Adoption and Usage of Cyberzone in Public Libraries and Its Efficacy in Building Social Cohesion Among Underprivileged Communities in South Africa

Tlou Maggie Masenya, Durban University of Technology, South Africa*

ABSTRACT

Public and community libraries are playing a significant role in building and promoting social cohesion among communities and society as a whole. These social libraries serve as a conduit to access information, knowledge, and support lifelong learning. However, the traditional roles of public libraries continue to change as technology evolves. These libraries need to continually adapt their services to meet their user needs, thereby ensuring their relevance in this digital era, characterized by digital knowledge-based economy and to the communities they serve. Public libraries must integrate emerging technologies to their services by implementing cyberzones in order to build social cohesion among community members. The purpose of this study was to examine the implementation of cyberzones in public libraries and its efficacy in building social cohesion among underprivileged communities in South Africa.

KEYWORDS:

Cyberzone, Cyber Security, Public Libraries, Social Cohesion, Underprivileged Communities

INTRODUCTION

Knowledge and information are regarded as vital resources needed for the development of all sectors in any community or nation. Libraries thus serve as reservoirs and repositories of knowledge and information from all fields of learning and are playing a very important role in facilitating access to global information and knowledge resources. One of the major roles of libraries is thus to ensure that knowledge remains accessible and available to users and future generations of scholars and to satisfy the information needs of the citizens. Therefore, a nation without functional libraries and information centres may lack access to information that would enable sustainable development. Public libraries have perfomed a unique and critical role in Africa, and since the inception of the first public library in 1818, the South African library and information services landscape has also been the reflection of the socio-political order and developments in the country. *The IFLA/UNESCO Public Library*

Manifesto (1994) described the public library as an organisation that provides access to knowledge, information, and works of imagination through a wide range of resources and services, making it available equally to all members of the community regardless of race, nationality, age, gender, religion, language, disability, economic and employment status. It is the local gateway to knowledge that provides a basic condition for lifelong learning, independent decision-making, and cultural development of individual and social groups (*The IFLA/UNESCO Public Library Manifesto*, 1994).

Edwards, Raunseo, and Unger (2013) classified public library services into five broad categories: libraries as community builders, libraries as community centres for a diverse population, libraries as centres for the arts, libraries as universities, and libraries as champions of youths. These libraries have provided free access to resources that stimulate the mind, nourish generations of African imaginations native-born and immigrants, rich and poor and connect individuals to people and events outside the boundaries of their own experiences. Therefore, one of the fundamental rights that need to be considered for all members of a society is the right to access all facilities, resources and services despite their varying abilities or limitations. However, public library user needs have changed through the years, requiring these institutions to provide facilities to meet these needs, and they thus need to be flexible and address the new needs to ensure their continued growth and survival, while also maintaining their relevance in the digital transformation era.

Many public libraries worldwide are implementing cyberzones as a way of contributing to sustainable development since timely and effective provision and sharing of useful information can assist in building social cohesion among underprivileged communities and society at large. Cyberzones can be described as a section of a library in which computers and other electronic devices are made available to users for the purpose of accessing library materials in digital format, multimedia items and the Internet (Laws Africa, 2015). Modern public libraries are thus being designed with cyberzones and activities rooms such as audiovisual and electronic reading rooms, activity rooms for lectures, academic meetings, special seminars, information workshops, computer labs, literacy programmes and homework centres, as a way of creating spaces for people to come together to engage in educational, social and recreational activities, and builds an enabling environment for social cohesion to occur. Larger public libraries may also include Internet cafés, open either throughout the opening hours of the library, or for special occasions, and such facilities are sometimes contracted out to a commercial provider. There is, therefore, a need for libraries to employ reliable and potential tools like Internet and other Information and Communication Technologies (ICTs) to support economic, social, and political sustainability. The purpose of this study was to examine the adoption of cyberzones in public libraries and their efficacy in building and promoting social cohesion among underprivileged communities in South Africa.

PROBLEM STATEMENT

Public servants and information professionals in libraries need to maintain accountability and responsibility to the citizens they serve. However, in this technology-driven era, effective access to library services and knowledge sharing became a vital challenge over the past years. Public libraries around the world have adopted cyber-spaces such as cyberzones to mitigate these challenges. Cyberzones have been considered viable, trusted alternatives to accessing and sharing information among communities (Padayachee et al., 2018). Although the adoption of these cyber-spaces in public libraries can fundamentally change the society we live in, however, the level of adoption of cyberzones is low in public libraries in South Africa. Technological innovation has always been a key challenge in accessing and sharing information, even though some public libraries have shown great interest in the implementation of cyberzones. As noted by Bopape et al. (2021), public libraries in developing countries such as South Africa largely remained forgotten assets for the dissemination of information to rural communities. Proper implementation of cyberzones thus continues to be a challenge due to a lack of sufficient skills, policies, procedures, and standards, as well as a lack of knowledge of how to use emerging new technologies in accessing and sharing information.

The questions that arise are as follows: Are the cyberzones effective for promoting and building social cohesion among underprivileged communities in South Africa? How can public libraries secure a role as the facilitator of cyberzones? How can cyberzones be used to support and enhance the current roles of the public library in the under-served communities? What are the factors hindering the adoption and use of cyberzones in public libraries? What policies and cybersecurity laws should public libraries adopt to guide community members in using the cyberzones effectively? This also underscored the need for greater technical expertise to develop policies to support the implementation and adoption of cyberzones in public libraries. Although the role of the public library is to promote social cohesion among communities and society at large through implementing cyberzones, it is evident from the literature that it is still an under-researched area in the South African context. The Library and Information Services (LIS) transformation charter (2014) stated that insufficient time prevents a comprehensive study of aligning traditional aims and objectives of libraries with national imperatives such as poverty eradication, social cohesion, and economic development.

