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Ncube, Mthokozisi Masumbika; Mutongi, Chipo; and Kurebwa, Mercy, "The conceptualisation of the Provisioning of Assistive Resources for Patrons with Visual Impairment within Academic Libraries in Zimbabwe" (2022). *Library Philosophy and Practice (e-journal)*. 6825.
https://digitalcommons.unl.edu/libphilprac/6825

# The conceptualisation of the Provisioning of Assistive Resources for Patrons with Visual Impairment within Academic Libraries in Zimbabwe
## By

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## Abstract

The introduction of assistive resources within academic libraries in the 20th century positively affected library users (patrons) since they eased information access challenges for patrons living with impairments. However, most academic libraries in developing countries are still grappling with challenges relating to ensuring adequate services to patrons with visual impairment. Given this problem, this paper seeks to provide a better overview and understanding of what provisioning of assistive resources entails. Such an understanding would aid decision-making in academic libraries on the specific resources that should be acquired for patrons with visual impairment. In addition, this paper also went on to conceptualise the term patrons with visual impairment, this is because there has been confusion within most academic libraries on the specific individuals that fall within this category.

## Keywords:

Academic Libraries, Assistive Resources, Assistive Service, Assistive Technology, Patrons with Visual Impairment, Provisioning

## Introduction and Background

Academic libraries serve the informational, educational, and other library needs of students, staff members and other university or college stakeholders. This also includes individuals with intellectual impairments, visually impairment, hard of hearing, or gifted. The introduction of assistive resources within academic libraries in the 20th century positively affected library users (patrons) since they eased information access challenges for patrons living with impairments (Ayiah, 2017). These also ensured that patrons with visual impairment were able to address any library need. Such resources enhanced inclusion because library patrons with visual impairment could also receive the same services without a need for help from assistants, other patrons, and library staff members. In addition, such library resources reduced dissatisfaction from patrons with visual impairment, at the same time broadening the resource base for the libraries (Craddock, 2001;

Ekwelem, 2013). Since academic libraries had challenges in providing and ensuring information availability and access to patrons with visual impairment, they were expected to embrace this innovation, which would ensure adequate and effective resource provisioning to this user category. Babalola and Haliso (2011) explicate that assistive resources were thus, expected to gain traction in academic libraries as they addressed the long-expressed need for increased information access, convenience, and self-reliant patrons. However, contrary to these expectations, the provisioning of assistive resources within most academic libraries has been disappointingly low, inadequate, fragmented, and uninspiring (Ayiah, 2007; Babalola & Haliso, 2011; Majinge & Stilwell, 2013; Chimhenga, 2017). Carter (2004), and Babalola and Haliso (2011) blame the libraries for not taking a more proactive and initiative role in ensuring the provisioning of relevant assistive resources for library patrons with visual impairment.

The situation has comparatively improved in the developed countries, such as North America, Europe, some parts of Asia, and the Middle East, where the provisioning of such resources increased in the past eight years (Sanaman & Kumar, 2014; America Library Association, 2017). This particularly happened after the academic libraries became innovative in the provisioning of such resources for patrons with visual impairment. Such innovativeness by the academic libraries was attributed to a change in culture and general practice (Ncube, 2016; Mugo, 2013). On the contrary, Africa has not benefitted much from these positive improvements where the provisioning of assistive resources is still depressed, fragmented and a mirage within most academic libraries in the continent (Majinge and Stilwell, 2013; Sanaman and Kumar, 2014; Ncube, 2016; Chimhenga, 2017; Munyoro & Musemburi, 2019).

This issue of assistive resources is critical since academic libraries must ensure availability and access to library resources irrespective of gender, age, race, political affiliation, or disability (Universal Declaration of Human Rights, 1948; INASP, 2006; United Nations Convention on the Rights of Persons with Disabilities, 2006; IFLA, 2012; UNESCO, 2017). Lack of assistive resources threatens the accreditation of such libraries by academic governing bodies, as it is required that they have resources that support students, academics, and other stakeholders within their respective academic institutions. For instance, in Zimbabwe, the Zimbabwe Council for Higher Education (ZIMCHE), as the watchdog of academic institutions, also pays attention to the need for such institutions to have in place adequate teaching, learning and research resources for any user group; among these resources are libraries. Inadequately resourced libraries run the risk of having their accreditation revoked.

