends the need to draw lessons from work place practices in other disciplines and from innovative work place behavior within the LIS discipline evident in the preliminary findings presented in this paper, and more fully utilize qualification products from non traditional university institutions which often are the only tertiary level institutions many African school leavers are able to access. At the same time qualification models should afford articulation means that provide opportunities for further education and development of these individuals.

Keywords: LIS education-Africa; LIS education-South Africa; LIS services-Africa; LIS services-South Africa

1 Introduction

Establishing library and information science (LIS) as a graduate profession as currently happens in first world contexts such as the United States of America and Canada, indeed does propel the status of the profession in society and, significantly, guarantees general (liberal arts) education which universally is argued to be crucial in the preparation of the LIS professional (Shera 1972; Wilson and Hermanson 1998; IFLA 2000; Kagan 2002; Raju 2006). Kagan (2002: 13) argues that "this wider perspective [that comes with engaging general education/liberal arts subjects as well as various discipline based subjects as part of a university bachelor's degree] is a prerequisite for enhanced professional status". This scenario is perhaps also affordable in a first world context where, following the post-graduate route, it can take up to five/six years to become an LIS professional. Can the developing African context afford this? Perhaps not, particularly in a context of scarce resources, pressing national development priorities and, very importantly, educational difficulties associated with a school-leaving population, the majority of which come from severely disadvantaged (educationally and economically) backgrounds. It therefore becomes important for countries in Africa to blaze their own unique paths in terms of adopting LIS qualification models that would be realistic and relevant to the local African context and, importantly, add value to their library and information services which have a crucial role to play in growth and development.

As a contribution to this end, a research project is currently being undertaken in South Africa where, as part of the project, work environments in other disciplines are being empirically investigated and compared with library and information services (LIS) in terms of job functions and higher education qualification types required to fulfill these job functions. Langley, Gray and Vaughn (2003: 1-2) suggest that in order to instigate change in an atmosphere (libraries)

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traditionally associated with a sluggishness to change, "we need to look outside the profession to other models of work behavior to see how we can do it better". In line with this innovative thinking this project has begun with journalism, health care and engineering - important disciplines also contributing to growth and development in the African context - to see if perhaps there are any innovations, lessons or best practices that the LIS profession can draw from these disciplines in terms of staff structures in LIS services, job functions of incumbents, and qualification requirements defining these structures and functions. The purpose of this paper is to report on some of the preliminary findings in an initial and novel comparison involving public, academic and special libraries, and engineering firms, newspaper houses and health care services. To contextualize this, the paper will first briefly elucidate on the idea of seeking LIS qualification models suited to an African context; then take a cursory look at development in an African context and the role of LIS services in this development. Further, in the process of reporting on the above initial findings, the paper will discuss issues such as vocational higher education institutions like the emerging universities of technology in South Africa and the value and role of their LIS qualifications *vis á vis* those of the traditional universities, the role and contribution of the LIS paraprofessional to LIS services in a developing context, and the issue of articulation between higher education qualification types and the relevance of this for LIS education in a developing context. Teasing out such issues is important in the search for qualification models that are relevant to information and libraries in an African context and to growth and development in general.

2 Exploratory study

This paper reports on work in progress. The word 'model' is used in this paper not in the sense of having arrived at something definitive and complete. Rather it is used as a means of exploring LIS qualification scenarios for an African context. Broadbent (1988: 92-93) claims that one of the medium by which a model may be represented is the "verbal" or "narrative" medium, as is being used in this paper. Broadbent (1988: 91) also points out that one of the functions of models may be "exploratory", which the author believes is the purpose for which it is being used here. One also needs to be mindful that "no model can ever be complete…" (Broadbent 1988: 88). In seeking other scenarios or models, "certain properties of the object" are "singled out, represented in their pure, simplified form and then studied in the absence of the actual object" (Bless and Higson-Smith 2000: 10). Kebede (2002: 71) usefully points out that the strength of the model concept is its ability to capture and communicate essential aspects in order to generate a better understanding of the reality under study. It is in this exploratory context that this paper discusses qualification models or scenarios that are relevant to information and libraries in a developing context in Africa.

