‘I DON’T WANT TO BE CARRIED LIKE LUGGAGE’: DISABILITY AND PHYSICAL ACCESS TO TANZANIAN ACADEMIC LIBRARIES

Rebecca M. Majinge
Information Studies, School of Social Sciences
University of KwaZulu-Natal, Pietermaritzburg, South Africa
majinge@yahoo.com

Christine Stilwell
School of Social Sciences
University of KwaZulu-Natal, Pietermaritzburg, South Africa
stilwell@ukzn.ac.za

ABSTRACT

This article reports on an empirical study which investigated access for people in wheelchairs and/or with visual impairments to Tanzanian academic libraries. A pragmatism paradigm and Oliver’s (1990) social model of disability were employed as well as the International Classification of Functioning, Disability and Health (ICF). Using quantitative and qualitative methods, questionnaires, interview schedules and an observation checklist were used to collect data. The study sample from the libraries of five Tanzanian higher education institutions (HEIs) totalled 196 respondents. The respondents were library directors, other

UNISA university of south africa

Mousaion
Volume 33 | Number 1 | 2015
pp. 80–102

Print ISSN 0027-2639

professional library and disability unit staff, Ministry of Education's Special Needs Unit staff, and people in wheelchairs and/or with visual impairments. The study found that there were no functioning lifts and/or ramps in the academic libraries studied which could have enabled these users to reach the upper floors where the information resources or services were located. For academic libraries to provide services which are inclusive, as well as certain special services for users with disabilities, various guidelines need to be implemented. Examples include library buildings having working lifts and/or ramps, and signage and location devices appropriate for people with visual impairments. The study findings could be used to improve physical access to these academic libraries.

Keywords: physical access, academic libraries, Tanzania, visual impairments, users in wheelchairs, social model

1. BACKGROUND AND RESEARCH PROBLEM

Academic libraries lie at the heart of teaching and learning and have both a moral and legal obligation to ensure equal access to their resources for all users including people with disabilities (Heaven 2004). Such libraries support teaching, learning and consultancy by all in their community of users, including people in wheelchairs and/or with visual impairments. People with these disabilities need information for research, assignments and examinations, and have to undertake all the work related to academic endeavor, just as able people do (Majinge 2014). It is increasingly recognised that the right to information is the key to the fulfillment of other rights. Without recognition of the right to information, it is impossible for citizens to fully enjoy their right to participate in political life and their right to self-determination, among others (Okello-Obura and Kigongo-Bukenya 2011). Majinge (2014) asserts that access to information is essential for all human beings, and in theory it is the aim of every library to provide the right information at the right time and in the right format to its patrons regardless of race, religion, age, nationality and language. Similarly, Bagandanshwa (1998) in his study on library services for people with visual impairments in Tanzania, affirmed that library services are very important in any community. Their significance lies in the fact that they facilitate individuals' efforts in the search for knowledge and skills. The need to improve their skills and acquire knowledge is important for all people regardless of gender, age, race or disability. Bodaghi and Zainab (2012) point out that access to information is one of the rights that society cannot deny and libraries are one of the most important sources of information. For this reason, academic library buildings should be accessible to people in wheelchairs and/or with visual impairments so that they can access the information resources housed in the libraries.

Academic libraries are those libraries of universities, polytechnics, colleges and other institutions forming part of, or associated with, HEIs (Prytherch 1995, 3), that

is, apart from library schools. According to Igun (2006, 18), an academic library is a part of a university, or other HEI, where books and non-book materials are provided for users. It can also be described as an organised collection of published books, journals and other materials and includes the services of staff who are able to provide support and interpret the research, educational, recreational and cultural needs of staff and students.

'I don't want to be carried like luggage' is a verbatim complaint from an actual respondent in the current study which indicates in particular the plight of people in wheelchairs, who are unable to gain access to academic library buildings without being literally carried in because of the disability-unfriendly environment in the libraries. The statement typifies the humiliation and challenges which people with disabilities face in many academic libraries located in universities and in this particular case in Tanzania.

Throughout the world people with disabilities face numerous difficulties as they seek to assert their position in a modern, complex and competitive world dominated by able-bodied individuals. People with disabilities are often excluded from social activities and are not treated in the same way as their able-bodied equals (Ochoggia 2003). The first author's experience as an academic librarian suggested that there was a lack of access to services that met the needs of users in wheelchairs and/or with visual impairments in Tanzanian academic libraries. In the same vein, Bagandashwa (1998) noted that library services for people with visual impairments were significantly lacking in Tanzania. Ndumbaro's (2009) study found that in Tanzania generally, library and information services were planned without considering the needs of people with visual impairments. In addition, Alemna (1993) noted that in most African countries library and information services for people with visual impairments were almost non-existent. In a similar way, for a large majority of people with disabilities, public facilities, transport, training, working opportunities, communication and access to information were unavailable or inaccessible (Grobbelaar-Du Plessis and Van Reenen 2011).

Part of the solution would seem to lie in the application of the concept of universal design which is 'a strategy for making environments, products, communication, information technology and services accessible to and usable by everyone – particularly people with disabilities – to the greatest extent possible' (Ginnerup 2009, 5). Barriers to participation in many aspects of life can be avoided when universal design principles are applied to policies and solutions in the early stages of planning.

2. PURPOSE AND OBJECTIVES OF THE STUDY

The article is based on research carried out for a doctoral study (Majinge 2014). Its purpose is to present the aspects of the larger study which deal with physical

access for people in wheelchairs and/or with visual impairments to the library and its collections in Tanzanian academic libraries. Once the findings regarding these aspects have been made public, the recommendations from the study could be used to improve progress towards universal access in Tanzanian university libraries. The policy, funding, staffing and staff training aspects of the larger study have been presented in Majinge and Stilwell (2013), and the information and communications technology (ICT) aspects were covered in Majinge and Stilwell (2014).