It thus appears that little academic research has been conducted in the adoption and use of cyber zones. There is an urgent need for public libraries and librarians in South Africa to ensure social inclusion to their services and to shift its focus from collection to connection. This study thus attempts to fill the gap that exists between traditional and modern methods of accessing and sharing information as a way of building social cohesion among underprivileged communities. The research objectives formulated for this study were to:

- Establish the initiatives to promote social cohesion among underprivileged communities in public libraries in South Africa.
- Determine the adoption and use of cyberzones in public libraries in building social cohesion among underprivileged communities in South Africa.
- Determine the factors hindering the adoption and use of cyberzones in public libraries in South Africa.
- Determine the implication of policy and cyber security laws on the adoption and use of cyberzones.

LITERATURE REVIEW

A combination of theories and models was required to give grounded coherence to the study and to understand the factors that constitute the successful adoption and use of cyberzones in public libraries in South Africa. Community-based collaborative and social cohesion theories were used as theoretical frames to guide the study.

Community-Based Collaborative Theory

The need to work together in communities and society on issues of critical concern shifted the emphasis from individual efforts to group work and from independence to community-based collaborations (Leonard & Leonard 2001). As noted by Hollenbeck, Beersma, and Shouten (2012), 20% of work in the 1980s was team-based, whereas 80% of work by 2010 was team-based, and this has changed the nature of work from individual to collaboration. Gray (1989) defined *collaboration* as a process through which parties with different aspects of problems can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible. Collaboration in the library context has been used increasingly to promote information and knowledge sharing or transfer and to support social and community development through the development and use of new technologies. Collaborating partners create flexible environments whereby information and knowledge are shared, and all members of the communities are involved in the process of improving the services and the community's condition. Therefore, when communities do not develop a pattern of collaboration, they diminish community development potential.

As stated by Himmelman (2001), effective collaboration enhances communities, and it requires that stakeholders exchange information, alter activities, share resources and be willing to enhance the capacity of partners. These collaborations are sustained through a shared commitment to serving the ever-changing needs of the community. Building social cohesion among communities thus requires systems and platforms for sharing knowledge, organizing, and coordinating activities and communities that are supportive of improvement. In this context, the community-based collaboration approach has become a focus of promoting knowledge sharing as a way of building social cohesion among underprivileged communities. Hogue (1994) described community-based collaboration as the process by which citizens, agencies, organizations, and businesses make formal, sustained commitments to work together to accomplish a shared vision. However, community-based collaboration requires the allocation of human, physical and financial resources, as stated by Hogue (1994). This approach is playing an important role in the speedy and efficient exchange of knowledge, including the know-how formed within a particular community, and it is based on networks that exert powerful effects on norms, values and behaviour of the culture of the group involved (Goodwin et al., 2004). Knowledge can also be shared through collaborative alliances, i.e., by conducting face-to-face communication, knowledge-sharing sessions and meetings with strategic alliance partners or community members, and through *communities of practice* (CoPs) or communal meetings in which socialisation occurs in the form of sharing ideas, knowledge and experiences. Collaborative alliances thus focus on developing relationships and partnerships sufficient to achieve valued results. Therefore, by building collaborative alliances and a community of practice, the library strengthens its community ties, shares resources, and builds positive relationships with diverse stakeholders.

Julian (2006) defined the community of practice in terms of strengthening the capacity of communities to meet the needs of constituents and assist constituents in realizing their dreams. CoPs are popular in recent years, as a means of managing the human and social aspects of creating and disseminating information in organizations, and they are increasingly being looked at in sharing knowledge (Ardichvili et al., 2006). Stewart (1997) further described the CoP as a group that facilitates the transfer of knowledge and innovation in people capital development. A CoP is created by people who engage in a process of collective or collaborative learning in a shared domain of human endeavour, such as a tribe learning to survive, a band of musicians trying to find new forms of expression, or a group defining its identity in school (Wenger, 2011). Collaborative learning philosophy is mostly applied at committee meetings, with community groups, within their families and generally as a way of living with and dealing with other people (Panitz, 1996).

In a collaborative learning environment, knowledge thus comes from a wide range of knowledge backgrounds, and everyone brings a unique perspective to learning. As a result, all community members gain knowledge from each other (Woods & Chen, 2010). Learning is social at its core, and community members learn from each other by sharing their current knowledge and solving problems together. Bryan and Henry (2012) proposed a model for creating community partnerships comprised of the following steps: preparing to partner whereby stakeholders examine attitudes and practices that might impact attempts to engage culturally diverse stakeholders, assessing needs and strengths, creating a formal collaborative group or partnership, creating a shared vision, taking action to implement the shared vision, and evaluating and celebrating success. Dollarhide and Saginak (2016) further developed a model that incorporates a community-centred approach, formal decision-making procedures, an array of role-related behaviours, and active management of the collaborative community problem-solving process.
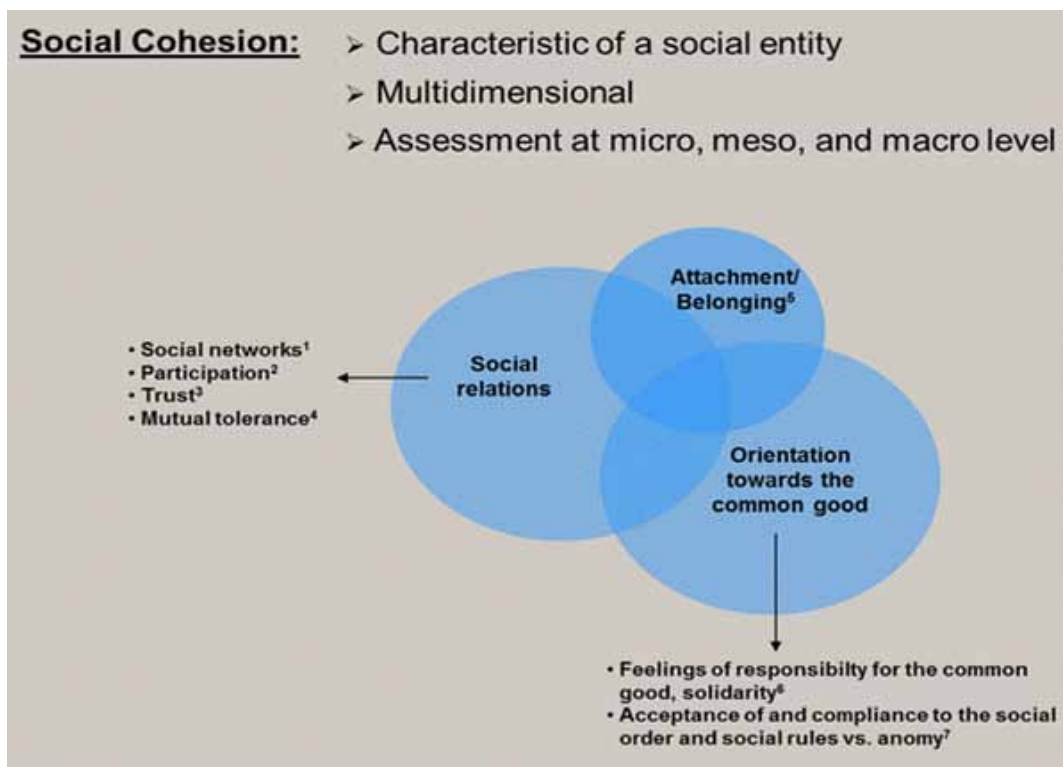
Social Cohesion Theory