3 Development in Africa and the role of LIS services

African populations (including large sections of the South African population) generally suffer from a "lack of requisite high level and varied types of needed literacy skills" (Raseroka 2005: 4) necessary for access to required information, especially electronic access to information which has become the dominant mode of access in our current knowledge society. Furthermore, electronic access to information is dependent on complex information and communication technology (ICT) infrastructure which, according to Raseroka (2005: 4) is "poorly distributed to the majority of African populations or is unaffordable". The latter is largely the result of economic constraints facing most African countries. These factors collectively contribute to the information access divide that precludes Africa's meaningful participation in a true knowledge society where there is equitable access to information by all communities and which is required for African development in the various sectors. While South Africa in these instances might be somewhat better off than most other African countries, there are still significant sections of its population that suffer similar disadvantages. Library and information services have a significant role to play in helping to bridge this divide, for example, by making creative efforts towards literacy development of African populations, by using innovative methods to make information needed for everyday survival available to local African communities or by providing access to research outputs published abroad to scholars based in Africa and who are working on African research problems. This calls for LIS education that is cognizant of African needs and African development priorities.

African (including South African) LIS education and training, historically, has been influenced by British and American trends. In the pre-independence era many African librarians trained abroad or engaged in distance education with institutions abroad (Rosenberg 1999: 12) thus bringing with them western values and priorities into the African LIS context. Once library schools were established in the post-independence era, it was inevitable that they would follow the British or American model in their delivery of programmes. For example, professional LIS programmes were located in universities and certificate and diploma programmes (paraprofesssional programmes) in non-university institutions such as polytechnics and technical colleges. A degree in LIS was a requirement for entry into the profession (Rosenberg 1999: 13-15). This emulation of western models was inevitable given the assistance and funding and even academic staffing that

came from the West in the setting up of the first library schools in African countries. The curriculum content too tended to be based on what was taught in the United States of America and in the United Kingdom. According to Rosenberg (1999: 16-19) the necessity to indigenize curricula and make them relevant to local African needs was recognized as far back as 1962 but this has been difficult to achieve. Understandably, African library schools, in their aspirations to maintain international standards in professional LIS education and also as a result of the general lack of teaching and learning materials relevant to library and information work in Africa, have largely maintained the curriculum content from the west. However, in more recent years there have been efforts in African scholarship generally to de-emphasize hegemonic Euro-American values and for higher education and research to reflect the lived experiences of the vast majority of Africans. Okolie (2003: 235) in his call for knowledge production in higher education for sustainable African development, appeals for African-centered higher education where African ideas, knowledges and ways of knowing are affirmed and promoted. Raseroka (2005: 4) too, in her call to help bridge Africa's knowledge divide, appeals to African scholars and librarians to "stimulate knowledge creation and its analysis by local researchers and communities [and] thus stimulate rigour in the critical analysis of local research issues". Okolie (2003: 247) laments that African researchers and academics are dependent on western sources for research funds, equipment and publishing outlets; they "crave for recognition by their western counterparts, and for institutional affiliation with western universities or research institutes". Hence programmes in university and college faculties become organized along lines similar to programmes in Europe and America – as noted above in the case of LIS education in African countries. Okolie (2003: 248) argues rather for critical pedagogues in higher education that create room for interrogation of and research in areas that address African needs and priorities. It is in this critical context that this paper attempts to explore qualification scenarios that are relevant to the library and information environment in a developing African context.

4 Empirical work

As a preliminary phase in a wider project area led by the author, three limited studies (Dlabantu 2006; Ngubane 2006; Rajagopaul 2006) were conducted in 2006 in the busy port city of Durban, KwaZulu-Natal, South Africa under the auspices of the Library and Information Studies Programme of the Durban University of Technology. The collective objective of the studies was to investigate job functions of traditional university and university of technology (UoT) graduates in special, public and academic library environments on the one hand and in engineering, journalism and health care environments on the other. The intention was to draw on possible trends and best practices from the latter for the former. Like LIS, engineering, journalism and health care disciplines draw their personnel from both traditional universities and UoTs. The research questions that were used to guide the studies in meeting this objective were:

- What are the job functions of university and university of technology graduates in the staff structures of selected special, public and academic libraries in the Durban area?
- What are the job functions of university and university of technology graduates in the staff structures of selected engineering firms, newspaper houses and health care services in the Durban area?
- Are there any trends and best practices in staff structures in the engineering, journalism and health care work environments that can be adopted/adapted for the LIS work place?