In dealing with physical access to the academic libraries the study was guided by the following objectives:

- To examine the physical layout of academic libraries in Tanzania.
- To assess ways in which people in wheelchairs and/or with visual impairments locate an item they need in the library.
- To investigate whether the library shelves allowed people in wheelchairs and/or with visual impairments to locate information resources by browsing.
- To find out whether the arrangement of shelves in the library allowed people in wheelchairs and/or with visual impairments to move freely.
- To determine whether people in wheelchairs and/or with visual impairments were able to use the restroom facilities in the library independently.
- To make recommendations based on the findings of the study to improve progress towards universal access in Tanzanian university libraries.

3. THEORETICAL FRAMEWORK AND MODELS

The research was conducted within a paradigm of pragmatism which Creswell (2009, 10) describes as a world view arising out of actions, situations and consequences rather than antecedent conditions. It concerns the application of what works and finding solutions to problems. Punch (2009, 291) explains that with a pragmatism paradigm, the research question is more important than the method used, or the paradigm underlying the method and the decision regarding the use of either qualitative, quantitative methods or mixed methods depends on the research questions being asked. This paradigm was used for the study because the intention was to address the problem concerning the challenges people in wheelchairs and/or with visual impairments face in seeking to access information in academic libraries in Tanzanian HEIs by applying various approaches to data gathering (Majinge 2014).

Various models have been used for disability studies, such as the charity model, the administrative model, the medical model and the social model. The medical model was generally used before the advent of the social model which provides one of the models for the current study. The medical model regards disability as a feature of the person, directly caused by disease, trauma or a health condition, which

requires medical care provided in the form of individual treatment by professionals. Disability, in this model, calls for medical or other treatment or interventions, to 'correct' the problem with the individual according to the World Health Organization (WHO 2002). This model has been critiqued as being centred on the individual and neglecting more socio-structural and environmental factors. The social model, on the other hand, recognises that some key factors are external to the individual and thus society in general is seen as having an impact on individual behaviour patterns (Majinge 2014). In the medical model, disability is seen as an individual characteristic that deviates from the medical norms. Disability is seen as the sufferer's problem and those with disabilities can never be equal to non-disabled people. The social model treats disability as a gap between the person and the social environment. It looks beyond a person's impairment to all the relevant factors that affect his/her ability to be a full and equal participant in society (Putnam 2002).

The social model has been used by people with disabilities in their campaigns for anti-discrimination legislation and independent living. It has also been applied to analyse the way in which societal structures create barriers which exclude people with disabilities (Newton, Ormerod and Thomas 2007). With this model, responsibility for the rights of those with disabilities lies with society; it entails the recognition that there are various social and physical challenges which hinder the lives of people who have disabilities. In relation to this assertion, Radermacher (2006) claims that impairment is something imposed by environmental structures and the implications of how society reacts to people with disabilities. In practice it means that interventions may have to focus on removing challenges in society in order to accelerate the facilitation of access to all sorts of amenities for people with disabilities.

Majinge (2014) explains that the social model's focus is on society's conception of disability which must change and not focus primarily on the treatment of the person's disability. This approach requires a mind shift with regard to obvious shortcomings within a particular society. Examples are environmental challenges, such as the inadequate design of common appliances, inaccessible buildings, limited alternative means of communication, and the inability of schools and similar public institutions to accommodate people with different forms of disability (Grobbelaar-Du Plessis and Van Reenen 2011).

The social model proposes that 'systematic challenges, negative attitudes and exclusion by society, purposely or unintentionally, are the ultimate factors defining who is disabled and who is not in a particular society' (Oliver 1990 in Chitereka 2010, 85). This model focuses on the changes required in society (Majinge 2014). These might be in terms of: (i) attitudes, for example, a more positive attitude towards certain mental traits or behaviours, or not underestimating the potential quality of life of those with potential impairments; (ii) social support, for example, dealing with the above challenges, resources, aids or positive discrimination to overcome them;

(iii) information, for example, using suitable specialised formats such as Braille or the simple form of a language and explaining issues others may take for granted; and (iv) physical structures, for example, buildings with sloped access and elevators (Chitereka 2010, 85). Oliver's (1990) social model of disability was particularly important for the aspects of the study contained in point (iv).

Oliver's (1990) social model is grounded in the principles of the Union of the Physically Impaired against Segregation (UPIAS) which was founded in the mid-1970s in the United Kingdom (UK). It is closely linked to the International Classification of Functioning, Disability and Health (ICF) (WHO 2001, 18). The ICF describes disability as a complex set of relationships in which various factors can impact on an individual's impairment, both directly and indirectly; it also expands the number of factors affecting the individual to include the larger society (Mackenzie, Hurst and Crompton 2009). These factors comprise the everyday activities the individual undertakes (activities); individual characteristics, such as education, income, family and friends, motivation, and so on (personal factors); their involvement in social and community relationships and events (participation), and their general environment, which includes the physical, social, financial and political elements that makes it easier or harder to function day-to-day (environment) (Majinge 2014). The article focuses in particular on the environment, which in turn impacts on people's activities and participation in HEIs.

The social model is endorsed by the UK's Society of College, National and University Libraries' (SCONUL) Access Working Group (Robertson 2001). Robertson (2001, 2) points out that the model entails the recognition that people are disabled by social barriers which may be physical, attitudinal or behavioural: 'If no barrier exists, then a person with an impairment is not prevented from using services.' The model presupposes universal access to libraries, achieved, among other things, by universal design and practical measures, such as constructing ramps alongside stairs and installing automatic doors. It also entails the provision of special assistive technologies, providing information in Braille and large print, Braille embossers, screen magnification and screen reading software like JAWS (Shava 2008).

The main criticism of the social model is that, if taken to an extreme, it suggests that disability would be eradicated if society were changed in the appropriate ways. For example, it has been seen to imply that people with disabilities could do any job if attitudes changed, the environment was accessible and work was organized appropriately. It appears not to acknowledge limitations which may result from impairment (e.g. pain) that no amount of change to the social context could remove (Chitereka 2010). As Imrie and Kumar (2010, 364) note, access will never be satisfactory for everyone, but as one of their respondents said, the problem 'will never disappear but it can be improved'.

Using the social model and the ICF as the guiding frameworks, the gap that the study sought to address was to assist academic libraries in Tanzania in creating a

more enabling user-friendly environment and ensuring that the information resources they housed were accessible to all library users, including people in wheelchairs and/or with visual impairments (Majinge 2014).