Furthermore, the low inadequate and fragmented provisioning of assistive resources raises questions about the quality of technology, services, and commitment of such libraries in enhancing inclusion, and non-discriminatory tendencies (Babalola and Haliso, 2011; Ncube, 2016). This entails that libraries can enhance social exclusion. In addition, the libraries place their patrons at a disadvantage when it comes to information access to enhance their education and informational endeavours. Ayiah (2007) reveals that students with visual impairment find it difficult to access information due to inadequate assistive services. Ayiah notes that such patrons usually spend significant amounts of time waiting for volunteers to read to them. Furthermore, inadequate provisioning of assistive resources can increase inequality of access to information for library patrons with visual impairment (Tucker, 1997), bringing about dependence and inability to make choices on information sources and type (Porter, 1997). Craddock (2001) is of the view that some

library patrons with visual impairment are delayed access to information owing to inadequate assistive services, thus affecting their performance. Tripathi and Shukla (2014), and Munyoro and Musemburi (2019) posit that academic libraries are anticipated to embrace and provide assistive resources for patrons with visual impairment to enable them to become autonomous in realising their research endeavours. To better understand this problem, the following diagram provides the context of the provisioning of assistive resources in academic libraries.

**An Interplay of Assistive Resources, Patrons with Visual impairment and Academic Libraries**
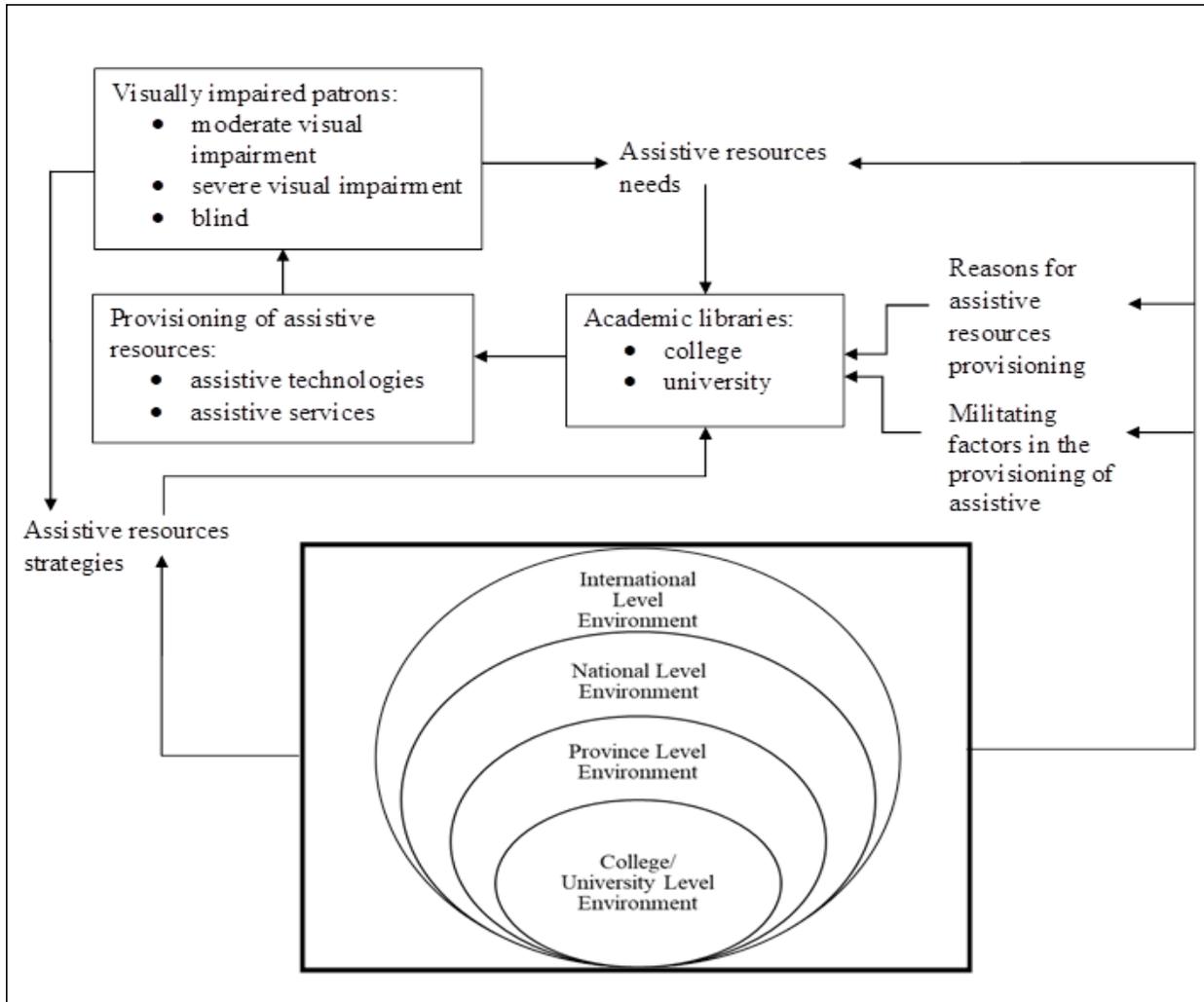