After reviewing literature related to the individual areas of investigation to become acquainted with current issues in the areas of research and also to integrate the studies into the wider body of knowledge that is relevant to the research problem being investigated, these studies used mainly self-administered questionnaires and structured interviews as data collection instruments. The questionnaire was used to collect data from selected samples (using appropriate sampling techniques) of traditional university and university of technology LIS, engineering and journalism graduates from purposively selected special, public and academic libraries, and engineering firms and newspaper houses in the Durban area. In order to increase the validity of data collected structured interviews were employed to gather data from purposively selected samples of managers from special library environments, public libraries and academic libraries, and from newspaper houses and heath care services. In the case of engineering firms the self-administered questionnaire was also used to collect data from managers as this was found to be a more workable option in this particular environment. With the health care services the graduates themselves were not engaged because the intention was to source data from the managers as it was found that this would be the best route to follow when dealing with a terrain that is large, unfamiliar and has a great variety of health care practitioners. This proved to be a difficult sector to access and evidence of this is that eventually only one health care service, but a very big and significant one, out of the three approached afforded an interview, albeit an in-depth and very useful interview. Due to reasons of space further details regarding the methodology and other aspects of these individual preliminary studies, including difficulties associated with data collection, are not included in this paper but will be captured in a forthcoming journal publication. For the purposes of this paper an overview of the findings in this initial phase of a wider and continuing project, will be provided in table format and in terms of the three critical questions that guided the initial studies.

5 Preliminary findings

Table 1 Institutions surveyed

LIS Services		
Special library services	**Public library services**	**Academic library services**
1. Engenoil Library 2. Oceanographic research Institute Library 3. Shepstone & Wiley Law Library	10 branches of the Ethekwini Municipal Library Service: 1. Beach 2. Central Lending 3. Durban North 4. Glenashley 5. Glenwood 6. Grosvenor 7. Montlands 8. Prince Edward 9. Umbilo 10. Windermere	1. B.M. Patel Library (Durban University of Technology) 2. E.G. Malherbe Library (University of KwaZulu-Natal) 3. McO'Dowd Resource Center (Mangosuthu Technikon)

Institutions from other disciplines		
Engineering firms	**Newspaper house**	**Health care service**
1. Amalgamated Beverage Industries LTD. 2. Ethekwini Water & Sanitation. 3. Conlog: Prepayment Metering Systems.	Independent Newspapers – the only major newspaper house in Durban which publishes many of South Africa's daily and weekly newspapers.	Addington Hospital – one of the largest public health care services in the province of KwaZulu-Natal.

Table 2 Research question 1:
What are the job functions of university and university of technology graduates in the staff structures of selected special, public and academic libraries in the Durban area?

Special libraries	Public libraries	Academic libraries
1. Both university and UoT graduates (degree and diploma UoT graduates) stand the same chance of securing positions, both professional and support positions. 2. Special libraries do not seem to correlate job titles/functions and type of higher education institution the LIS graduate comes from. 3. Thin line separating the job functions of Librarian and Library Assistant, often with an over-lap in functions. In instances where just one person is employed (common in special libraries) the individual assumes both professional and assisting functions.	1. University LIS graduates are generally employed in professional positions (e.g. Librarian) while UoT graduates are employed in support positions (e.g. Library Assistant). 2. Emerging trend of B.Tech LIS graduates from the UoTs being considered for professional positions. 3. Professional functions of Librarians are clearly defined to include staff supervision, decision making, collection development, administrative/ management functions, etc. 4. Support functions of Assistants are also clearly defined to include clerical tasks, circulation duties, shelving, cash routines, etc.	1. In the academic library located in the traditional university, LIS graduates from universities occupy professional positions (e.g. Subject Librarian) and those from UoTs, including those with a B.Tech. degree, occupy support or paraprofessional positions. 2. In the academic libraries located in the universities of technology, LIS graduates from both the traditional university and the UoT qualify for professional positions (involving general librarianship functions, subject librarian functions, administrative/ management functions, etc.) while holders of the National Diploma in LIS from the UoTs qualify for paraprofessional/support positions involving routine tasks. 3. The library of one of the UOTs breaks traditional ground even further by regarding the National Diploma in LIS from the UoT as a requirement for entry level professional positions (e.g. Assistant Librarian) with routine clerical duties being allocated to incumbents who are not LIS graduates and diplomates. The management claims that type of qualification is not their primary concern but rather requirements of the job.

Table 3 Research question 2:

What are the job functions of university and university of technology graduates in the staff structures of selected engineering firms, newspaper houses and health care services in the Durban area?