Barnes (1998 in Shava 2008) supports the principle of inclusive design which simplifies life for everyone by making products, communications and the built environment more usable by as many people as possible, at no extra cost. Inclusive or universal design which entails 'designing products and spaces so that they can be used by the widest range of people possible' (UniversalDesign.com 2015). It evolved from the design process, accessible design, which addresses the needs of people with disabilities. Universal design, however, recognises

> that there is a wide spectrum of human abilities. Everyone, even the most able-bodied person, passes through childhood, periods of temporary illness, injury and old age. By designing for this human diversity, we can create things that will be easier for all people to use (UniversalDesign.com 2015).

This design process takes into account 'the full range of human diversity, including physical, perceptual and cognitive abilities, as well as different body sizes and shapes'. In designing for such diversity, an environment can be created that is more functional and more user-friendly for all. An example is curb cuts at sidewalks that were designed for people in wheelchairs, but they are now used by pedestrians with baby strollers or luggage on wheels. This design has added functionality to sidewalks that all can benefit from (UniversalDesign.com 2015). Many examples of good practice applicable to universities are provided in the Council of Europe report (Ginnerup 2009).

The universal design concept promotes a shift to more emphasis on user-centred design by following a holistic approach and aiming to accommodate the needs of people with disabilities, including the changes that people experience in the course of life (Ginnerup 2009, 8). Such inclusive design is a potentially equitable approach for addressing critical access issues, but it is not a panacea. Some design solutions might need to be specific to certain types of impairment, and are not relevant to other disabled or non-disabled library users. In the context of the current study, inclusive design may include constructing shallow ramps alongside stairs at the entrance to the library, or installing automatic doors which are technologies that can be used by all irrespective of their mobility. While providing large print and audio books would be inclusive – as they could be used by sighted users as well as those with sight impairments – the provision of Braille signage for directions and shelf information is not inclusive. These would be used only by people with visual impairments.

On account of the complexity of the relationships and circumstances around disability the study adopted the ICF (WHO 2001, 2002) in addition to the social model of disability of Oliver (1990). The researchers used the ICF framework because deviation or loss of organs of people in wheelchairs and/or with visual impairments

could not be removed by inclusive design in the social model of disability. For this reason Oliver's (1990) social model of disability and the ICF (WHO 2001, 2002) were used in combination to address the research problem. The social model of disability and the ICF were tested in the context of the current academic library study and a new non-recursive interactive model was developed by Majinge (2014). For reasons of space it is not included here but is the subject of a separate article.

4. LITERATURE REVIEW

Caga (2011) endorses the human rights approach typified by Disability Rights Promotion International which views disability as a human rights issue, and emphasises that people with disabilities are holders of rights, not objects of charity, and as such are entitled to enjoy the same rights as other people. Governments and their institutions should therefore ensure that these rights are applied to all citizens including those in rural communities, the disadvantaged, the disabled and the illiterate. Human rights are moral and legal entitlements which are fundamental to people's well-being, dignity and the pursuit of their full potential (Maredith 2009).

To support this assertion Deines-Jones (2007) contends that libraries should be designed to be universally accessible, and should in addition have equipment in place to enable all users to obtain maximum benefit from the libraries' materials and services. Similarly, libraries should be resources that are easily accessible and universally available and which offer a nonjudgmental environment for people from all backgrounds (Davis 2009). Providing accessible services means removing the challenges that prevent people with disabilities from participating in core life activities, including the use of services, products and information (Destounis et al. 2004). In line with this statement, Kharamin and Siamian (2011) claim that an ideal library service is one where each individual, regardless of the degree of his/her visual impairment or other disabilities has access to information resources at the time they are required, in a format that can be used, in the quantities that are needed, and where the user's needs are understood by the staff. Libraries and other related information services are crucial in educational development because the information they hold is an essential tool with which to foster the learning process (Magara and Nyumba 2004).

Irvall and Nielsen (2005) stress that all parts of the library should be accessible. In providing appropriate buildings there should be no architectural barriers which create challenges, for example, too many steps with no option of using a ramp, narrow stairways, and steps acting as a barrier at the entrance of the building (Todaro 2005). The space should be arranged logically with clear signage and location devices and a floor plan including an audio option posted close to the entrance. Service desks should also be located near the entrance. Users in wheelchairs should be able to move around inside the library easily. If the library has more than one level, there

should be a lift or manageable ramps for users in wheelchairs. There should be no raised doorsteps and all doors should have automatic openers. Ideally, shelves should be reachable from a wheelchair (Irvall and Nielsen 2005).

Seyama, Morris and Stilwell's (2014) study of the information seeking behaviour of blind students and those with visual impairments at the Pietermaritzburg Campus of the University of KwaZulu-Natal in South Africa revealed that the students relied heavily on Disability Unit staff rather than library staff for their access to library resources, but that efforts were being made to work towards universal access.

In the United Republic of Tanzania (URT 2004) the National Policy on Disability of 2004 provides guidelines and sets parameters for service delivery, with a strong focus on development, and the rights and dignity of people with disabilities. This policy was aimed at providing an environment for people with disabilities conducive to engaging in productive work for their own development and the utilisation of the available resources for improved service delivery. The policy also aimed at improving the life situation of people with disabilities by undertaking the following actions: encourage the development of people with disabilities; empower families with disabilities; review/amend legislation that is not disability friendly; improve service delivery; allow the participation of people with disabilities in decision making and implementation of important activities in the society; and enable families of people with disabilities and the society at large to participate in decisions and implementation of important disability friendly activities. Although the focus of the National Policy on Disability was to provide guidelines and set parameters for service delivery, with its strong focus on the development, rights and dignity of people with disabilities, it did not specifically embrace the provision of library services generally, or academic library services, to people with disabilities (Majinge 2014). The latter constituted part of the gap which the current study sought to address.

