The historical evolution of university and technikon education and training in South Africa and its implications for articulation between the two types of higher educational institutions with particular reference to LIS education and training

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The paper provides discussions on articulation between university and technikon LIS education and training in the context of: the historical evolution and traditional purposes of university and technikon education and training; major similarities and differences between university and technikon LIS education and training; and current changes in higher education in South Africa to effect a new ethos of transformation, equity and efficiency. In doing this the paper highlights issues that are critical to deliberations on the matter of articulation between LIS programmes at universities and technikons. This, the paper claims, is important because increasingly higher education institutions are faced with the articulation dilemma as students seek greater mobility within a transforming higher education sector.

Introduction

The issue of articulation between different types of higher education institutions has become an important one particularly in the context of current educational transformations in South Africa to bring about a more equitable and integrated education system. The purpose of this paper is to trace the historical evolution of university and technikon education and training in South Africa and examine the implications of this historical evolution for articulation between the two types of higher educational institutions with particular reference to library and/or information science (LIS) education and training. After briefly explaining what higher education is as this is the context in which universities and technikons are located, the paper moves on to define the concept of a university and that of a technikon and also discuss the evolution of these institutions in the South African context. The paper also draws on an empirical study by Raju (2002) that investigated, among other things, what possibilities exist for articulation between university and technikon LIS education and training in South Africa.

Higher education

The term higher education is generally used to indicate the area of education following secondary education. Higher education covers a wide diversity of types of institutions, such as, universities, polytechnics, technikons (in the case of South Africa) and various types of colleges. Higher education at these institutions focuses

on the functions of teaching and/or research that prepare individuals to take up a variety of roles in society.

University education and training in South Africa

A university is an autonomous institution that is organised in various ways depending on its geographic location and historical heritage. It creates, investigates, evaluates and conveys culture through its scientific research and teaching activity (Brzezinski 1997: 202). This scientific and teaching activity, according to Brzezinski, must be morally and intellectually independent of political and economic authority. Scholars generally believe that universities should be conditioned only by the relevant criteria of research and teaching efficiency (Gumanski 1997: 40-41). However, in practice economic and political considerations often make this difficult.

The *University Act of South Africa* (Act 12 of 1916) formalised university education in the Union of South Africa by establishing the University of South Africa (UNISA). UNISA incorporated the various teaching university colleges scattered in different parts of the Union of South Africa. Gradually these colleges became independent universities and by 1951 the process of establishing independent universities was completed. By this time UNISA had become a fully-fledged correspondence university (Behr 1984). In the 1960s additional universities were created and by the mid-1980s there were ten residential universities for whites in South Africa. The *Extension of University Education Act* (Act 45 of 1959) provided for the establishment of universities for Africans, Coloureds and Indians in South Africa (Behr 1984).

The government, in entrenching its policy of separate development (apartheid) for the different race groups, viewed universities in South Africa as legal entities whose nature and functions were prescribed by law. Universities had no powers or rights other than those prescribed by law. They had no autonomy other than that granted to them by the state for reasons of administrative efficiency (Bunting 1989: 399). While the government shared the internationally held view, alluded to by Gumanski (1997) above, that the main functions of universities were to disseminate knowledge through instruction of students in various academic disciplines, and to advance knowledge through research, according to the apartheid government and in keeping with its

policy of separate development, these functions were to be exercised in a way that was relative to the cultural and value framework of specific population groups. This was a departure from international university trends where the autonomy of universities was valued.

Thus apartheid policies had created a higher education system in South Africa that was complex and discriminatory and by the beginning of the 1990s consisted of twenty-one universities, fifteen technikons and a host of colleges including teacher training colleges, agricultural colleges and colleges of nursing (Gultig 2000: 40).