Engineering firms	Newspaper houses	Health care services
1. Engineering graduates from the UoTs holding the B.Tech.(Engineering) degree and those from the traditional university holding the B.Sc. (Engineering) degree are assigned professional job functions such as those of Engineering Managers. 2. Holders of the National Diploma in Engineering from the UoTs qualify for support positions and functions as in that of a Technician.	1. Most of the journalism graduates surveyed were UoT graduates. 2. All graduates have the same job designations and job functions (e.g. Reporter) whether they carry a UoT Diploma or B.Tech. in journalism or a university journalism qualification. 3. All graduates and diplomates start at the bottom as Reporters and work their way up the career ladder through hard work and dedication to the profession. 3. A journalism qualification may be an advantage but it is hard work that counts.	1. Positions such as those of Medical Doctors, Nurses, Pharmacists, Dieticians, Speech Therapists, Radiographers, etc. are recognized as professional positions and required qualifications for these positions may be from universities or UoTs. 2. Positions and job functions that categorize as paraprofessional are those of clerical personnel. 3. Incumbents are not employed in terms of the type of higher education institution they come from but rather the requirements of the available position are the focus.

Table 4 Research question 3:

Are there any trends and best practices in staff structures in the engineering, journalism and health care work environments that can be adopted/adapted for the LIS work place?

Engineering firms	Newspaper houses	Health care services
1. Apart from the trend that UoT B.Tech graduates, like traditional university graduates, are considered for professional positions (a trend that seems to be already emerging in the LIS sector) there do not seem to be any marked or novel practices in staff structures in the engineering environment that may be applied to the LIS work place.	1. The type of higher education institution (traditional university or UoT) does not play a role in the job designations and functions of journalism graduates. A basic qualification is required for professional work in the field. 2. The journalism work environment does not distinguish between professional and paraprofessional positions - all journalism related positions are considered as professional. 3. While in LIS services higher qualifications generally determine upward mobility in the organization, in journalism it is dedication, enthusiasm, hard work and quality of work.	1. All health-related practitioners are considered to be professionals in their own right, whether they come from traditional universities or UoTs. Unlike in the LIS profession even those practitioners such as Radiographers, Speech Therapists, Dieticians, etc. (who are generally considered to be technician personnel many of them emanating from the UoTs with their technological focus) are viewed as professionals and take up professional positions in health care services.

6 Discussion

While the above preliminary investigations are based on limited samples, they do nonetheless reveal some interesting findings in a novel comparison from which one can draw on to explore qualification models or scenarios that allow for maximum use of LIS-trained human resources in an African LIS work place with its particular needs and priorities. These limited studies are currently being expanded on with more scientifically extracted samples from a wider geographic area to see if the trends revealed by the above preliminary investigations are indeed applicable more widely.

In the meantime, what are some of the "work behavior" from "outside the profession" (Langley, Gray and Vaughn 2003: 2) revealed by these initial findings that we in the LIS discipline can draw on to more efficiently, in an African context, utilise our qualification products?

Ocholla and Bothma (2006), who have reflected on LIS education and training in Eastern and Southern Africa, point to two dominant qualification models predominant in South Africa and likely to be applicable in other parts of Africa with some variation: the undergraduate model (three/four years of undergraduate study, followed by postgraduate studies if desired) and the postgraduate model (any general degree plus a postgraduate diploma in LIS, followed by further post-graduate studies, if desired). Literature on LIS education and training in Africa generally tends to make only cursory

reference to university of technology (UoT), polytechnic or equivalent LIS programmes. UoTs (previously technikons in South Africa), polytechnics, etc. have traditionally not been regarded in society as being as elite as the traditional universities among higher education institutions. Vocational institutions, such as universities of technology, have an applied and solutions-driven approach to education (Du Pré 2007: 2) as opposed to the more academic and theoretical approach of traditional universities. Thus, such higher education vocational institutions have very functional roles to play particularly in growth and development in an African context with its particular needs and priorities. In fact the South African Higher Education Qualifications Framework (HEQF) consciously promotes such diversity and differentiation in the higher education system for the purpose of meeting "the varying needs of … clients and communities …" (Department of Education (South Africa) 2007: 5-6). Testimony to the value of vocationally-oriented higher education lies both in the above preliminary findings as well as in the literature (as discussed below).