**Figure 1: Diagrammatical Presentation of Assistive Resources for Patrons with visual impairment in the Academic Libraries**

## Provisioning

The term provisioning has diverse connotations and explanations. Beal (2017) notes that the term is used in a variety of ways and contexts. Spacey (2017) says the term is linked with the Telecommunication industry, and cloud infrastructure. However, it can be applied to other industries and sectors as well. Of interest to this paper is a definition by Cambridge University

(2019), which defines provisioning as the activity of obtaining equipment and resources needed for an activity. There are diverse types of provisioning that have been identified in the literature; these include, amongst others, Grid computing provisioning, Storage Area Network (SAN) provisioning, server provisioning, user provisioning, internet access provisioning, service provision, resource provisioning, and environment provisioning (TechTarget, 2010). The relevant type of provisioning in this paper is resource provisioning. Resource provisioning, as explained by Bhavani and Guruprasad (2014), entails the selection, deployment, and management of software, hardware, and other resources for guaranteed performance.

Bhavani and Guruprasad (2014) suggest that the provisioning of resources should be based on the needs of users or clients. As noted in Figure 1, this concept is imperative as it relates to the assistive resources needs of the users (patrons). While provisioning resources, individuals and organisations face several obstacles (Narotzky, 2004; TechTarget, 2010; Bhavani & Guruprasad, 2014). This proposition is clear in Figure 1 above, as there are factors that militate against the provisioning of assistive resources for patrons with visual impairment in academic libraries. Focusing on strategic provisioning in Figure 1, Whaiduzzaman, et al. (2014) stress the need to come up with strategies for ensuring and enhancing provisioning.

## Academic Library

An academic library is often misinterpreted and considered synonymous with the university library. Inevitably, this misclassification and misconception have resulted in the relegation of some academic libraries to school libraries, such that they receive little attention in establishing and sustaining productive equipment, facilities, and services for patrons (Tabs, 2003). Due to this categorisation, some libraries no longer have a category to belong to, as they cannot be categorised under special, public, or school libraries. Furthermore, this failure to categorise academic libraries results in the exclusion of some libraries from consortiums and associations that pertain to academic libraries (Ncube, 2016). In some circles, academic libraries conform to any library that provides academic informational resources. Proponents of this position note that any library within an educational institution is an academic library since it supports teaching and learning institutes (Lee & Taylor, 2017). This viewpoint provides another misconception of academic libraries in terms of the type of service provisioning. Nagoji (2017) concedes that limiting academic libraries to the provisioning of teaching and learning resources limits the context of service provisioning within academic libraries. According to Nagoji academic libraries must go beyond the discourse of providing teaching and learning materials, into facilitating research activities, providing reference and bibliography services, conducting selective dissemination of information, and provisioning services to individuals living with impairments. Given these different connotations, it was, therefore, essential for the current paper to conceptualise this term sufficiently. Phan, et al. (2014) posit that an academic library is a type of library that is attached to an institution of higher education, serving two significant and complementary purposes, which entail supporting the institution's curriculum and supporting the research endeavours of the stakeholders. Jennings (2013) argues that academic libraries are libraries that are associated with a college or university, providing support for the mission of the institution, as well as the research needs of its faculty, staff, and students. In line with these sentiments, the American Library Association (2018) expounds that academic libraries can be categorised into two distinct types, thus, college libraries and university libraries.