South Africa's first democratic elections in 1994 signalled the beginning of changes in many sectors, including the higher education sector. This sector witnessed significant changes in the 1990s as a result of post-apartheid legislation as well as global and national changes in the economy. Post-apartheid legislation de-racialised universities and other institutions in the higher education sector. In the immediate post-apartheid period that was characterised by a less regulated 'market' atmosphere, foreign donors and local industry poured money into education and training as education was seen as the 'engine' of growth. There was also a significant commitment on the part of the state to redressing apartheid inequalities (Gultig 2000: 37). Gultig goes on to point out that what emerged was a "deregulated 'free market' in higher education" resulting in a widening of gaps in higher education. For example, while the historically advantaged white universities and technikons consolidated their positions as leading higher education institutions in the country, the historically disadvantaged black institutions were plagued by crises and were losing students in massive numbers. It is precisely this situation that subsequent changes in the higher education system in South Africa (discussed later) are attempting to address, mergers of higher education institutions being one of the mechanisms being used.

Thus university education in South Africa between 1916 and the present seems to have see-sawed from a situation of being tightly controlled by the apartheid state in the interests of its own policies to a brief period of deregulated 'free market' higher education in the immediate post-apartheid era, and to the current position of being regulated once again in the name of achieving a more equitable, integrated and

efficient higher education system but where the autonomy of the university seems once again to be in jeopardy.

Technikon education and training in South Africa

Technikons in South Africa have their roots in technical colleges whose responsibility was to attend to the theory aspects of apprentice education and training throughout the country. In 1923 the *Higher Education Act* (Act 30 of 1923) declared certain technical colleges to be places of higher education. In time these colleges came to offer the community courses other than those related to the theoretical aspects of apprentice training (Department of National Education, National Education Policy Branch 1988: 5).

As a result of a growing shortage of skilled and high-level personnel to meet the needs of commerce and industry in the country the *Advanced Technical Education Act* (Act 40 of 1967) created a new type of institution that was an intermediate between a technical college and a university (Behr 1984: 128). The new type of institution was called a college for advanced technical education (CATE) and was located in the higher education sector.

By the late 1970s the Van Wyk de Vries Commission's recommendation that universities and CATEs should enjoy free vertical development, but with a difference in focus, was accepted (Department of National Education, National Education Policy Branch 1988: 7-8). This not only represented an important development in the history of what was to become known as technikons but also highlights the fact that these two types of higher education institutions have different foci. This difference in focus is further highlighted by the fact that the *Advanced Technical Education Amendment Act* (Act 43 of 1979) changed the name 'college for advanced technical education' to 'technikon' (Pittendrigh 1988: 193-194). The new name had been derived from the Greek word 'technike' that refers to anything related to technique or technology and serves as an important basis for the difference in orientation between universities and technikons (elaborated on later). Pittendrigh (1988: 231-232) explains that a hierarchy of qualifications unique to technikons and parallel to universities had evolved. Immediately this raises the issue of articulation between the two types of institutions, an issue central to this paper. Unfortunately at the time when these developments

were taking place in technikons, there seems to have been no clear guidelines for this type of articulation.

By the early 1990s fifteen technikons had emerged nationally (Cooper 1994: 70-71). As had been the case with the universities, apartheid had been deeply entrenched in the technikon system as well. The *Technikons Act* (Act 125 of 1993) established technikons as degree-awarding institutions (Republic of South Africa 1993: 4). The *Higher Education Act* (Act 101 of 1997) firmly established technikons within the higher education sector (Republic of South Africa 1997: 18). Unfortunately both these pieces of legislation make no reference to the status of universities and technikons *vis-á-vis* each other except to imply that they are both part of the higher education sector and one is left to presume from official documents and other sources cited in this paper that while they may develop parallel to each other they have different foci. Furthermore, both these pieces of legislation provide no guidelines on possible articulation between the two types of institutions. The silence on these issues in the above legislation adds to the uncertainty regarding the relationship between university and technikon LIS education and training referred to by Raju (2002; 2004a). It has only been subsequent changes in higher education to bring about a more integrated higher education system in South Africa, which has begun to address these issues.