Section 48(1) of the Tanzanian Persons with Disabilities Act 9 of 2010 (URT 2010), however, states that all persons with disabilities shall be entitled to a barrier-free and disability friendly environment to enable them to have access to public premises and facilities for public use, roads, communications and other amenities to assist and promote their mobility. Section 48(2) further states that architects, construction engineers and other persons who are involved in design and construction of the physical environment shall observe and comply with accessibility requirements to ensure that all new buildings, roads, play grounds, transport facilities and renovation of the old ones, conform to designs aimed at creating access for persons with disabilities. In addition, Section 49(2) states that information services and documentation shall be made accessible to different groups of persons with disabilities in such form as Braille, tactile services and large print; spoken information and appropriate technologies and sign language; and computerised information. For the Tanzania League of the Blind (2008) the government's main goal was to ensure that those legal instruments were known by the general public and by the community

of people with disabilities so as to guarantee that they were implemented in the country.

Despite the wealth of policy supporting services for people with disabilities and the implications of the various sections of the 2010 Act there appears to be a lack of recognition of the applicability of the Act to academic library services. In all the Tanzanian academic libraries investigated the study confirmed that the layout of the library buildings and the information resources available were unsuitable for people with disabilities. That means there is a gap between policy and the actual practice of library services' provision for people with disabilities in academic libraries in Tanzania (Majinge 2014).

Tanzania is a member of the African Disability Alliance (ADA). The ADA superseded the Secretariat of the African Decade of Persons with Disabilities (SADPD) in 2014. As the ADA's (2015:1) vision is to be a knowledge-based organisation that works in partnership with the African Union (AU), United Nations (UN), African governments, civil society organisations, academia and disabled people's organisations (DPOs) 'to promote inclusive development and human rights for persons with disabilities', it is potentially a significant partner for addressing disability in Tanzanian universities. The AU's African Decade for Persons with Disabilities, the first decade of the new millennium (1999–2009) was launched by the SADPD head office in South Africa to facilitate the implementation of a Continental Plan of Action drafted in 2001 in Addis Ababa.

In 2008, the first decade was extended for another ten years through the Windhoek Declaration on Social Development. Aims were full participation, equality and empowerment of people with disabilities in Africa. AU member states were asked to research the situations of persons with disabilities, and to formulate measures aimed at equal opportunities, and full participation and independence in society.

Regional ADA offices in Addis Ababa, Ethiopia, and Dakar, Senegal, serve bases in 26 African countries, including Tanzania. The ADA has a strong coalition of alliance and network partners to influence policy making and mainstreaming of policy addressing disability issues in government and civil society organisations' strategies. These include an alliance formed in 2011 in Cape Town, South Africa, to lobby for an inclusive process for drafting an African Disability Protocol (SADPD 2012).

5. METHODOLOGY

The research on which the article reports comprised a literature review and an empirical study conducted within a pragmatism paradigm. The intention was to address the problems which people in wheelchairs and/or with visual impairments face in accessing information in Tanzanian HEIs. Various suitable approaches to data gathering, including both quantitative and qualitative methods, were used. The

research was conducted in three administrative regions, namely: Dar es Salaam, Dodoma and Tanga. In these regions, five universities were studied, namely, the: University of Dar es Salaam (UDSM), Open University of Tanzania (OUT), Dar es Salaam University College of Education (DUCE), Sebastian Kolowa Memorial University (SEKOMU) and St. John's University of Tanzania (SJUT). In addition, the Special Needs Education Unit for Disabilities at the Ministry of Education and Vocational Training (MoEVT) was included in the study. These five universities were the largest universities in Tanzania and they were also willing to participate in the study. Data collection took place from 30 September to 31 December 2012 which allowed research visits to all of the HEIs.

The sample size of the study comprised 196 respondents, including library directors, other professional library and disability unit staff, staff from the Ministry of Education's Special Needs Education Unit, and users in wheelchairs and/or with visual impairments. The criterion for the choice of the respondents from the Ministry was that they were involved with policy formulation, budgeting, training and provision of information materials and equipment for people with disabilities in all schools and HEIs in Tanzania.

Snowball sampling was used to identify the users in wheelchairs and/or with visual impairments because the researchers were unable to establish the actual population of library users with the targetted disabilities in the universities in advance. Snowball sampling was employed to ensure that a suitable sample of six users in wheelchairs, and 57 library users with visual impairments was reached. In addition, the census method was used for the population of library staff who were all involved in the study because this population was relatively small. This method seeks to collect data from every member of the population being studied rather than choosing a sample (Kothari 2004, 55).

Questionnaires, interview schedules and an observation checklist were used to gather data.[1] The data gathered through the questionnaires was analysed using descriptive statistics facilitated by the Statistical Package for the Social Sciences (SPSS), and the data gathered through the interviews was analysed using thematic analysis.

Of the 77 respondents targeted, 66 (47%) were from the University of Dar es Salaam; 17 (12%) of 24 from the Dar es Salaam University College of Education; 13 (9%) of 18 from the Open University of Tanzania; 11 (8%) of 13 from St John's University of Tanzania; and 6 (5%) of 7 from the Sebastian Kolowa Memorial University. The total number of respondents who completed and returned the questionnaires from all universities surveyed in Tanzania was 113 (81%) of the 139 respondents targeted (see Table 1).

Table 1: Population of library staff (N = 139)

SN	University	Library staff		% response
		Expected respondents	Actual respondents	
1	UDSM	77	66	47%
2	DUCE	24	17	12%
3	OUT	18	13	9%
4	SJUT	13	11	8%
5	SEKOMU	7	6	5%
Total		**139**	**113**	**81%**

Source: Field data (2012)

In addition five (100%) directors of academic libraries from five HEIs in Tanzania were interviewed.

Of 19 potential respondents from disability units, 15 (78.9%) completed and returned the questionnaire. Of these, three (15.8%) were from the University of Dar es Salaam; three (15.8%) were from the Dar es Salaam University College of Education; one (5.2%) of three respondents was from the Open University of Tanzania; five (26.3%) were from the Sebastian Kolowa Memorial University; and three (15.8%) were from the Ministry of Education and Vocational Training. There were no responses in this group from St John's University of Tanzania (see Table 2).