Bidandi et al. (2021) described *social cohesion* as a broad concept that encompasses a variety of factors ranging from community development, nation-building, diversity, globalisation, technology, economic performance, societal well-being, and the legitimacy of democratic institutions. As noted by Maxwell (1996), social cohesion involves building shared values and communities of interpretation, reducing disparities in wealth and income, and generally enabling people to have a sense that they

are engaged in a common enterprise, facing shared challenges, and that they are members of the same community. It has also been linked with positive outcomes such as democratic stability and participation, economic growth and greater productivity, and an overall good quality of life for citizens in all societies, since the 1980s and 1990s (Dragolov et al., 2013). Social cohesion strategy thus refers to any kind of action which ensures that every citizen and community member can have the opportunity to access, the means to secure their basic needs, to progress and develop, the protection of legal right, to dignity and social confidence (Council of Europe, 2005).

In South Africa, social cohesion has also been associated with the concept of *ubuntu*, nation-building and efforts to bridge the cultural and racial divides of the past. Ubuntu is a multidimensional concept that encompasses the core principles such as reciprocity, accountability, trust, open sharing, inclusivity and consensus in order to build strong relationships with participants (Munung et al., 2021). Jensen (1998) identified five dimensions of social cohesion, namely: belonging (i.e., shared values, collective identities in the social entity), economic inclusion/exclusion (i.e., in the labour market), participation and involvement of the society's members in public affairs, recognition versus rejection of diversity and pluralism, and the degree of legitimacy of societal institutions. Most approaches to social cohesion combine these dimensions into the following three key elements: social relations, attachment or belonging, and orientation towards the common good. Figure 1 illustrates three essential dimensions for measuring social cohesion by Schiefer and Van Der Noll (2017).

The model by Schiefer and Van Der Noll (2017) described social cohesion as relations which are the glue to hold society together and close social relations, including participation, trust, and mutual tolerance, while emotional connectedness is demonstrated by feelings of attachment, a sense of belonging, sense of shared identity and self-perception as member of a group. Therefore, one of the key attributes of social cohesion is to instill in individuals the sense of belonging to the same

Figure 1. Three core essential dimensions of social cohesion (Schiefer & Van Der Noll, 2017)

community and the feeling that they are recognised as members of that community. In order for social cohesion to emerge, community members or individuals thus need to orient their actions and behaviour towards the common good of the society (Langer et al., 2017). A cohesive society is thus characterized by close social relations, pronounced emotional attachment to the social entity, and a strong orientation towards the common good.

Chan et al. (2006) further conceptualised social cohesion as a latent characteristic of a social entity, such as a group or society that emerges from the micro-, meso-, and macro-levels. The *micro-level* is seen in relationships with primary groups, such as family and close friends, whereas the *meso-level* includes interactions with secondary groups in the community setting, such as neighbours and like-minded people with shared interests and values. The *macro-level* refers to the sense of belonging to society and to institutional trust, and it includes participation in social or political organizations (Martínez-Martínez et al., 2020). These levels comprise the vertical and horizontal relations among members of society and the state and are characterised by a set of attitudes and norms that includes trust, inclusive identity and cooperation for the common good.

METHODOLOGY

This study provides a holistic understanding and insights into the adoption and use of cyberzones in public libraries and their efficacy in building social cohesion among underprivileged communities in South Africa. The study critically reviewed literature in order to analyze the adoption of cyberzones in public libraries in South Africa, using *qualitative content analysis*. Roller and Lavrakas (2015) described qualitative content analysis as the systematic reduction of content, analysed with special attention to the context in which it was created, to identify themes and extract meaningful interpretations of the data. Content analysis has also been used as a stand-alone method, although it has served mostly as a complement to other research methods, and as noted by Bowen (2009), there are some specialised forms of qualitative research that rely solely on the analysis of content. This method is suitable for analysing various qualitative and unstructured data, such as those collected during unstructured or semi-structured interviews or web-based documentary research. Like other analytical methods in qualitative research, content analysis requires that data be examined and interpreted in order to elicit meaning, gain understanding and develop empirical knowledge (Corbin & Strauss, 2008). The literature review process was guided by a protocol-driven approach that offers researchers a framework to select, analyse, and assess papers with the aim of ensuring robust and defensible results through reliability and repeatability (Massaro et al., 2016). Content analysis on the adoption and use of cyberzones in public libraries was thus conducted following the review protocol or guidelines advanced by Kitchenham (2004), composed of the following elements.

Search Strategy

The search strategy aimed at finding peer-reviewed articles and was conducted using some of the databases that provide access to publications in a variety of fields, namely: EBSCOhost, Emerald Insight, Springer, Scopus, Web of Science, and Google Scholar. As noted by Wang and Noe (2010), databases such as EBSCOhost allow using complex search strings and filters, which makes it easy to apply complex selection criteria, and it is, therefore, considered a suitable choice for systematic literature reviews. The search terms or keywords were used to collect data from related studies reporting on the adoption and use of cyberzones in public libraries. The search was restricted to peer-reviewed journals based on keywords such as "cyberzones and public libraries", "cyberzone and social cohesion," "public libraries and social cohesion," and "public libraries and community building" appearing in the title, abstracts or subject terms, in order to ensure the inclusion of all relevant studies in the content analysis. After searching all relevant articles, each article was checked for the inclusion of keywords in the title and abstract, in order to ensure that the articles are in line with the research objectives of the study.