Figure 1 shows that to further conceptualise academic libraries, it is essential to understand the context where such libraries operate in, as the context also influences the provisioning of resources within such libraries. Atkinson (2018) affirms that academic libraries operate within the context of higher education institutions, the general community in their sphere of influence, the nation they are in, and the global community at large. In terms of the higher education institutions, Thorpe, et al. (2014) avow that academic libraries have a mandate to demonstrate their value per the institution's measurements of success. Atkinson (2018) emphasises the need for patron convergence and super convergence. In explaining this convergence and super-convergence, Woolley and Core (2018) clarify that this entails placing the patrons at the heart of service delivery, aligning strategies, creating a unique and integrated environment, and designing support services with patrons in mind. Thorpe, et al. (2014) highlight that academic libraries must ensure diverse mechanisms of ensuring effective service delivery to all patrons, without discrimination to ensure their relevance in the academic institution. Oakleaf (2010) argues that in terms of community context, the community expects higher educational institutions not only to enhance the student's academic experience, but also to undertake partnerships, collaborations, and engagements with the communities. Oakleaf postulates that such community-based commitments by higher education institutions cascade down to their respective academic libraries since they also must prove their value within the communities they serve. Oakleaf notes the essence of providing adequate resources for all the stakeholders, which in turn could satisfy the community needs and expectations.

Baum, et al. (2017) expounds that at the national level, governments' involvement in higher educational institutions is mostly rooted in both efficiency and equity goals. In their view, higher educational institutions are expected to create lifelong opportunities, assuming a leading role in guiding the governments and communities in developmental endeavours, promoting economic success, and political participation. Hackett (2005) stresses the essence of libraries in providing adequate resources because there is a direct relationship between national development and adequate library services. Hackett (2005) explains that highly ranked nations in the United Nations' Human Development Index have in place adequate resources for any library user group. The University of San Diego (2018) notes that higher education institutions are also liable to diverse treaties, conventions, covenants, protocols, charters, and pacts, at the international level. They are supposed to play their part in fulfilling the aspects they would have agreed on at an international level. Bonnet (2017) argues that most libraries, including academic ones, have a mandate in fulfilling diverse binding treaties and conventions to which they are signatories. According to Bonnet one of such treaties is the Marrakesh Treaty of the year 2013, which advocates for the provisioning of assistive resources for library patrons with visual impairment. The notion that academic libraries have an institutional, community, national and global community is a prerogative to ensure that patrons have adequate assistive resources (Hackett, 2005; Oakleaf, 2010; Thorpe, et al., 2014; Atkinson, 2018). Therefore, it is vital to understand the context in which academic libraries operate because this provides a further conceptualisation of the term academic libraries.

## Assistive Resources
Academic libraries must provide diverse library services and resources to their patrons, including assistive resources. Therefore, Figure 1 shows that the term assistive resource also made the paper

concept. Figure 1 reveals that the term encompasses assistive technology and assistive services that ensure the functionality of individuals living with an impairment. DeMarco (2014) avers that assistive technology is an umbrella term that comprises assistive, adaptive, and rehabilitative devices or equipment for people living with impairments. Mugo (2013) also notes that assistive technology is an interdisciplinary field of knowledge encompassing products, equipment, and strategies to encourage the functionality of individuals living with impairments, relative to self-sufficiency, individuality, the eminence of life and social inclusion. Numerous scholars have included assistive services within the domain of assistive technology. However, these are different entities, as assistive services conform to the human and non-technologically related aspects meant to aide individuals who are impaired (Ncube, 2017). The human element corresponds to aid from individuals that provide support to individuals living with impairment. Treaties, conventions, laws, or any legislation that has a direct or subtle implication upon individuals living with impairment also fall within this category (Ncube, 2017). This is also apparent in the definition of assistive services by Mugo (2013), who highlights that assistive services entail any facility that directly assists an individual living with an impairment in the selection, acquisition or use of an assistive device or technology.