A technikon is defined as a higher education institution whose main educational task is to provide education and training in order to supply the labour market with middle-level and high-level personnel who possess particular skills and technological and practical knowledge that ensures that they practice their occupations effectively and productively (Department of National Education, National Education Policy Branch 1988: 22). While this definition was formulated in 1988, the fact that there is no evidence of a revision of this definition in subsequent documentation and also bearing in mind that this definition is in keeping with the reason why technikons (or CATES as they were initially known) were established, leads one to assume that the definition still applies today. This definition is important in that it encapsulates the basis of the difference in orientation between universities and technikons. In the context of this definition technology or technological knowledge is directly related to the handling of a task or the solution of a problem as opposed to scientific knowledge which refers to knowledge that is "pursued and created within the context of a particular discipline by

a community of scientists in accordance with a shared methodological practice and set of scientific values" (Department of National Education, National Education Policy Branch 1988: 12, 22). The distinction between these two concepts (science and technology) makes for a clear distinction between the fields of the technikon and the university:

> The technikon concentrates on (a) training in and practice of technology (including development), and (b) the specific side of the spectrum of vocational preparation [that is, preparation for specific occupations]. The university concentrates on (a) training in and practice of science [in the broad sense of the word which includes all scholarly activities] (including research), and (b) mainly the general side of the spectrum of vocational preparation. (Department of National Education, National Education Policy Branch 1988: 22-23)

Thus technikon qualifications are often the result of constant interaction between relevant industries and the technikon through liaison committees, advisory boards and experiential learning programmes. The corpus of scientific knowledge is not directly relevant to technikon education and training as is the case in university education and training where it forms the basis of general education or liberal arts education. This distinction between the technological and occupational focus of technikon education and training and general university education with its focus on life-long learning, is a crucial issue as it is a fundamental difference between the two types of education and training (and an area elaborated on by Raju (2004b)).

In summary then, while technikon and university education and training are both located in the higher education sector, their individual foci are different. This has serious implications for the relevance of each of these types of qualifications for the work environment in general and for the LIS services work environment in particular. While the value of articulation between universities and technikons is evident, there has been (until recently) a lack of guidelines on this type of articulation.

Recent changes in higher education in South Africa

The National Commission on Higher Education's (NCHE) *Policy framework for higher education transformation* (1996) report that formed the basis of the 1997

Education white paper 3 : a programme for the transformation of higher education and the subsequent *Higher Education Act* (Act 101 of 1997), stated that the system of higher education in South Africa was "fundamentally flawed by the inequities, imbalances and distortions deriving from its history and present structure". Therefore it had to be re-shaped to meet pressing national needs and to respond to a context of national and global opportunities and challenges (National Commission on Higher Education 1996: 1). The White Paper stressed that central to the transformation process was that higher education must be planned, governed and funded as a single national co-ordinated system in order to overcome the fragmentation, inequality and inefficiency which are the legacy of the past. It recognised universities, technikons and various types of colleges as three types of institutions offering higher education programmes. The White Paper proposals for the transformation of higher education in South Africa were legislated through the promulgation of the *Higher Education Act* (Act 101 of 1997). This Act also established the Council on Higher Education (CHE) to spearhead this transformation process (Republic of South Africa 1997: 10).

While in the past university, technikon and college programmes were regulated by separate qualification frameworks that led to impermeable boundaries between sectors, the Ministry of Education endorsed, via the above Act, the principle that a single co-ordinated qualifications framework should be developed for all higher education qualifications in line with the National Qualifications Framework (NQF).

The South African Qualifications Authority (SAQA) has the function of overseeing the development and implementation of the National Qualifications Framework (Republic of South Africa 1995: 6). All approved and registered South African education and training qualifications would be housed within this Framework in the form of specific descriptions of learning outcomes agreed by all major stakeholders in the particular area of learning. The NQF allows for learners to earn credits towards national qualifications through a range of providers of learning such as schools, universities, technikons, colleges as well as on-the-job training. (South African Qualifications Authority 1997).