Criteria for Inclusion

The review process began by identifying and selecting documents on the basis of their usefulness and relevance to the study, and only peer-reviewed journal articles written in English and published in the years 2013–2022 were considered and included in the content analysis, and they were therefore taken as units of analysis. The ten-year period was chosen because there has been exponential growth in modern technologies and innovation in public libraries in this technology-driven era characterised by the digital knowledge economy. Public libraries are increasingly integrating innovative technologies into their practices and services in the past ten years. The types of studies considered for inclusion in the literature review thus included all qualitative, quantitative, and mixed methods studies. The editorials, theses, books, and all other articles not focusing on the adoption and use of cyberzones in public libraries were thus excluded from this study.

The retrieved articles were screened over two rounds for the study's selection. In the first round, many articles related to the study were retrieved as per titles and abstracts. However, some of the articles, including all duplicates, were removed after thoroughly reading all the articles, mainly because of their irrelevance to the topic of interest and research objectives, which considerably reduced the sample size. The selection criteria included systematic literature reviews, empirical studies and other reviews published in peer-reviewed journals focusing on the adoption and use of cyberzones in public libraries. The articles relevant to the study were initially identified after the second round of the search strategy, following an iterative process of manual screening. The search thus resulted in the retrieval of 270 articles, whereby a total of 155 duplicate articles were removed, and the remaining 115 articles were screened for relevance using the inclusion criteria. A total of 52 articles that were determined to be irrelevant to the study were further removed, and a total of 63 articles were evaluated for eligibility. Furthermore, a total number of 40 articles that did not cover the entire scope of the review were excluded based on the exclusion criteria used in the study. A total of 23 articles that met the inclusion criteria were included in the final review, which largely focused on the adoption and use of cyberzones in public libraries, as shown in Figure 2.

FINDINGS AND DISCUSSION

The descriptive-analytical narrative method was used to analyse systematically the qualitative data or text extracted directly from previous studies focusing on the adoption and use of cyberzones in South African public libraries. Of the 23 selected articles, the majority focused on the adoption and use of cyberzones in public libraries ($n = 11$). Other remaining articles focused on the awareness

Figure 2. Flow chart of the process of the study selection for the systematic review guided by the PRISMA method
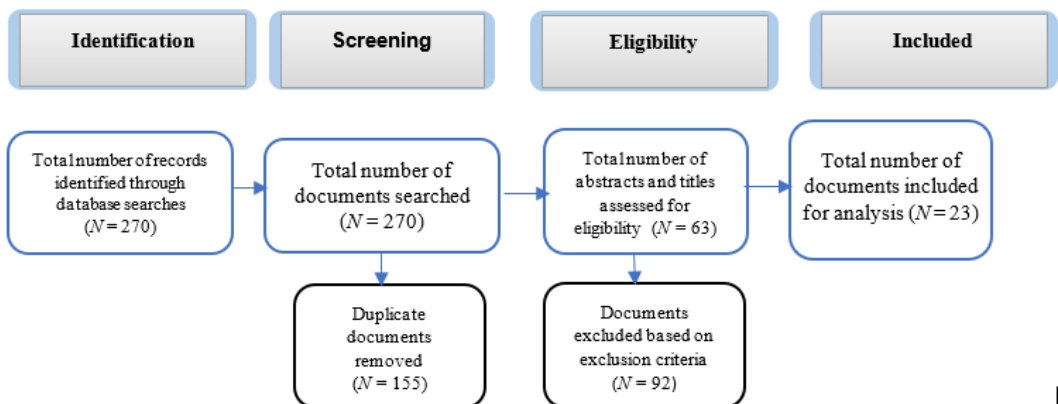
and use of cyberzones in public libraries (*n* = 3), collaborative learning in cyberzones (*n* = 5) and cyberzones initiatives in public libraries from different countries (*n* = 4). The findings are presented under the following themes, based on research objectives: the initiatives to promote social cohesion among underprivileged communities, the adoption and use of cyber zones in public libraries, the factors hindering the effective adoption and use of cyberzones in public libraries, and the impact of policy and cybersecurity laws in protecting cyberspaces.

Initiatives to Promote Social Cohesion Among Underprivileged Communities

Knowledge is a critical component of economic and social systems in many organizations, and it can be shared and used for community development and empowerment. Rapid community development thus depends on the creation of knowledge-based communities whereby community members build their capacity for integrating information and knowledge into their various development activities. Public libraries should focus on building knowledge-based communities or society and intellectual capital capabilities to empower people to solve the problems that exist in their communities intelligently. Knowledge-based communities are peer networks consisting of practitioners within an organization who support each other to perform better through the exchange and sharing of knowledge (Musteen et al., 2018). Some large organizations have contributed or supported the establishment of numerous communities of practices that operates in different ways and have different areas of interest (Wenger, 2011). During the third African Public Libraries Summit in South Africa, Minister of Arts and Culture Nathi Mthethwa also stated that more needs to be done to promote libraries as spaces where information is conveyed through new technologies and can help transform lives for the better (Singh, 2018).