Other scholars that extensively wrote on assistive resources was Demson and Timony (2010), who argue that assistive services include the library staff and management making a dedication in ensuring that reading, library programmes, and resources are accessible to individuals living with impairments. This is particularly through the provisioning of books in alternative formats and making the library environment as comfortable and accessible as possible to individuals living with impairments. Assistive services also entail educating patrons and staff about assistive technologies, and disability awareness. In addition, Ncube (2017) asserts that assistive services include training in assistive technologies. Demson and Timony (2010) note that assistive services also entail instructing patrons in networking, sharing of information and building communities of inquiry and practice around assistive technologies. Therefore, assistive resources include technologies and services designed to aid individuals with impairments in using libraries.

Assistive resources have extensively aided patrons living with impairments. DeMarco (2014) affirms that individuals living with impairments usually have difficulties in performing diverse activities independently. In DeMarco's view, assistive resources can improve the effects of impairments that limit the ability to perform ADLs, even within libraries. Mugo (2013) contends that the principal purpose of assistive resources is to support or advance an impaired person's functionality and independence in the library. In Mugo's view, these also hasten their active participation in a library community. Mugo (2013) observes that assistive technologies sustain or expand the functional competencies of patrons living with impairment, while assistive services ensure the effective usage of assistive technologies within the libraries. DeMarco (2014) asserts that assistive resources can also aid in the prevention of further impairments and secondary health conditions.

Academic libraries are expected to take leadership and a proactive role in using assistive resources due to the varied benefits that these resources afford to patrons with visual impairment. The benefits of assistive resources within libraries to patrons with visual impairment revealed through

numerous studies (including, Babalola & Haliso, 2011; Sanaman & Kumar, 2014; World Health Organisation, 2015; Munyoro & Musemburi; 2019, amongst others), include the following:

i. increasing independence for patrons.
ii. decreasing the digital barriers for patrons with visual impairment.
iii. supporting patrons with visual impairment to take part in learning activities.
iv. bridging disparities between patrons with and without visual impairment.
v. providing the means of access to and participation in library-related activities.
vi. enhance social and recreational opportunities in the library.
vii. increasing engagement amongst patrons.
viii. improving self-esteem for people with visual impairment.
ix. reducing costs for library services and individual support.
x. expanding the library resource base.

Majinge and Stilwell (2013) note that by enabling the participation and inclusion of library patrons with visual impairment within academic libraries, assistive resources can impact the self-image, self-esteem, and sense of self-worth of users, thus improving the library's image in society. However, even with these benefits brought about by assistive resources within libraries, scholars have revealed that some individuals who are impaired do not have access to such technologies and services, while others are finding it difficult to use the technologies effectively (Ayiah, 2007; Ekwelem, 2013; DeMarco, 2014; Ncube, 2017).

## Patrons with Visual Impairment

The other concept of interest shown in Figure 1 is visual impairment. Various experts and specialists have written about the distinct types of impairment. For instance, McIntyre and Hanson (2014) enunciate that the most prevalent form of impairment is visual impairment since there are diverse types and ranges of visual impairment to such an extent that some individuals are not even aware that they are living with an impairment. Tinerella and Dick (2005) also wrote comprehensively on visual impairment and expound that blindness and sight impairment are quite common disabilities in all countries of the world. In their view, the term visual impairment applies both to people who can partially see and to those who cannot, those that are blind. McIntyre and Hanson (2014) note that the range of visual impairment includes cloudy or patchy vision, inability to distinguish light from dark, confusion and frustration, blurred vision, difficulty judging distance or speed, peripheral vision, and tunnel vision; while some people cannot see objects, others have poor distance eyesight. Focusing on visual impairment, the International Classification of Diseases (2006) articulates that all visual impairment types or ranges and classified these into three categories, which include:

i. moderate visual impairment: those individuals who can tell shapes and colours of objects and can distinguish between brightness and darkness. Can only read characters with larger size and broader strokes.
ii. severe visual impairment: individuals who can only distinguish more obvious changes in brightness and darkness.
iii. blindness: this includes the lack of light perception, also known as total blindness or total visual impairment.