A key feature of the NQF, and of particular significance for higher education, is the levels of learning through which a learner can progress. Levels one to four cover

General Education and Training and Further Education and Training. Levels five to eight or ten (this is still being deliberated) cover the Higher Education sector and include qualification types ranging from national certificates to doctoral degrees (South African Qualifications Authority 2000: 11; Ministry of Education 2004: 19).

These levels of learning, especially those in the higher education and training band, have been and still are the subject of much debate among stakeholders. They have already gone through a number of changes and are likely to undergo further changes in the future. For example, the New Academic Policy document (Council on Higher Education 2001) proposed four sub-levels within level eight of the NQF to accommodate various qualification types at this level. A further academic policy document (Ministry of Education 2004) recently released for discussion, suggests additional levels nine and ten to accommodate masters' and doctoral degrees.

The NQF has been received with mixed reactions from various sections of society. Higher education practitioners too have articulated their concerns and have challenged aspects of the NQF (Bellis 1995; Geber and Munro 1999; Luckett 1999; Van Wyk 1999; Luckett 2000). However, the basic principles and objectives of the NQF have been accepted across the political and ideological divide as the NQF is viewed largely as being part of the broader process of South Africa's political, social and economic transformation. SAQA (1997: 3) emphasises the continuing participative and collaborative nature of the NQF that allows for collective and individual contributions to a "flexible, diverse but coherent framework".

Traditionally curriculum development at universities has been discipline-based with departments having a high level of autonomy in designing and promoting new programmes and qualifications. Under the new system there is a shift from a disciplinary approach to "a programme-based higher education system" (Department of Education 1997: 17). This means a shift from disciplinary degrees to inter-disciplinary programmes that are presented across departments, faculties and even institutions. The proposed new funding formula for higher education is based on programmes (Department of Education 1997: 48). Furthermore, programmes are required to be designed to "improve the responsiveness of the higher education system to present and future social and economic needs, including labour market

trends and opportunities" (Department of Education 1997: 17-18). Technikons traditionally have been accustomed to these practices of standardisation of qualifications, quality assurance and consultation with employers on curriculum development. Universities, however, have had to make the shift from a closed to a more open system that is sensitive to the demands of the market place and other emerging needs.

That all higher education qualifications are now housed in a single co-ordinated qualifications framework, has important implications for co-operation and articulation between different types of higher education institutions, especially universities and technikons. Such a framework allows for the facilitation of articulation procedures which, as pointed out earlier, had not been developed before.

Among the many proposals put forward to the Minister of Education by the CHE that was tasked with the responsibility of reviewing the size and shape of the higher education sector, was the proposal relating to the need for differentiation and diversification of the higher education system (Council on Higher Education, Size and Shape of Higher Education Task Team 2000). The CHE argued that differentiation and diversity are essential in higher education because there is no added value if all institutions have exactly the same mandates and missions and seek to be the same in all respects. The CHE also emphasised that while differentiation and diversity must be a principal feature of a reconfigured higher education system, articulation mechanisms must exist to ensure that the system is highly integrated. This is particularly significant as prior to this there has been a lack of formal structures to facilitate articulation between different types of higher education institutions. The proposed New Academic Policy discussed later addresses precisely this issue of articulation.

The Ministry in its *National plan for higher education* agreed with the CHE that a differentiated and diverse higher education system is essential to meet the transformation goals of the White Paper. It proposed that this institutional diversity should be ensured through mission and programme differentiation based on the type and range of qualifications offered. The programme mix at each institution will be determined on the basis of its current academic profile as well as the relevance of this

profile to the institution's location and context and its responsiveness to regional and national priorities (Ministry of Education 2001). The Ministry subsequently released the document *Approved academic programmes for universities and technikons : 2003-2006* that stipulated the programme mix for higher education institutions. Interestingly, in this document the Ministry has called for a review of programmes that are duplicated in particular regions (Ministry of Education 2002), for example, LIS programmes that are offered at the University of Natal (now University of Kwa-Zulu Natal), the Durban Institute of Technology (DIT) and the University of Zululand in the province of KwaZulu Natal. Such a review forces LIS departments or programmes to look closely at their curricula for overlap or duplication and possible rationalisation here, as well as for areas of specialisation that need to be retained and strengthened.