According to the above findings, other disciplines seem to be embracing the emerging UoTs in the work place much more than the LIS work environment. For example, Bachelor of Technology (B.Tech.) graduates from the UoTs, like traditional university engineering graduates, are considered in the Engineering work place for professional positions such as that of Engineering Manager. This is a trend that, after many years of resistance, is only just beginning to surface in the public library work environment in South Africa. Academic libraries based in traditional universities seem to still vehemently resist this. In an age of advanced technologies which are redefining traditional library roles (Neal 2006: para 1) university academic libraries, argues Ngubane (2006: 49-50), need to re-visit their traditional view and "embrace new role functions that the new university of technology graduate, particularly at the B.Tech. level, can contribute in a technologically advancing academic library environment", especially in technology-oriented positions. Academic libraries of the UoTs, probably more appreciative of the value of vocational education, tend to display a more progressive demeanor towards the B.Tech. LIS qualification and embrace these together with the university LIS qualifications as professional qualifications. Special libraries, generally located in the corporate world and perhaps influenced by the rigour of corporate culture have no fetishes about qualification types and even those with the National Diploma in LIS, and not just degree holders, could be appointed in professional posts.

Dlabantu (2006: 46) observes that the LIS work environment can learn from journalism. She purports that while qualifications are important perhaps LIS services have "become overly preoccupied with them to the detriment of good service, which often is the outcome of hard work, enthusiasm and dedication to the profession" – a culture that the journalism work environment seems to promote and in the process generate much productivity and creativity. The LIS work environment can learn from health care services too where all health-related practitioners, whether they come from traditional universities or from the UoTs, are considered to be professionals in their own right and take up positions in the work place accordingly. Some of the rigidity in the LIS work environment regarding job titles/functions and qualification types evidenced in the above findings is perhaps an indication of us, in Africa, still engaging in old practices imported into our work environments at another time in a different age. Some LIS services, albeit a few, have been brave enough to break away from the dominant work place models. For example, in the UoT academic library cited in the above findings, the Management has bravely made the National Diploma in LIS from the UoT a requirement for entry level professional positions (e.g. Assistant Librarian) with routine clerical duties being allocated to incumbents who are not LIS graduates and diplomates – a position similar to that in the health care service cited earlier. The Director of this particular academic library goes further to claim that she in fact discourages the use of the word 'paraprofessional' as she believes that it does not allow for progression in the work place. It is such 'out of the box' thinking and employment practices that are needed for us to break with old models both in the work place and in the learning environment to meet African needs in an African context.

Thapisa (1999: 99), writing in the African context, calls for LIS education and training that is "more market driven, vocational in approach and competence based" and that provides students with skills and competencies that enable them "to tackle real job or employment-related issues and problems". However, Thapisa claims, at the same time this education should be broad-based enough so as not to be concerned only with the technical understanding of jobs but also with "the attitudes, competencies and skills that make up a whole and complete worker". An African LIS work environment, then, has place for the products of traditional universities, where general education and subject expertise (the liberal arts) has always been a focus, as well as products of vocational institutions such as UoTs, polytechnics and others which despite their traditional focus on work place competencies also emphasize life long learning skills as, for example, required of all higher education qualifications in South Africa (Department of Education (South Africa) 2007: 6).

The knowledge economy, influenced largely by rapidly advancing ICTs, "has brought about a whole range of opportunities and excitement and the changing roles of information professionals has been a result of these inevitable forces" (Tin and Al-Hawamdeh 2002: 331). For example, as people's information needs and demands rise in this knowledge context a trend has evolved, globally, for paraprofessionals, generally the products of LIS education at

vocational institutions, to take over the role of professionals "in providing basic reference service, thereby releasing the professionals to provide other value-added services to users" (Tin and Al-Hawamdeh 2002: 333). Similarly, in many areas of information work particularly where there has been the automation of functions, paraprofessionals are being assigned tasks that were previously solely the domain of professionals (Neal 2006: para. 14). Significantly, this downward shift in the work hierarchy has resulted in much task overlap and blurring of lines between responsibilities of products of traditional universities and those of the universities of technology, polytechnics and other vocational institutions. Is it perhaps not time then for us, especially in Africa, in the context of basic information required for everyday survival in many communities, to more fully utilize the skills and knowledge of the latter. This is also relevant in the context of many school leavers in African countries coming from severely disadvantaged educational and economic backgrounds and thus in many instances not being able to access the more elite traditional universities but are in many cases able to access vocational institutions (a case in point in South Africa), and thus emerge as paraprofessional LIS products after three years or so of study. Such available skills and knowledge should be harnessed not only for the provision of efficient LIS services which have a role to play in the betterment of African societies, but also for the educational development of these individuals themselves so that they too may grow and develop and in turn impact on the growth and development of their communities. Why do we have to, both in the work place and in terms of learning models adhere to demarcations and boundaries developed in another context to meet needs that are largely different from that of our context.