Table 2: Population of disability unit staff (N = 19)

SN	University	Disability unit staff		% response
		Expected respondents	Actual respondents	
1	UDSM	3	3	15.8%
2	DUCE	3	3	15.8%
3	OUT	3	1	5.2%
4	SJUT	-	-	-
5	SEKOMU	5	5	26.3%
6	MoEVT	5	3	15.8%
Total		**19**	**15**	**78.9%**

Source: Field data (2012)

The breakdown of respondents with visual impairments by institution was 23 (33.3%) from the University of Dar es Salaam; eight (10.1%) from the Dar es Salaam University College of Education; nine (11.6%) from the Open University of Tanzania; one (1.4%) from St John's University of Tanzania; and 16 (23.2%) from Sebastian Kolowa Memorial University (see Table 3).

Table 3: Population of users with visual impairments (N = 69)

SN	University	Users with visual impairments		% response
		Expected respondents	Actual respondents	
1	UDSM	23	23	33.3%
2	DUCE	8	8	10.1%
3	OUT	19	9	11.6%
4	SJUT	1	1	1.4%
5	SEKOMU	16	16	23.2%
Total		**67**	**57**	**85%**

Source: Field data (2012)

Of the users in wheelchairs from all the universities surveyed in Tanzania, three (42.8%) were from the University of Dar es Salaam; one (14.3%) was from Dar es Salaam University College of Education; one (14.3%) was from the Open University of Tanzania; one (14.3) was from St. John's University of Tanzania; and there were no respondents in wheelchairs from Sebastian Kolowa Memorial University (see Table 4).

Table 4: Population of users in wheelchairs (N = 7)

SN	University	Users in wheelchairs		% response
		Expected respondents	Actual respondents	
1	UDSM	3	3	42.8%
2	DUCE	1	1	14.3%
3	OUT	1	1	14.3%
4	SJUT	1	1	14.3%
5	SEKOMU	1	-	-
Total		**7**	**6**	**85.7%**

Source: Field data (2012)

6. RESULTS AND DISCUSSION

The results are presented and discussed in the sections that follow. The results focus on whether the layout of library buildings allowed users in wheelchairs and/or with visual impairments to gain access to the information resources housed in the library. In addition, they reveal whether the position and height of library shelves allowed the locating of documents and freedom of movement in the public areas of the library, as well as whether restrooms catered for users with visual impairments and in wheelchairs using the facilities independently. The standards that should apply to the various facilities are provided in the section on recommendations.

6.1. The layout of library buildings

The majority (89%) of library staff and all the library directors ($n = 5$) and users with visual impairments ($n = 57$) indicated that the layout of library buildings did not allow access to the information resources to wheelchair users and those with visual impairments. Four of the six respondents who used wheelchairs agreed with the assessment while two did not. One student in a wheelchair complained that:

> I don't like to go to the library and even to any other offices because there are stairs and there is no lift unless I ask someone to carry me upstairs, which I don't like – I don't like to be carried like [a] luggage.

Onatola (2007) noted that a similar situation existed in all universities in Nigeria. Students and staff who used wheelchairs had to be physically carried when they wanted to access public facilities such as libraries and lecture halls. An alternative arrangement made was to restrict users of wheelchairs to the ground floor, regardless of where the materials which they needed was housed. To enlarge on this problem of access a verbatim comment from a respondent in Tungaraza's (2010, 147) Tanzanian study stated:

> Sometimes I cannot go to places due to stairs. Besides, some buildings and staff offices are not accessible due to stairs and/or narrow doors, and I find it difficult to go to meet my lecturers if I have an academic problem. I have also missed some classes owing to the unfriendly environment. Even the library, the most important place for students, is not accessible for some of us. There is a need for change!

A respondent from Imrie and Kumar's (2010, 364) study complained that:

> I can't physically visit some public buildings. A flight of steps, no internal lift, too narrow doorways – all are obstacles which say keep out.

Four of the five libraries surveyed had more than one floor. The principal researcher observed that internal stairs provided the only access to the upper floors where services and information resources were housed in the institutions surveyed. There

were no functioning lifts or ramps providing alternative access to these floors. The findings confirmed that the layout of library buildings in the academic libraries studied did not allow users in wheelchairs and/or with visual impairments easy access to the information resources housed in the library. The findings concur with those of Bagandanshwa (1998) who observed that the library buildings in most cases were unsuitable for the mobility needs of users with visual impairments. They had no rail-marks for easy identification, and there were many stairs and unprotected embankments. Kaijage (1991), Ndumbaro (2009) and Leong and Higgins (2010) confirmed that the design of the library buildings did not provide easy access for university students with visual impairments.

6.2. How did users in wheelchairs and/or with visual impairments locate an item in the library?

Library staff were asked to indicate the way in which users in wheelchairs and/or with visual impairments located items they needed in the library. A total of 107 (95%) were assisted by friends and library staff; 80 (71%) said readers; 8 (7%) mentioned the catalogue; and one (1%) indicated that they did not use the library (see Table 5).

Table 5: Staff observations of the manner in which users in wheelchairs and/or with visual impairments located library items (N = 113)

Response	Frequency	Percentage
Use their friends and library staff	107	95%
Use their readers	80	71%
Use the catalogue	8	7%
Do not use the library	1	1%

Source: Field data (2012)

The same question was posed to users in wheelchairs. Responses were multiple. Four (67%) responded that they used friends; two (33%) used the catalogue; and three (50%) cited using library staff (see Table 6).

Table 6: Manner of locating items in the library by users in wheelchairs (N = 6)

Response	Frequency	Percentage
Use friends	4	67%
Use catalogue	2	33%
Use library staff	3	50%

Source: Field data (2012)

Users with visual impairments were also interviewed about the way in which they located items in the library. They responded that they used readers, people who were employed by the university, as well as library staff and friends. When asked if there were any other arrangements made by the library to assist them to obtain the information resources needed they responded that no such arrangements had been made. Asked if the signs in the library were suitable for their library access needs, they explained that they did not use the library signs; they used their own methods to identify the information resources or their location. For example, if they touched a library shelf they would know that they were in a section of the library where they could locate information resources and if they touched tables and chairs they realised that they were in the reading areas, and so on.