A further point raised by the Ministry of Education in its National Plan is that the programme distinction between technikons and universities has been eroded in line with the White Paper's suggestion of a loosening of boundaries between different institutional types. The result of removing the programme distinction and allowing degree-granting rights to technikons has seen a slow move towards uniformity between universities and technikons with technikons increasing their degree offerings at both the under-graduate and post-graduate levels. According to the Ministry this has led to a number of technikons requesting a change in status to universities of technology. The Ministry argued that the pressure for this change in status came at a time when technikons were contributing significantly to reversing a trend of higher education enrolments which has been skewed in favour of universities and which the NCHE suggested needed to be addressed in the interest of human resource needs of the country. The Ministry is concerned that the rapid erosion of the programme differentiation between universities and technikons would be detrimental to institutional diversity. It would also be detrimental to the capacity of the higher education system to meet the human resource development priorities of the White Paper, especially the goal of expanding career-oriented programmes, in particular, at certificate and diploma levels, and in science, engineering and technology. On the basis of this concern, the Ministry proposed, at the time, to continue to recognise, in the short-to-medium term, the broad function and mission of universities and technikons as two types of institutions offering different kinds of higher education

programmes. Thus, in planning for the short-to-medium term, the Ministry continued to regard:

- technikons as institutions whose primary function is to provide career-oriented programmes at the diploma level; and
- universities as institutions which offer a mix of programmes, including career-oriented degree and professional programmes, general formative programmes and research masters' and doctoral programmes.

(Ministry of Education 2001: 52)

More recently, however, technikons have been renamed universities of technology (Republic of South Africa 2003). However, there has been no further documentation indicating an alteration in the broad function and mission of technikons. Thus it would seem that while the name has changed the orientation and purpose of technikons within the higher education sector has remained the same. In fact the new title indicates that the technological focus of the institution type is still being maintained and thus serves to differentiate it from the university as a higher education institution. The author believes that the change in name from technikon to university has implications for funding and governance of technikons within the higher education sector rather than for their basic purpose.

It would seem then that there is indeed a place in the higher education system for different types of institutions that deliver products with different orientations in knowledge and skills that are required in the work environment. The author believes that the Ministry's decision to continue to recognise the broad function and mission of universities and technikons as two types of institutions offering different kinds of higher education programmes is, and continues to be, a sound one. This is especially so if the human resource requirements of a developing country such as South Africa requires technikon trained diplomates. The author believes that technological and vocational oriented education and training has been a strength of technikons. It should continue to build on this strength, especially at the diploma level, instead of shifting its focus to post-graduate programmes, thus contributing to the current confusion regarding the relationship between university and technikon degree qualifications and duplication of programmes particularly on a regional basis. However, as mentioned

by the author elsewhere (Raju 2002; 2004a; 2004b), the education system should, at the same time, allow for mobility or articulation of students between institutional types such as universities and technikons if certain students desired a change in the orientation of their education and training.

A further pillar in higher education transformation in South Africa is the *New academic policy for programmes and qualifications in higher education : discussion document* (2001). This has been an attempt by the CHE to develop a new academic policy on the processes of registration and accreditation of higher education qualifications and programmes. The qualifications framework for higher education which is presented in the New Academic Policy (NAP) document is located within the SAQA-NQF system. In developing this framework it is assumed that "learning achievements can be 'measured' in terms of levels and credits on a qualifications framework … and that this will facilitate the articulation of qualifications on the framework", thus enabling greater mobility and progression of students through the framework (Council on Higher Education 2001: 29).