An increasing number of public libraries are continually adapting their services and adopting new emerging technologies to meet their user needs, thereby ensuring their relevance to the digital era and to the communities they serve. The National Library of South Africa (NLSA), in partnership with Department of Arts and Culture (DAC) and provincial library services, developed the Mzansi Libraries On-Line (MLO) project to improve the quality and accessibility of public library services in the country. This project aimed to strengthen the sustainability of the public library ecosystem in South Africa by providing 700 public libraries, especially those in rural areas, with ICT equipment and Internet connectivity (NLSA, 2015). South African communities are thus receiving access to information through technology and sustained through collaborative partnerships, facilitated by skilled librarians, who understand and proactively respond to the evolving needs of their users (NLSA, 2020). Therefore, the MLO project can be viewed as the government's intention to assist citizens to overcome the triple scourge of poverty, inequality, and unemployment, by providing free access to information, especially e-governance through technology (NLSA, 2015). The Department of Arts and Culture (DAC) has also been allocating conditional community library services annually to public libraries in all the nine provinces in South Africa, namely: Gauteng, Limpopo, North West, KwaZulu Natal, Eastern Cape, Free State, Mpumalanga, Northern Cape and Cape Town provinces (Malotle & Selwana, 2016). The aim of the grant is to redress the imbalances and inequalities in the library and information services sector by improving and refurbishing existing public library and information services. All these initiatives have paved a way for some public libraries to have ICT tools such as computers connected to the Internet and Wi-Fi, the Online Public Access Catalogue (OPAC), photocopying machines and fax machines, desktops, tablets, e-readers, gaming facilities, and technological equipment for people living with disabilities. Thus, enabling community members and users to access the services and opportunities available to them is essential in the promotion of social cohesion.

Adoption and Use of Cyberzones in Building Social Cohesion

The Department of Social Development (2013) white paper described social cohesion as a process of building shared values and communities of interpretation, reducing disparities in wealth and income, and generally enabling people to have a sense that they are engaged in a common enterprise, facing shared challenges and that they are members of the same community. The United Nations Development

Programme (UNDP) further identified two main dimensions of social cohesion, namely: reducing disparities, inequalities and social exclusion and strengthening social relations, interactions and ties. A cohesive society works towards the well-being of all of its members, minimising disparities and avoiding marginalisation, and it entails three major dimensions: fostering cohesion by building networks of relationships, trust and identity between different groups, fighting discrimination, exclusion and excessive inequalities and enabling upward social mobility, as noted by the Organisation for Economic Co-operation and Development (2012).

Several authors identified potential advantages for highly cohesive societies, including more stable democracies and greater civic participation, greater productivity and growth, better quality of life for citizens, greater inclusivity and tolerance of diversity and multiculturalism and better health outcomes, particularly related to the links between health and income inequality, employment and social support measures (Pervaiz et al., 2013; Dhéret, 2015; Langer et al., 2017). The goal of public libraries is thus to enhance quality of life, wellbeing, happiness, social capital, social cohesion, safety, security, and social inclusion among communities (DAC, 2018). Lifelong learning is another means to achieving social cohesion, by providing people an opportunity to upgrade their knowledge and skills, thereby improving their economic, social and political circumstances. As stated by IFLA (2009), public libraries should foster lifelong learning and social engagement through community education and training programmes, and public programme activities that celebrate and foster cultural diversity. The Library and Information Services transformation charter (NLSA, 2014) further described the roles of the public library and the librarian as offering the following services to the community: promoting education and lifelong learning, fostering creativity and appreciation of cultural diversity, building social cohesion, and allowing citizens to participate in the knowledge society.

Therefore, to promote social inclusion and eradicate discrimination, librarians and other information workers in public libraries also need to ensure that the right to access information is not denied and that equitable services are provided for everyone (IFLA, 2012). However, modern technologies have brought about a transformation in the way library services are delivered and can thus revolutionize libraries' practices and how they interact in networked environments. Ashiq, Rehman, and Mujtaba (2021) stated that rapid, dynamic, and innovative changes in the technological sector and globalization continue to drive digital innovation in libraries. Public libraries are thus changing their traditional ways of providing information in order to stay relevant in this digital era so as to meet the demands of technologically advanced users, as noted by Oche and Ogbu (2020), while also providing equitable access to information and strengthening collaborative efforts. These libraries have moved from collections-based to service-based institutions focusing on virtual reference services, online research services, app-based services, and metaliterary services. Public libraries are committed to enhancing the benefits of digital technologies and networks to communities and society, in this digital era characterized by a digital knowledge economy. Community members and users need to access and share information or knowledge through the use of new technologies such as the Internet of Things, artificial intelligence, and blockchain technology, which could be achieved through the implementation and adoption of cyberzones. Nowadays, cyberzones have depended on emerging new technologies and trends, such as interdependent networks of information technology infrastructures, including personal computers and servers, supercomputers, the Internet, telecommunications networks, and embedded processors. In this era of ever-accelerating innovation, many libraries and information centres have increasingly adopted cyberzones to provide effective library and information services in digital environments. Padayachee et al. (2018) also pointed out that public libraries, worldwide have embarked on efforts to promote social cohesion among community members by implementing and using cyberzones, in order to enhance the library's role as a source of information and learning and to attract users to come together to engage in educational, social and recreational activities.

The implementation of cyberzones in public libraries also draws on librarians to develop technology-based skills and the ability to integrate technology into programs and services for communities while serving as a public space for collaborative learning, knowledge sharing and

community hubs of technology. Cyberzone technologies and information resources have brought about significantly different products and services in the library, where services offered presently differ from those offered in the past (Omekwu, 2002). Public library cyberzones are seen as focal points where users of diversified age groups, socio-political, economic backgrounds and cultural interests have to converge to utilize all the available resources that are relevant to their individual needs. These libraries should build a strong collection of information resources in both physical and digital formats to cater for the knowledge requirements of community members.

The use of the cyberzone in public libraries thus offer services for the benefit of the community or users whereby they are able to access and share information and communicate across the globe through the Internet. The Internet enables individuals and communities to have equality of access to information to support personal development, education, cultural enrichment, economic activity, and access to government and other services, enabling participation in a democratic society as an active citizen (IFLA, 2014). As pointed out by Stilwell (2016), access to the Internet through public libraries also enables individuals to search for employment, access government programmes, learn skills through online courses, research health issues and interact socially, which are all contributors to social inclusion. Public libraries should thus provide free access to the Internet or Wi-Fi to all community members and users. Cyberzones must thus be trusted spaces with skilled staff to provide training and support, particularly to community members or people who have not previously used modern technologies. Benedetti et al. (2020) also highlighted the need for libraries to adopt new skills for change management and to leverage 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 in the digital era.