Users in wheelchairs and/or with visual impairments located the documents they needed using readers, library staff and friends. The findings resonate with those of Onatola (2007) who claimed that in the institutions he investigated there were no formal calling services, and the students had to rely on friends to find and retrieve the needed materials from upper floors. In a similar way, Tungaraza's (2010) study indicated that students with visual impairments at the University of Dar es Salaam depended on readers who read for them since the library did not have books in Braille. In addition, it was noted from the current study findings that there were no signs or location devices in the library suitable for people with visual impairments to help them to identify where the information resources or services were located. Similarly, Kaijage (1991) indicated that the conventional card catalogue made no provision for the needs of the people with visual impairments.

6.3. Did the library shelves allow these users to locate information resources by browsing?

Library staff were asked whether library shelves allowed users in wheelchairs and/or with visual impairments to locate information resources by browsing. Responses from 113 staff were as follows: 110 (97%) responded negatively and three (3%) responded positively.

The same question was asked of users in wheelchairs. Five (83%) responded negatively and one (17%) responded positively.

The principal researcher observed that library shelves containing books arranged for users to browse and locate the items which they required were too high. It was difficult for people in wheelchairs to locate information resources by browsing. These users asked friends and the library staff to locate the information they needed in the library. This finding concurs with those of Alemna (1993) who claimed that most of the older libraries in Africa especially university libraries were built long before libraries ever considered providing material for the people with visual impairments.

6.4. Did the library shelf arrangement allow these users to move freely between them?

Library staff were asked whether the arrangement of shelves allowed freedom of movement for users in wheelchairs and/or with visual impairments. Responses from 113 staff were as follows: 92 (81%) responded negatively and 21 (19%) responded positively.

The same question was posed to users in wheelchairs. Five (83%) responded negatively and one (17%) responded positively.

Fifty-seven users with visual impairments were interviewed and they responded that the arrangement of library shelves did not allow them to move freely. They went to the library with their readers or their friends to be able to move about with less difficulty. The principal researcher confirmed this finding by inspecting the arrangement and signage of the library shelves.

6.5. Were these users able to use the library restrooms independently?

The majority (80%) of library staff and (50%) of users in wheelchairs and all (n = 57) users with visual impairments indicated that restrooms did not allow for users in wheelchairs and/or with visual impairments to use them independently. These users needed assistance to use the facilities and they stated that the restrooms were very dirty, so most of the time they preferred the facilities in their own rooms.

This finding concurs with the studies of Tungaraza (2010) and Ndumbaro (2009) who claimed that there were no restroom facilities that met the needs of people with visual impairments and in wheelchairs in the libraries they investigated. It was difficult to access the restrooms because of stairs or steps leading to them and doorways were narrow.

7. CONCLUSION AND RECOMMENDATIONS

It was concluded from the findings that the non-availability of functioning lifts and ramps, and other aspects of a lack of suitable design in libraries in HEIs in Tanzania affected access to and use of information resources and facilities by users in wheelchairs and/or with visual impairments. Although the number of responses for users in wheelchairs was low at six, suggesting a cautious approach to generalising the findings to broader issues of equitable information access, only seven such users were identified in all five universities hence the majority of the available population was surveyed.

Academic libraries should provide inclusive and specialised services to people with these disabilities as access to information is a fundamental human right. In addition to the social model the ICF should be adopted to provide special facilities

that are needed for those with disabilities, for example, Braille signage for users with visual impairments. Academic libraries exist to support learning, teaching, research and consultancy to all in the community of users of the universities. The critical lack of unassisted access for most disabled students to necessary information in academic libraries has consequences for the academic success of such users.

Academic libraries should follow the example of SCONUL's Access Working Group (Robertson 2001) and adopt Oliver's (1990) social model, augmented by the ICF (WHO 2001) as their guiding framework. A nuanced approach to universal design is needed for the areas where special services are required. For academic libraries to ensure physical access they need to provide carefully designed services. The layout of academic library buildings should include working lifts and/or ramps to facilitate access (Holmes 2008) by people in wheelchairs and/or with visual impairments to the information resources, services and facilities housed in the library. In particular a lift designated for wheelchair users should have clear manoeuvring space of 1 200 mm wide by 1 500 mm deep. The minimum internal lift car dimension should be 1 200 mm wide by 1 400 mm deep. The lift car should have a clear door opening of at least 900 mm. The lift landing call button located outside the lift should have floor space of at least 900 mm with no obstruction placed to prevent a wheelchair user from reaching the call button. The lift car control button located inside the lift should be placed at a height of 900 mm and 1 200 mm from the floor level (Building and Construction Authority 2013).

Ramps or any accessible paths or sloping surfaces that have no conforming handrails for wheelchair users are 1:20 (5%) for the running slope and 1:50 (2%) for the cross slope (Dean and Demmers 2004). In addition, doors must be at least 915 mm in size, and when in the open position (at 90 degrees) they should not block the doorway so that there is less than 812.8 mm of clear width. All accessible swinging doors are required to have a 254 mm high smooth panel on the push side that allows the door to be opened by a wheelchair footrest (Dean and Demmers 2004).

Door lever handles and manual locking devices must be no lower than 762 mm and no higher than 1 117.6 mm above the floor to allow a person in a wheelchair to reach them from a forward approach position. If a door has an automatic closer, it must be set so that it takes at least 3 seconds to close from an open position of 70 degrees to within 76.2 mm of the latch in order to allow persons in wheelchairs adequate time to clear the doorway (Dean and Demmers 2004).

Book shelves should be at a height that is accessible to people in wheelchairs. For example, the height of the book shelf unit (top of the topmost shelf) is limited to 1 371.6 mm, with 1 219.2 mm preferred (Dean and Demmers 2004). The library shelves should be arranged to allow for people in wheelchairs and/or with visual impairments to move freely between the book stacks.

Libraries should have adjustable computer tables which can accommodate any size of wheelchair (Holmes 2008).