The higher education framework proposed by NAP has under gone much discussion and is likely to undergo further discussion and changes before a final version is approved and adopted. The recently released draft document *The higher education qualifications framework* (Ministry of Education 2004) is part of this ongoing discussion and consultative process. However, the basic principles governing the development of the proposed higher education framework are likely to remain the same as these principles are meant to give effect to the policy guidelines set out in the White Paper and in the National Plan. Hence the discussion here of the articulation aspect of the proposed NAP, the principles of which have been reiterated in the recently released higher education qualifications framework discussion document (Ministry of Education 2004).

The proposed NAP places all higher education qualifications in two (general and career-focused) learning pathways or tracks, which are separated by a central articulation column designed to facilitate articulation between qualifications in the two tracks. Relevant to the issue of articulation of LIS programmes, the NAP document stresses (Council on Higher Education 2001: 37-38), that while the

proposed higher education framework aims to facilitate articulation, students should not assume that progression to specific programmes is ever guaranteed. Although the framework provides general guidelines and parameters for articulation, the receiving institution will determine specific articulation requirements, as it remains the right and responsibility of higher education institutions to determine their own admission requirements and the entry requirements for particular programmes.

The NAP document further points out that the pegging of two qualifications at the same NQF level does not mean that they are equal or even equivalent. It simply means that the programmes leading to these qualifications engage with comparable levels of complexity of learning. This is why the concept of horizontal and diagonal articulation is necessary to facilitate articulation between programmes and qualifications that may differ widely in nature and scope. In such cases further learning might be required before a learner's exit learning articulates with the entry requirement of a target programme, and vertical progression on the framework may be resumed. This concept has important implications for the articulation of LIS programmes between university and technikon education and training that, as pointed earlier, have different foci.

Thus in terms of the proposed higher education framework, the four LIS qualifications would be pegged at the following NQF levels: the National Diploma: Library and Information Studies (offered at technikons) would be pegged at NQF level 6 on the career-focussed track; the Bachelor of Technology: Library and Information Studies (offered at technikons), the Post-graduate Diploma in Library and/or Information Science (offered at universities) and the Bachelor of Library and Information Science/Bachelor of Information Science (offered at universities) could possibly all be pegged at NQF level 8 on the career-focused track. There are articulation credits to be earned (on the terms of the receiving institution) if one wants to, for example, move from the National Diploma (NQF level 6) to any of the three NQF level 8 LIS qualifications.

It makes sense that the three-year LIS technikon National Diploma is pegged lower than the four-year LIS qualifications. However many in the LIS services profession are likely to disagree with the university and technikon four-year qualifications being

pegged at the same level as there is a difference in the focus of each of these two types of education and training. However, the proposed NAP is clear that even though, for example, the B.Tech.(LIS), Post-graduate Diploma in LIS and B.Bibl./B.Inf. may all, in terms of the proposed higher education framework, be pegged at the same NQF level, the three qualifications are not necessarily equivalent. The proposed NAP maintains that qualifications pegged at the same NQF level can be different in function and purpose, and are therefore not equivalent, but can be pegged at the same level with similar credit ratings because the programmes leading to the qualifications engage with comparable levels of complexity of learning. It is precisely for this reason that the proposed NAP has the concept of horizontal and diagonal articulation, that is, to facilitate articulation between programmes and qualifications that may differ widely in nature and scope. This, for the author, demonstrates that the proposed framework recognises the difference in focus between, for example, the technikon B.Tech.(LIS) and the university B.Bibl./B.Inf. even though both might be pegged at the same level.