Factors Hindering Adoption and Use of Cyberzones in Public Libraries

The digital era provides public libraries, the world over, with an opportunity to leverage their services in support of the communities they serve, and the latter expect higher standards of library services. However, the collaborative approach in planning for this technology-driven era might result in libraries losing their lustre as the first choice for sharing and accessing credible and reliable information. Although the adoption of cyberzones in public libraries improves access to digital information and narrows down the digital divide (Padayachee et al., 2018), it should be noted that there are still libraries grappling with embracing advancements because of the digital divide. The digital divide can be attributed to the lack of resources concerning access to hardware and software, lack of technical infrastructure, challenges of usability and the limitations of the paywall (Tanner, 2009). Modern public libraries thus face the long-term challenges of technological impact and a lack of funding and support for community members and users. Technological developments should be viewed as opportunities for creativity and innovation within public libraries.

However, as noted by Ashiq et al. (2021), the traditional armchair culture, mindset and insouciant librarianship continue to inhibit innovation and creativity among information professionals. Despite advances in digital technologies, the benefits have not reached the majority of rural communities, particularly less-economically sophisticated classes in South Africa, due to a lack of national policies for promoting technology innovations, a lack of funds, a lack of priorities on the part of the government, and the absence of an integrated approach to social welfare and community development (Ashiq et al., 2021). Access to digital technologies continues to be marginal due to the high cost of connectivity resulting in the exclusion of community members from the emerging new technologies.

The growth of social networks and technological innovations may also bring new challenges for community members and other library users, including extortion, fraud, identity theft, and theft of intellectual property. Free access and low costs of entry to cyberzones can also lead to cybercrimes. Cybersecurity threats can also endanger international peace and security more broadly, as traditional forms of conflict are extended into cyberspace (Kramer, 2012). International law does not take into consideration the cross-border nature of the cyber-space as a virtual network. According to Couture

and Toupin (2019), the law only recognises states as the main entities that have the right to regulate this space, and it relies on the ability of the state to control its territory and impose laws and legislations on the population living in its territory. This weakens the ability of international laws to govern cyberspace activities and ignores the role of civil, private, and social actors in governing cyberspace conducts (Couture & Toupin, 2019).

Implications of Policy and Cybersecurity Laws on the Use of Cyberspaces

The draft Department of Arts and Culture (DAC) (2018) acknowledges the challenges of providing access to information as a human right in a knowledge and information society, stating that the right of access to information and knowledge is a long-term goal for millions of South Africans. DAC (2013) aims to determine the national norms and standards for public libraries. Public libraries are a provincial function, as stated by part A, schedule 5 of the constitution, and it plays a valuable role in society and contributes to promoting social cohesion among communities in South Africa (Padayachee et al., 2018). South Africa's first National Cyber Security Advisory Council was inaugurated and mandated to advise the government on cybersecurity issues. Cybersecurity is currently regulated in South Africa through provisions contained in the Electronic Communications and Transactions Act (ECTA; 2002), which also proposed the establishment of a cybersecurity hub by the Minister of Communications in consultation with the Minister of Justice. The cybersecurity hub was assigned responsibility for creating awareness of cybercrime, responding timeously to incidents or threats of cybercrime, detecting, and preventing cybercrime and fostering cooperation between government, the private sector, civil society and international businesses and communities in implementing guidelines or standards for cyber security requirements (Gilland & Bokhari, 2016).

South Africa is also a signatory to international treaties such as the Southern African Development Community (SADC) Model and the Budapest Convention, recognising that the Internet, being a global phenomenon, requires an internationally harmonised legislative approach to cyber security and international cooperation in order to combat cybercrimes efficiently. Over the past few years, a number of measures and steps were taken by the South African government in respect of cybersecurity, including the publication of the State Security Agency (2012), which outlined policy positions regarding cybercrime, national security threats in cyberspace, combatting cyber warfare and developing and updating applicable existing laws to ensure alignment. This framework aimed to coordinate state activities on cybersecurity and required cooperation between government, the private sector and civil society. The provision of the Protection of Personal Information (POPI) Act also imposed stringent requirements pertaining to the lawful processing of personal information and required data processors to implement data security measures and standards aimed at protecting personal data from breach or compromise. The draft Cybercrimes and Cybersecurity Bill provides for the criminalisation of a broad range of cybercrimes, including using personal information and financial information to commit offences, unlawfully accessing and intercepting data, using software, hardware and computer systems to commit offences and computer related espionage which includes the use of hacking, social engineering and specialised software and hardware to gain unauthorised access to critical data or national database(Law Society of South Africa, 2015) .

The racist social media posts also constitute a specific crime in terms of the Bill and infringement of copyright as well as the criminalisation of infringing copyright through the use of peer-to-peer file sharing. Therefore, attempting, inciting, or procuring any of the above crimes also constitutes an offence in terms of the Cybercrimes and Cybersecurity Bill, and penalties on conviction include fines of between R5 million and R10 million or imprisonment up to 25 years. The current legislative provisions applicable to investigating aspects relating to cybercrimes, such as the ECTA, the Regulation of Interception of Communications and Provision of Communication-related Information Act, No. 70 of 2002 and the Criminal Procedure Act, No. 51 of 1977, are deemed inadequate measures for the investigation of cybercrimes. The Cybercrimes and Cybersecurity Bill thus confers extensive powers to law enforcement authorities and other investigators in respect of access, search, and seizure procedures.

CONCLUSION AND RECOMMENDATIONS

The adoption of cyberzones in public libraries is a crucial effort towards sustainable development and building social cohesion among underprivileged communities in South Africa. Therefore, public libraries in South Africa should facilitate collaborative efforts for knowledge sharing and work greatly towards building social cohesion among community members and users. These libraries should adopt cyperzones by using new convergence technologies and have well-maintained infrastructure supported by professionally trained competent staff. Librarians and information professionals also need to learn new technologies and find a better solution to transform cyberzones into information or knowledge centres where people crippled with illiteracy or limited education find value. The government should also continue providing public access to the Internet through public libraries, encourage developing communication access centres that will play an important role in bridging the digital divide. ICT experts should create a rural public libraries network to connect rural community members to the Internet. Public library authorities need to ensure that library and information networks are as comprehensively available as other public utilities and provided at a reasonable cost. Public libraries, especially in rural communities, should be provided with the minimum infrastructure to access electronic information through national and international networks and to access local information in multiple formats. Librarians must thus be encouraged to attend continuing education programs and skill enhancement to use digital technologies to the fullest extent in delivering public library services. Public libraries should be provided with financial support or funding, on a regular basis, by the parent organizations. Policy on the use of cyberzones and innovative technologies in public libraries should be formulated and implemented. The innovation networks need to be created between communities, libraries, and government to:

- Encourage and foster a knowledge-sharing culture between community members, information professionals and government officials, and
- Enable public libraries to design and develop policies to support new library developments and innovations and provide them with a better understanding of technological innovations such as cyberzones and integration of new technologies in their library practices and services.