Off-campus access to library databases and other facilties improves univeral access for people in wheelchairs and/or with visual impairments (Majinge and Stilwell 2014) as well as for the non-disabled. Library signage and location tools, however, should be suitable for people with visual impairments to help them to identify where the information resources or services are located. Similarly, the provision of special formats for access to information and communication technology that is easily accessible for people with visual impairments is needed.

The library restroom facilities should be designed to allow users with disabilities to use these facilities independently. According to the International Federation of Library Association and Institutions (IFLA) checklist (Irvall and Nielsen 2005, 6–7), the library should have at least one toilet for people with disabilities equipped with clear signs with a pictogram indicating the location of the toilet. The door should be wide enough for a wheelchair to enter, and there should be sufficient space for a wheelchair to turn around. There should also be sufficient space for a wheelchair to pull up next to the seat; a toilet with handles and flush lever reachable for people in wheelchairs; an alarm button reachable for people with wheelchairs; and a washbasin and mirror at the appropriate height.

There are also issues of safety which were not addressed specifically in the current study. As observed by Anonymous reviewer (2015), being 'carried like luggage' relates not only to the inconvenience and humiliation of constantly requiring assistance to get into and around the library building, but could also have serious safety implications if trained assistance is not available to provide safe egress for disabled library users in the event of an emergency. No respondents in the current study raised the issue of safety which should, however, be a focus of future studies.

The provision of suitable facilities requires a nuanced approach to universal design with special facilities for the particular use of those with visual impairments, such as Braille signage. Library policies which address library services for people with disabilities, as well as a concommitant allocation of funds, are needed to enable academic libraries to provide equitable services to people in wheelchairs and/or with visual impairments (Majinge and Stilwell 2013). Furthermore, library staff should be trained to monitor levels of access regularly and should be encouraged to respond positively to people in wheelchairs and/or with visual impairments to allow them maximum access to and use of information resources.

The ADA (2015) has a strong focus on knowledge development and could provide strategic support for equitable access in Tanzania. In adddition, the ADA's strong coalition of alliance and network partners suggest its potential to influence policy making and mainstreaming of disability. Future implementation of the draft African Disability Protocol working in conjunction with the Tanzanian government and higher education sector has the potential to bring about a situation where library users are no longer subjected to the humilation and danger of being 'carried like luggage'.

NOTE

The instruments are available from the first author and at: http://researchspace.ukzn.ac.za/xmlui/bitstream/handle/10413/10709/Majinge_Rebecca_Mgunda_2014.pdf?sequence=3

REFERENCES

African Disability Alliance. 2015. http://www.africadisabilityalliance.org/ (accessed March 17, 2015).

Alemna, A. 1993. Library provision for the blind in Africa. http://forge.fh-potsdam.de/~IFLA/INSPEL/93-4alan.pdf (accessed July 29, 2013).

Anonymous. 2015. Comment by Reviewer 3 on the manuscript submitted to *Mousaion.*

Bagandanshwa, E.T.T. 1998. Library services for visually impaired and blind people in Tanzania. *Huria Journal of the Open University of Tanzania* 2(1): 53–59.

Bodaghi, N.B. and A.N. Zainab. 2012. Accessibility and facilities for the disabled in public and university library buildings in Iran. *Information Development* 29(3): 241–250.

Building and Construction Authority. 2013. Code on accessibility in built environment. http://www.bca.gov.sg/BarrierFree/others/ACCESSIBILITY_CODE_2013.pdf (accessed March 10, 2015).

Caga, T. 2011. Factors affecting people with disabilities in the employment sector. MA dissertation, Nelson Mandela Metropolitan University, Port Elizabeth.

Chitereka, C. 2010. People with disabilities and role of social workers in Lesotho. *International Online Journal* 8(1). http://www.socwork.net/sws/article/view/25/69 (accessed July 21, 2012).

Creswell, JW. 2009. *Research design: qualitative, quantitative, and mixed methods approach*. 3rd ed. Los Angeles, CA: Sage.

Davis, G. 2009. Towards a transformed library and information sector in South Africa: rethinking roles. *South African Journal of Library and Information Science* 75(2): 131–137.

Dean, E. and L. Demmers. 2004. Universal access in libraries. *Libris Design Project.* http://www.librisdesign.org (accessed March 26, 2012).

Deines-Jones, C., ed. 2007. *Improving library services to people with disabilities*. Oxford: Chandos.

Destounis, P., J. Garofalakis, G. Mavritsakis, M. Rigou, S. Sirmakessis and G. Tzimas. 2004. Designing for ease is designing for all experiences from a simplified office suite. *Information Technology and People* 17(3): 286–302.

Ginnerup, S. 2009. Achieving full participation through Universal Design. Strasbourg: Council of Europe. http://www.coe.int/t/dg3/disability/source/Universal_design.pdf (accessed March 18, 2015).

Grobbelaar-Du Plessis, I. and T. van Reenen, eds. 2011. *Aspects of disability law in Africa*. Pretoria: Pretoria University Law Press.

Heaven, S. 2004. The provision made by higher education library services for people with disabilities. *Library and Information Research* 23(90): 24–30.

Holmes, J.L. 2008. Patrons with developmental disabilities: A needs assessment survey. *New Library World* 109(11/12): 533–545.

Igun, S. 2006. Orientation on library use for new students, Delta State University, Abraka, Nigeria. *Library Hi Tech News* 23(10): 18–20.

Imrie, R. and M. Kumar. 2010. Focusing on disability and access in the built environment. *Disability and Society* 13(3): 357–374.

Irvall, B. and G.S. Nielsen. 2005. *Access to libraries for persons with disabilities – checklist.* International Federation of Library Associations and Institutions (IFLA), professional Report No. 89. The Hague: IFLA. http://www.ifla.org/files/assets/hq/publications/professional-report/89.pdf (accessed March 18, 2015).

Kaijage, J.J.L. 1991. An assessment of library and information services for the visually impaired, with particular reference to information needs of visually impaired university students and information plans for Tanzania. MLib dissertation, University College of Wales, Aberystwyth.

Kharamin, F. and H. Siamian. 2011. *The survey of public library services for visually impaired and blind in public libraries (case study Mazandaran province librarian: Iran)*. Singapore: International Association of Computer Science and Information Technology (IACSIT) Press.