In summary, recent changes in higher education in South Africa has seen the development of a single, co-ordinated qualifications framework within which all higher education qualifications are housed. Such a framework allows for the development of structures for articulation between different types of higher education institutions, a situation that had been lacking previously. This has direct relevance for articulation between university and technikon LIS programmes. Furthermore, despite recent dramatic changes in the higher education sector, including the change in the name of technikons to universities of technology, the traditional purposes of university and, especially, technikon education and training seems to have been maintained by the Ministry of Education. This too has relevance for the relationship between university and technikon LIS programmes, and hence for articulation between the two.

Empirical study

Self-administered questionnaires were used in an empirical study by Raju (2002) to gather data on the views of past students, employers and educators in the LIS field regarding first level LIS qualifications offered at South African universities and technikons and their relevance to the LIS services work environment. Among the

many issues raised with respondents was that of articulation between LIS programmes at universities and technikons. There was input from significant quarters of the employer and past student populations that needed to be analysed and reported even though the return rate of questionnaires from employers and past students (17% and 15%, respectively, of the total number of questionnaires sent out - 455 and 554, respectively) may be considered to be low. There was an overall response rate of 52% (of the 65 questionnaires sent out) from the educator population. The study considered the issue of articulation between university and technikon LIS education and training in the context of the traditional purposes of university and technikon education and training as well as recent changes in higher education in South Africa. The paper thus far has highlighted issues in these areas.

As part of the broad context within which the study considered the issue of articulation, it also looked at similarities and differences between university and technikon LIS education and training. Employers and educators surveyed in the study identified many similarities and differences between university and technikon LIS education and training. However, a relatively large number of both employers and educators identified the practical orientation of technikon LIS education and training (it focuses on LIS services techniques) and the theoretical orientation of university LIS education and training (it provides in-depth knowledge of the field in addition to training in LIS techniques) as a major difference between the two types of education and training. This major difference between the two types of education and training is supported by the literature on the traditional purpose of technikon education and training *vis-à-vis* university education and training discussed earlier. Furthermore, employers surveyed identified the practical orientation of technikon LIS education and training as its major strength and the relative lack of practical exposure as a major weakness of university LIS education and training.

General education through a variety of general academic or discipline-based subjects in university education and training had also been identified by both employers and educators surveyed as a significant difference between the two types of LIS education and training. This difference too is supported by the literature (cited above) on the traditional purpose of technikon education and training *vis-à-vis* university education and training, that is, that universities focus on general education and lifelong learning

and technikons on specific technological and vocational preparation. Employers surveyed (Raju 2002) also identified general education as a major strength of university LIS education and training and the general lack of general education as a major weakness of technikon LIS education and training.

These two differences between university and technikon education and training (evident in the literature as well as in the findings of the study by Raju (2002)), that is, the presence of general education in the former and the general lack of it in the latter and the theoretical orientation of university education and training and the practical orientation of technikon education and training, are essentially what differentiate between professional and paraprofessional LIS education and training. Much of what has been couched in the findings of the study by Raju (2002) as strengths and weaknesses of each of these types of education and training (for example, university LIS graduates lack practical training or technikon LIS education and training has too narrow a focus in that it emphases specific LIS services techniques and procedures) are actually a reflection of the basic purposes of these two types of education and training and should be viewed in this context.

The majority of employers and educators surveyed stated that a major similarity between the two types of LIS education and training is the fact that the basic themes of the library and information services profession are covered by the curricula of both technikons and universities. However, many employers and educators surveyed qualified this by saying that while there are strong similarities in LIS content between university and technikon LIS education and training, there are differences in orientation (theoretical and practical) and in depth of coverage and emphases. These differences in orientation, depth of coverage and emphases are, the author believes, to a large extent determined by the traditional purposes of university and technikon education and training as discussed above.

A further difference identified by some educator respondents and which has implications for articulation between university and technikon education and training is that entry requirements for the two types of education and training are different, that is, the technikon National Diploma (LIS) and subsequent B.Tech.(LIS) do not require a matriculation exemption as university LIS qualifications do. This, according

to one educator respondent, leads to the assumption that students who enter technikons are not expected to deal with highly rigorous and academic or research oriented work, such as in-depth general education, as students who enter universities are expected to. This, according to some educator respondents, leads to differences in the calibre and orientation of students who enter each of these two types of programmes. These are some of the issues that need to be taken into account when articulation requirements are being deliberated by receiving institutions.