The above classification was also adopted in this paper, as shown in Figure 1, also fitting well with the explanation by Tinerella and Dick (2005) who emphasise that only a small proportion of people with visual impairment are blind, most of them fall within the moderate visual impairment category. As there are a substantial number of individuals with visual impairment (McIntyre &

Hanson, 2014), academic libraries also have patrons with visual impairment (Sanaman & Kumar, 2014). To cater to the library needs of patrons with visual impairment, most academic libraries have in place assistive resources (Sanaman & Kumar, 2014). The American Library Association (2017) clarifies that academic libraries have a significant role to play in the lives of individuals with impairments by facilitating their full contribution and participation in the college or university society. According to the association, such libraries should have strategies based upon the philosophy and principles of universal design to guarantee that library resources meet the needs of patrons with visual impairment.

DeMarco (2014) elucidates that assistive resources for patrons with visual impairment in academic libraries include diverse areas such as increased barrier-free access to information, improved development, proficiency and efficacy in academic work, augmented self-esteem, and self-reliance. In addition, DeMarco (2017) posits that librarians can aid these patrons through assistive services by becoming specialists in the assistive technologies they provide in the libraries. DeMarco (2017) also explicates that librarians can also inspire and offer patrons peace of mind in using assistive technologies and addressing contextual (environmental) issues that have a bearing on assistive resources. Though there are benefits brought about by assistive resources in academic libraries, there still exists a gap in their provisioning in most libraries (Ekwelem, 2013). Chisenga's (2006) study focusing on academic libraries in Ghana revealed that library patrons with visual impairment in academic libraries were dissatisfied with the technologies in place. Another study by Jain (2016) concluded that most academic libraries in Africa still face challenges in the provisioning of technologies and facilities to individuals with visual impairment. Ncube (2017) contends that most academic libraries in the African context have not yet fully instituted the technologies, while the library staff members are reluctant to ensure effective services to patrons with visual impairment.

As an overview of Figure 1, DeMarco (2014) contends that patrons with visual impairment expect to use assistive resources within academic libraries, while Ncube (2017) notes that academic libraries are supposed to undertake the provisioning of assistive resources for patrons with visual impairment. The American Library Association (2017) notes patrons with visual impairment should use assistive resources in academic libraries. Hence, Figure 1 shows this interplay of patrons with visual impairment, academic libraries, and assistive resources, while the diverse contexts (environments) that affect academic libraries subsequently affect the other concepts (assistive resources and patrons with visual impairment).

The conceptual presentation in Figure 1 bridges a gap in the literature. Most studies have focused on assistive technologies, while others have looked at assistive services as individual concepts. Studies that have looked at these concepts have mostly used the term assistive technology, with assistive services playing an insignificant role. However, this paper focuses equally on these concepts under the umbrella term assistive resources, thus, bridging this gap in the literature. In addition, most studies have focused on access issues concerning assistive resources. However, this paper goes further to look at provisioning, which goes beyond these two terms, as noted in Figure 1. Furthermore, the term visual impairment in this paper encompassed the three categories of visual impairment, thus moderate, severe visual impairment, and the blind. Most studies have tended to overlook the moderate category of visual impairment.

## Conclusion

In conclusion, the provisioning of resources should be based on the needs of users or clients. While provisioning resources, individuals and organisations face several obstacles. Such entities need to have in place context-specific, unique solutions and strategies to address such obstacles. This paper also focused on academic libraries. These libraries operate within the context of higher education institutions, the general community in their sphere of influence, the nation they are in, and the global community at large. As such, academic libraries must ensure diverse mechanisms for the provisioning of resources to all patrons, without discrimination to ensure their relevance in the academic institution. This paper also conceptualised the term patrons with visual impairment and noted that there are three major types, which include moderate visual impairment, severe visual impairment and the blind. The paper noted that only a small proportion of people with visual impairment are blind, most of them fall within the moderate visual impairment category. As such, academic libraries have a significant role to play in the lives of individuals with impairments by facilitating their full contribution and participation in the college or university society through the provisioning of assistive resources.

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