REFERENCES

Ardichvili, A., Maurer, M., Wentling, W. L. T., & Stuedemann, R. (2006). Cultural influences on knowledge sharing through online communities of practice. *Journal of Knowledge Management*, *10*(1), 95–96. doi:10.1108/13673270610650139

Ashiq, M., Rehman, S., & Mujtaba, G. (2021). Future challenges and emerging role of academic libraries in Pakistan: A phenomenology approach. *Information Development*, *37*(4), 158–173. doi:10.1177/0266666919897410

Benedetti, A., Boehme, G., Caswell, T. R., Denlinger, K., Li, Y., McAllister, A. D., & Wesolek, A. J. (2020). *Top Trends in Academic Libraries.* https://digitalcommons.unf.edu/cgi/viewcontent

Bidandi, F., Roman, N., & Davids, G. (2021). The responsibility of government and society towards social cohesion: A family perspective. *Strategic Review for Southern Africa*, *43*(1), 11–33.

Bopape, S. T., Dikotla, M., Mahlatji, M., Ntsala, M. J., & Lefose, M. (2021). Public and community libraries in Limpopo Province, South Africa: Prospects and challenges. *South African Journal of Library and Information Science*, *87*(1), 9–19. doi:10.7553/87-1-1810

Bowen, G. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, *9*(2), 27–40. doi:10.3316/QRJ0902027

Bryan, J., & Henry, L. (2012). A model for building school–family–community partnerships: Principles and process. *Journal of Counseling and Development*, *90*(4), 408–420. doi:10.1002/j.1556-6676.2012.00052.x

Chan, J., To, H. P., & Chan, E. (2006). Reconsidering social cohesion: Developing a definition and analytical framework for empirical research. *Social Indicators Research*, *75*(2), 273–302. doi:10.1007/s11205-005-2118-1

Corbin, J., & Strauss, A. (2008). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (3rd ed.). Sage. doi:10.4135/9781452230153

Council of Europe. (2005). *Concerted development of social cohesion indicators: Methodological guide*. University of Virginia: Council of Europe Publishing.

Couture, S., & Toupin, S. (2019). What does the notion of "sovereignty" mean when referring to the digital? *New Media & Society*, *21*(2), 2305–2322. Advance online publication. doi:10.1177/1461444819865984

Department of Arts and Culture (DAC). (2013). *The South African Public Library and Information Services Bill*. DAC.

Department of Arts and Culture (DAC). (2018). *National policy for Library and Information Services*. DAC.

Department of Social development. (2013). *White paper on families in South Africa.* University of Cape Town.

Dhéret, C. (2015). *Fostering social cohesion: The missing link in the EU's exit strategy from the crisis*. European Policy Centre.

Dollarhide, C. T., & Saginak, K. A. (2016). *Comprehensive school counselling programs K–12: Delivery systems in action*. Merrill Counselling.

Dragolov, G., Ignácz, Z., Lorenz, J., Delhey, J., & Boehnke, K. (2013). *Social cohesion radar measuring common ground: An international comparison of social cohesion methods reports*. Jacobs University Bremen.

Edwards, J. B., Rauseo, M. S., & Unger, K. R. (2013). *Community centred: 23 reasons why your library is the most important place in town*. Public Library Association.

Gilland, S., & Bokhari, B. (2016). *World's largest crimezone . . . cyberspace*. Bizcommunity.

Goodwin, N., Peck, P., Freeman, T., & Posaner, R. (2004). *Managing across diverse networks of care: Lessons from other sectors*. National Coordinating Centre for the Service Delivery and Organisation.

Gray, B. (1989). The pathways of my research: A journey of personal engagement and change. *The Journal of Applied Behavioral Science*, *25*(4), 383–398. doi:10.1177/002188638902500406

Himmelman, A. T. (2001). On coalitions and the transformation of power relations: Collaborative betterment and collaborative empowerment. *American Journal of Community Psychology*, *29*(2), 277–284. doi:10.1023/A:1010334831330 PMID:11446282

Hogue, T. (1994). *Community based collaboration: Community wellness multiplied*. Academic Press.

Hollenbeck, J. R., Beersma, B., & Shouten, M. E. (2012). Beyond team types and taxonomies: A dimensional scaling approach to team description. *Journal of Academy of Management Review*, *37*, 82–106.

IFLA. (2012). *IFLA Code of Ethics for Librarians and other Information Workers*. IFLA.

IFLA/UNESCO public library manifesto. (1994). International Federation of Library Associations and Institutions and the United Nations Educational, Scientific, and Cultural Organization.

International Federation of Library Associations and Institutions. (2009). *World Library and Information Congress: 75th IFLA General Conference and Assembly, August 23–27, 2009, Milan, Italy*. Author.

Jensen, J. (1998). *Mapping social cohesion: The state of Canadian research*. Canadian Policy Research Network.

Julian, D. A. (2006). A community practice model for community psychologists and some examples of the application of community practice skills from the Partnerships for Success initiative in Ohio. *American Journal of Community Psychology*, *37*(1–2), 21–27. doi:10.1007/s10464-005-9004-5 PMID:16680534

Kitchenham, B. (2004). *Procedures for Performing Systematic Reviews*. Keele University.

Langer, A., Stewart, F., Smedts, K., & Demarest, L. (2017). Conceptualising and measuring social cohesion in Africa: Towards a perceptions-based index. *Social Indicators Research*, *131*(1), 321–343. doi:10.1007/s11205-016-1250-4

Law Society of South Africa. (2015). *Cybercrimes and Cybersecurity Bill*. Author.