Kothari, C.R. 2004. *Research methodology: Methods and techniques*. 2nd ed. New Delhi: New Age International.

Leong, I.C.B. and S.E. Higgins. 2010. *Public library services for wheelchair-bound young people in Singapore*. London: Routledge.

Mackenzie, A., M. Hurst and C. Crompton. 2009. Defining disability in the participation and activity limitation survey. *Canadian Social Trends* 88: 55. http://www.statcan.gc.ca/pub/11-008-x/2009002/article/11024-eng.htm (accessed March 26, 2012).

Magara, E. and J.B. Nyumba. 2004. Towards a school library development policy for Uganda. *Library Review* 53(6): 313–322.

Majinge, R.M. 2014. Library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania. PhD thesis, University of KwaZulu-Natal, Pietermaritzburg. http://researchspace.ukzn.ac.za/xmlui/bitstream/handle/10413/10709/Majinge_Rebecca_Mgunda_2014.pdf?sequence=3 (accessed September 1, 2014).

Majinge, R.M. and C. Stilwell. 2013. Library services provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania. *South African Journal of Libraries and Information Science* 79(2): 39–50.

Majinge, R.M. and C. Stilwell. 2014. ICT use in information delivery for people with visual impairments and on wheelchairs in Tanzanian academic libraries. *African Journal of Library, Archives and Information Science* 24(2): 151–159.

Maredith, K. 2009. Disability, education and development: Perspectives from Tokelau. MA dissertation, Victoria University of Wellington, Wellington.

Ndumbaro, R. 2009. Library and information services provision for people with visual impairment in selected university and public libraries in Tanzania. MA dissertation, University of Dar es Salaam, Dar es Salaam.

Newton, R., M. Ormerod and P. Thomas. 2007. Disabled people's experience in the workplace environment in England. *Equal Opportunities International* 26(6): 610–623.

Ochoggia, R.E. 2003. Persons with Disabilities Bill 2002: Implications concerning visual disabilities for academic library and Information Services in Kenya. *New Library World* 104(1190/ 1191): 307–312.

Okello-Obura, C. and I.M.N. Kigongo-Bukenya. 2011. *Library and information science education and training in Uganda: Trends, challenges and the way forward*. Makerere: Education Research International.

Oliver, M. 1990. *The politics of disablement: A sociological approach*. New York: St. Martin's Press.

Onatola, A. 2007. Reaching people with disabilities in developing countries through academic libraries. In *Improving library services to people with disabilities*, ed. C. Deines-Jones, 87–104. Oxford: Chandos.

Prytherch, R. 1995. *Harrod's librarians' glossary of terms used in librarianships, documentation and the book craft and reference book.* 8th ed. Aldershot: Gower.

Punch, K.F. 2009. *Introduction to research methods in education*. Los Angeles, CA: Sage.

Putnam, M. 2002. Linking aging theory and disability models: Increasing the potential to explore aging with physical impairments. *Gerontologist* 42(6): 799–806.

Radermacher, H.L. 2006. Participatory action research with people with disabilities: exploring experiences of participation. PhD thesis, Victoria University of Wellington, Wellington.

Riddell, S. 1998. Chipping away at the mountain: Disabled students' experience of higher education. *International Studies in Sociology of Education* 8(2): 203–222.

Robertson, L. 2001. Access for library users with disabilities. London: Society of Colleges National and University Libraries. http://www.sconul.ac.uk/publications/pubs/access_disabilities.pdf (accessed September 26, 2012).

SADPD *see* Secretariat of the African Decade of Persons with Disabilities.

Secretariat of the African Decade of Persons with Disabilities. 2012. http://african-decade.co.za/wp-content/uploads/2012/10/Brochure_Print.pdf (accessed March 17, 2015).

Seyama, L., C.D. Morris and C. Stilwell. 2014. Information seeking behaviour of blind and visually impaired students: A case study of the University of KwaZulu-Natal, Pietermaritzburg Campus. *Mousaion* 32(1): 1–22.

Shava, K. 2008. How and in what ways can Western models of disability inform and promote the empowerment of disabled people and their participation in mainstream Zimbabwean society? MA dissertation, University of Leeds, Leeds.

Tanzania League of the Blind. 2008. http://www.tanzanialeagueblind.org/news.php (accessed August 5, 2012).

Todaro, A.J. 2005. Library services for people with disabilities in Argentina. *New Library World* 106(1212/1213): 253–268.

Tungaraza, F.D. 2010. *Accomplishments and challenges facing students with disabilities at the University of Dar es Salaam: Thirty years of navigating the hill*. Dar es Salaam: University of Dar es Salaam.

United Republic of Tanzania. 2004. *National Policy on Disability*. Dar es Salaam: Ministry of Labour, Youth and Development and Sports.

United Republic of Tanzania. 2010. *Persons with Disabilities Act 9 of 2010*. Dar es Salaam: Parliament of the URT.

UniversalDesign.com. 2015. What is universal design? http://www.universaldesign.com/about-universal-design.html (accessed March 18, 2015).

URT *see* United Republic of Tanzania.

WHO *see* World Health Organization.

World Health Organization. 2001. *International Classification of Functioning, Disability and Health.* Geneva: WHO.

World Health Organization. 2002. *Towards a common language for functioning, disability and health: the International Classification of Functioning, Disability and Health.* Geneva: WHO.

ABOUT THE AUTHORS

REBECCA M. MAJINGE is a librarian at the Institute of Finance Management, Dar es Salaam, Tanzania. She has worked in libraries for 29 years. She holds a PhD from the University of KwaZulu-Natal (UKZN). Her research interest is library services provision for people with disabilities.

CHRISTINE STILWELL is Emeritus Professor and Fellow of UKZN. She was Head of the Information Studies Programme from 2003 to 2007 and Acting Director of the Centre for African Literary Studies from 2011 to 2013. She has experience as a practitioner in the public library sector and her early research focused on community libraries and the role of public libraries in post-apartheid South Africa. Her current interests are public libraries and their role in addressing poverty and social exclusion, and information behaviour.