In this context of the traditional purposes of university and technikon education and training, recent changes in higher education in South Africa and similarities and differences between university and technikon LIS education and training, the study interrogated what possibilities exist for articulation between university and technikon LIS education and training. There was a strong feeling among past students surveyed that their qualifications should allow them to articulate between higher education institutions. Relatively more educators surveyed support articulation between universities and technikons after completion of an LIS qualification than articulation between the two types of institutions when a student is in the midst of doing an LIS programme, as articulation in the latter case seems to be more problematic. There seemed to be much uncertainty among educators surveyed as to how to deal with articulation between technikons and universities. At the same time educators surveyed also emphasised the importance of the issue of articulation especially in the light of current educational transformations in South Africa to bring about a more equitable and integrated education system. The literature (cited earlier) reveals that until recently there has been a lack of guidelines on articulation between institutional types, which has resulted in much uncertainty on the issue of articulation between institutions. However, it is hoped that the issue of articulation between different types of higher education institutions would receive guidance from current attempts (also discussed earlier) to develop a single co-ordinated system of higher education in South Africa that brings together universities, technikons, colleges and private providers of higher education, and will facilitate student mobility between different types of higher education institutions. Structures are in the process of being developed at a national level so as to provide a coherent and transparent system within which articulation of qualifications can take place in a consistent manner.

Interestingly, what came through quite strongly in many of the responses to the items on articulation in the survey of educators in Raju's (2002) study is that students articulating between technikons and universities may need to take certain modules, for example, general education modules, in order to meet admission or curriculum requirements of the new programme. Such requirements of individual institutions do seem to have a place in the proposal regarding articulation put forward by the NAP document (and supported by more recent documentation (Ministry of Education 2004)). In terms of the proposed higher education framework, these requirements may be accommodated within the articulation column of this framework.

For the first time then there are general guidelines and parameters being provided to guide articulation between university and technikon LIS education and training. Furthermore the proposed higher education framework within which these guidelines are being provided, recognises and accommodates, especially for articulation purposes, the difference in focus between, for example, the technikon B.Tech.(LIS) and the university B.Bibl./B.Inf. However, it is crucial to note that education and training structures such as the proposed higher education framework are very much in a state of transition, which should be borne in mind when applying LIS qualifications to this framework.

Summary and conclusion

This paper has provided discussion on articulation between university and technikon LIS education and training in the context of the historical evolution and traditional purposes of university and technikon education and training, and current changes in higher education in South Africa. It has also, drawing on an empirical study, highlighted major similarities and differences between university and technikon LIS education and training, which in large part seem to be a reflection of the traditional purposes of the two types of institutions. In doing this, the paper has highlighted issues that are critical to deliberations on the matter of articulation between LIS programmes at universities and technikons. In particular, the historical evolution of university and technikon education and training in South Africa reveals a difference in focus in each of the two types of education and training. This has implications for the articulation of LIS programmes between universities and technikons. While the empirical study by Raju (2002) indicates some uncertainty among LIS educators on

how to deal with this articulation although the value of it is recognised, current changes in higher education seem to be attempting to provide general guidelines to assist such articulation. However, emerging national policy seems to indicate that while the national qualifications framework will provide general guidelines and parameters for articulation, it is still the right and responsibility of the receiving institution to determine specific articulation requirements for entry to a particular programme. It is precisely for this reason that one needs to aware of and understand issues, particularly in their appropriate historical and/or contemporary contexts, that are critical to deliberations on articulation requirements. This is especially relevant in the current environment where increasingly higher education institutions, and specifically LIS education and training departments or programmes, are being confronted with the articulation dilemma as students seek greater mobility within a transforming higher education sector.

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