Laws Africa. (2015). *Libraries. eThekwini, South Africa*. FRBR URI: /akn/za-eth/act/by-law/2015/libraries/eng@2015-09-17.

Leonard, P. E., & Leonard, L. J. (2001). The collaborative prescription: Remedy or reverie? *International Journal of Leadership in Education*, *4*(4), 383–399. doi:10.1080/13603120110078016

Malotle, A., & Selwana, K. (2016, October). The impact of the public libraries and community libraries conditional grant. *The State of Conditional Grant Funded Libraries in South Africa, October 2016*, 11. National Library of South Africa.

Martínez-Martínez, O. A., Ramirez-López, A., & Rodríguez-Brito, A. (2020). Validation of a multidimensional social cohesion scale: A case in urban areas of Mexico. *Sociological Methods & Research*, *49*(3), 778–808. doi:10.1177/0049124118769112

Massaro, M., Dumay, J. C., & Guthrie, J. (2016). On the shoulders of giants: Undertaking a structured literature review in accounting. *Accounting, Auditing & Accountability Journal*, *29*(5), 767–801. doi:10.1108/AAAJ-01-2015-1939

Maxwell, J. (1996). *Social dimensions of economic growth*. University of Alberta.

Munung, N. S., de Vries, J., & Pratt, B. (2021). Genomics governance: Advancing justice, fairness and equity through the lens of the African communitarian ethic of Ubuntu. *Medicine, Health Care, and Philosophy*, *24*(3), 377–388. doi:10.1007/s11019-021-10012-9 PMID:33797712

Musteen, M., Curran, R., Arroteia, N., Ripollés, M., & Blesa, A. (2018). A community of practice approach to teaching international entrepreneurship. *Administrative Sciences*, *8*(4), 1–17. doi:10.3390/admsci8040056

National Library of South Africa. (2014). *The Library and Information Services (LIS) transformation charter*. Author.

National Library of South Africa. (2015). *Annual report*. Author.

National Library of South Africa. (2020). *Annual report*. Author.

Oche, N. A., & Ogbu, K. N. (2020). Re-defining the roles of public libraries in the era of information explosion. *Library and Information Perspectives and Research*, *2*(2), 74–85.

Omekwu, C. O. (2002). Challenges of information systems in Modern Libraries. In E. C. Madu & M. B. Dirisu (Eds.), *Information science and technology for library schools in Africa* (pp. 100–114). Ibadan Evi-Coleman Publications.

Organisation for Economic Co-operation and Development. (2012). *Perspectives on global development: Social cohesion in a shifting world*. Author.

Padayachee, K., Matimolane, M., & Ganas, R. (2018). Addressing curriculum decolonisation and education for sustainable development through epistemically diverse curricula. *South African Journal of Higher Education*, *32*(6), 288–304. doi:10.20853/32-6-2986

Panitz, T. (1996). A definition of collaborative vs cooperative learning. In *Deliberations*. London Metropolitan University. Retrieved November 5, 2011, from https://www.londonmet.ac.uk/deliberations/collaborative-learning/panitz-paper.cfm

Pervaiz, Z., Chaudhary, A. R., & van Staveren, I. P. (2013). *Diversity, inclusiveness and social cohesion* (Working Paper No. 2013-1). International Institute of Social Studies.

Roller, M. R., & Lavrakas, P. J. (2015). *Applied qualitative research design: A total quality framework approach*. The Guilford Press.

Schiefer, D., & van der Noll, J. (2017). The essentials of social cohesion: A literature review. *Social Indicators Research*, *132*(2), 579–603. doi:10.1007/s11205-016-1314-5

Singh, J. (2018). Public libraries are a catalyst for change. *Metro: Ezasegagasini*, 5. https://www.durban.gov.za/Resource_Centre/gazette/Documents/13July_26July2018_English.pdf

State Security Agency. (2012). *National cyber security policy framework for South Africa*. Government Gazette.

Stewart, T. A. (1997). The invisible key to success. *Fortune*, *134*(3), 173–176.

Stilwell, C. (2016). Public libraries and inclusion: An update from South Africa. *Perspectives on Libraries as Institutions of Human Rights and Social Justice*, *41*, 119–146. doi:10.1108/S0065-283020160000041006

Tanner, C. K. (2009). Effects of school design on student outcomes. *Journal of Educational Administration*, *47*(3), 381–399. doi:10.1108/09578230910955809

Wang, S., & Noe, R. A. (2010). Knowledge Sharing: A Review and Directions for Future Research. *Human Resource Management Review*, *20*(2), 115–131. doi:10.1016/j.hrmr.2009.10.001

Wenger, E. (2011). *Community of practice: A brief introduction*. Academic Press.

Woods, D. M., & Chen, K. C. (2010). Evaluation techniques for cooperative learning. *International Journal of Management and Information Systems*, *14*(1).

Tlou Maggie Masenya holds a PhD in information science from the University of South Africa and a master's degree in information technology from the University of Pretoria. She has eight years of work experience in academia, in the field of information science and technology. She is currently a senior lecturer in the Department of Information Systems at Durban University of Technology. She also worked as a senior lecturer at the University of South Africa and the University of Zululand. She supervises graduate students and also serves as an external examiner for postgraduate studies. She published book chapters and articles in peer-reviewed accredited journals. She is currently reviewing articles for the South African Journal of Information Management, South African Journal of Library and Information Science, Mousaion, Research Metrics and Analytics Journal, Journal of South African Society of Archivists, and IGI Global book chapters. Her areas of expertise include ICT4D, Digital preservation and Curation, technopreneurship, digital entrepreneurship, Records management, knowledge management, indigenous knowledge systems, Digital transformation and disruptive innovation technologies. She edited a book titled Innovative Technologies for Enhancing Knowledge Access in Academic Libraries, published by IGI-Global in June 2022. She is editing a book entitled "Digital Preservation and Documentation of Global Indigenous Knowledge Systems, to be published by IGI-Global in June 2023.