Chapter 1
Futurizing Library Services in a Technology-Driven Dispensation:
Reflections on Selected Academic Libraries in Zimbabwe and South Africa

Tlou Maggie Masenya
Durban University of Technology, South Africa

Collence Takaingenhamo Chisita
https://orcid.org/0000-0002-7375-8627
Durban University of Technology, South Africa

ABSTRACT

Many libraries and information centres are faced with the challenges of providing effective services to their users in the digital era. Modern technologies such as internet of things (IOT), blockchain, cloud computing, just to name a few, have brought about transformation in the way library services are delivered and are providing libraries with an opportunity to extend their relevance in the digital era. These technologies have the potential to revolutionize information services delivery in libraries and how libraries interact with each other in networked environments. Academic libraries are thus positioning themselves to take the advantage by implementing these innovative technologies to provide effective services to their users. This study reviewed related literature on futurizing academic libraries through technology adaptation to analyse the application of emerging technologies in the provision of electronic library services with the view to highlight how these technologies can revolutionise library practices and information service delivery.

DOI: 10.4018/978-1-6684-3364-5.ch001

INTRODUCTION

Before modern digital technologies, library books, journals and other printed resources were kept on shelves and accessed by consulting catalogue cards in catalogue cabinets. The emerging technologies are transforming the way libraries operate from the analogue to the digital paradigm. Library information resources continue to increase in multiple forms and formats: printed, audio-visual, electronic, and multimedia formats. Bhat, Rao and Pai (2014) stated that electronic resources(e-resources) had become an inseparable part of libraries and researchers because they provide an enviable comfort that their print counterparts failed to provide. The emergence of modern technologies has transformed library information service provision for the benefit of users irrespective of time and space. Rehman and Mujtaba (2021) argued that rapid, dynamic and innovative changes in the technological sector and globalisation continue to drive the digital revolution in libraries. The adoption of modern technologies is changing every aspect of the library, for example, acquisition, processing, storage, retrieval and dissemination of information. The storage of information resources is now digitally driven, kept in data centres and accessed via the Internet to aid large information storage and ensure flexibility in access and retrieval (Adetoro & Ayeni, 2020). Therefore, today's library information services provision ensures access to electronic or digital resources. However, there can be a delay or no access to these resources if they are not adequately organised. Academic libraries are thus playing a significant role in providing access to credible digital resources, organising them and helping users locate, discover, retrieve, utilize, reproduce or produce and share information they need.

Atkinson (2020) highlighted that innovative library technologies now typify the fifth generation of libraries powered by fifth-generation technologies. For example, self-service technologies, online repositories, mobile or wearable devices and social media have become the order of the day. Academic libraries have moved from collections-based to service-based institutions focusing on research data management, bibliometrics, open access presses, virtual reference services, and digital and metaliteracy. Atkinson (2020) also noted that while libraries have transitioned from physical to online collections and the provision of access to an increasing range of electronic resources, they continue to encounter opportunities and challenges in areas such as the adaptation of the technologies of the Fourth Industrial Revolution (4IR), for example, artificial intelligence, the Internet of things and wearable technologies. Ashiq, Madge and Robu (2019) further observed that the technological revolution in the twenty-first century had contributed immensely to shaping library users' expectations, preferences, and behaviors. Benedetti et al. (2019) also highlighted the need for libraries to adopt new skills for change management in an era of Volatility, Uncertainty, Complexity and Ambiguity (VUCA) and the need to be relevant in the digital era. The VUCA phenomenon and digital trajectory demand librarians to leverage their mental alacrity and highly sought-after critical skills for engaging with new technologies and the dynamic needs of diverse users and an appreciation of emerging technologies to move the library profession forward.

Preparation for technological developments requires a *future thinking* approach in order to unearth the inclinations and dynamics manipulating the present moment and that are creating the future (Schlak, 2020). According to the author the futures thinking approach aids librarians to recognize and strive toward a future that will reflect our choices and is informed by stratagems to discover alternatives, possibilities, and choices in the era of technological progress. The library collections of the twenty-first century continue to evolve due to technological change and this justifies the need for futures *thinking.* The futurization of academic libraries is necessary for an era whereby the change is the only constant thing. Sarfraz, Sarfraz, Iftikar and Akhund (2021) argued that the rate at which information was be-