Research sojourns by the author to countries like Canada and Australia and interactions with LIS academics, LIS services managers and general staff in these contexts revealed first hand that they can afford to continue with the traditional and dominant qualification models as they do not have the same development challenges that African countries have. Visits over the past year by the author, as part of a wider study being undertaken, to a variety of public, special and academic libraries in KwaZulu-Natal (one of the economically embattled provinces in South Africa) to observe and enquire about staff numbers, qualification levels and job functions revealed that in many instances, particularly in community public libraries, the skills and knowledge of LIS products from vocational institutions such as the UoT are being successfully utilized to run these services. The Congress on Professional Education (COPE) (2003: para. 3) usefully points out that information technology has changed the nature of work and this calls for the contents of many jobs to be evaluated and re-defined. This presents the ideal opportunity for us to re-visit traditional boundaries in the LIS work place and traditional qualification requirements. It is an opportunity to maximize the use of the skills and knowledge of products of vocational institutions, such as UoTs which have a technology and problem solving focus.

This also presents an opportunity to build into our higher education systems real mechanisms that facilitate articulation between vocational qualifications and those of the traditional universities so as to allow individuals who were not initially able to access the latter the opportunity to experience more theoretical or academic LIS education, if they wish. This could be for their own personal growth and development as individuals as well as to contribute to LIS services and to development generally, rather than remaining locked in a particular qualification stream with limited opportunities for vertical and horizontal mobility in the LIS work place. While the HEQF in South Africa does attempt to "facilitate qualification articulation across the higher education system" by providing general guidelines for such articulation, "possession of a qualification does not guarantee a student's progression and admission to a programme of study...the decision to admit a student to higher education study is the right and responsibility of the higher education institution concerned" (Department of Education (South Africa) 2007: 10, 14). Ultimately, then, allowing for such desired articulation rests with individual institutions with some being more amenable to this than others. This situation is compounded by the fact that the HEQF makes very clear that the "positioning of two or more qualifications [for example, the four-year UoT LIS qualification and the four-year university LIS qualification] on the same NQF level...does not indicate that they have the same purpose, content or outcomes...nor does it necessarily demonstrate equivalence of qualifications" (Department of Education (South Africa) 2007: 11). Again, this leaves weighty responsibility on employers this time to apply their minds cogently and make maximum use of the diversity of LIS qualification products that the higher education system allows for, when seeking personnel for positions requiring certain competencies - and not to simply go by traditional qualification requirements. These issues also explain the diversity in reactions among employers evident in the above preliminary findings.

7 Conclusion and recommendations

LIS qualification models in developing contexts do not necessarily have to travel the same route as done in the West. It must be acknowledged that there are significant aspects of western developed qualification models that continue to be useful in our contexts. As Okolie (2003: 254) quite rightly points out, it does not serve our purpose to "reject useful and useable elements of western civilization". We must use these by all means but at the same time we must allow the

development of our qualification models be guided by African realities. Drawing from preceding discussions such realities include:

- the African context and its development challenges;
- the relevance of vocational higher education institutions to development in an African context, particularly with their technology driven and applied nature;
- the value and use of LIS 'paraprofessionals' in information and knowledge services, here again, their work place application skills and technology focus being strengths for LIS services in a developing context; and,
- the need for articulation possibilities between LIS vocational education and traditional university education for further education and development of personnel.

While the preliminary studies reported in this paper are part of ongoing research, their findings do point to the need to be creative and innovative and to draw lessons, where possible, from work place practices in other disciplines also contributing to growth and development in an African context, as well as from innovative work place behavior from within our own discipline as evident in the reported findings. LIS products from both traditional universities and vocational institutions have a place in an African LIS work environment, such as in South Africa, and the exemplars emanating from these preliminary studies point to the need to more fully utilize qualification products from non traditional university institutions which often are the only tertiary level institutions that many school leavers in African countries are able to access. At the same time qualification models should provide adequate articulation means that provide opportunities for further educational development of these individuals.

Acknowledgement

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