



Reclaiming Africa's Intellectual Futures

LEADING THE WAY: UNIVERSITY LIBRARIES ADVANCING SUSTAINABLE DEVELOPMENT GOALS

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Presentation outline

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- Role of universities in Sustainable Development Goals
- Role of University libraries in Sustainable Development Goals
- Research purpose and question
- Methodology
- Conceptualising the study
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Purpose of the presentation

To report on the results of a study on how university libraries can lead the way by using citizen science activities to advance Sustainable Development Goals.

Introduction

- Citizen science is a collaboration or the activity of gathering research data by untrained community members.
- Citizen science is essential in realising SDGs as it can be used as the primary source of research data in monitoring and measuring the progress of SDGs.
- University libraries are already involved in research support and can provide access to research data to support citizen science projects.

Role of Universities in Sustainable Development Goals

“Sustainable Development Solutions Network proposes that universities have a critical role in the achievement of the SDGs through the provision of education, research and collaboration, and that the SDGs provide a framework through which universities can demonstrate their impact”

(Thorpe & Gunton 2021)

Role of libraries in Sustainable Development Goals

- Services and products that promote the achievement of the SDGs.
- Understanding the needs of clients and indispensable support
- Advancing digital inclusion through access to ICT, internet connection and skills.
- Promoting innovation, creativity and access to the world's knowledge for current and future generations.

<https://www.ifla.org/files/assets/hq/topics/libraries-development/documents/sdg-storytelling-manual.pdf>

Research purpose and question

Research purpose

To propose how university libraries can support Sustainable Development Goals using citizen science.

Research question

Which resources are required by university libraries to sustain SDGs through citizen science?

Methodology

- Paradigm – pragmatism to find practical solutions to key issues related to a real-world problem.
- Approach – mixed method to acquire views and specific feedback from academic librarians and experts working with research data.
- Design – exploratory sequential design method to understand the problem holistically.
- Questionnaire administered to 63 academic librarians (members of the Library and Information Association of South Africa).
- Interviews conducted with 15 experts in research data (members of the Network of Data and Information Curation Communities).

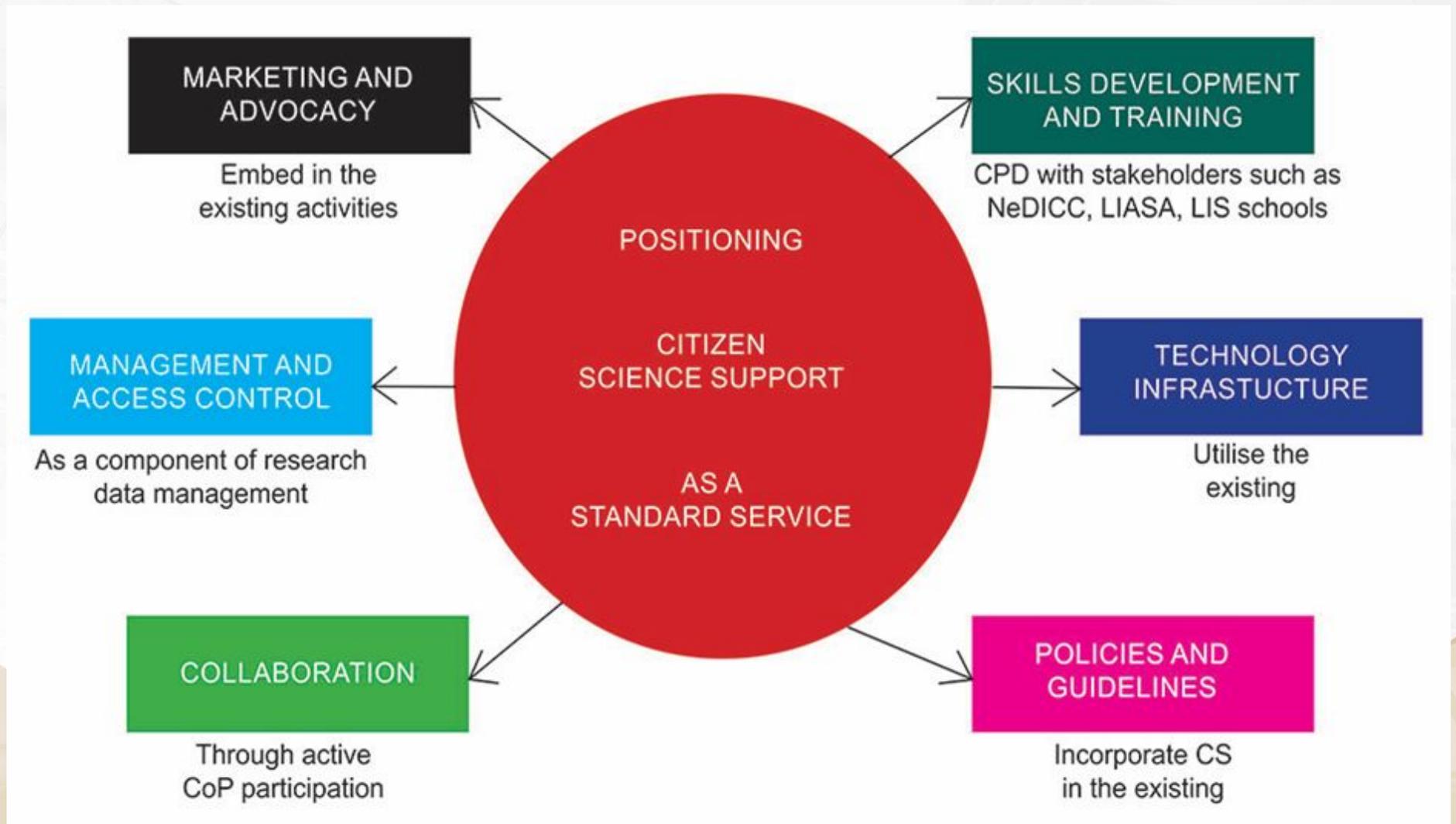
Methodology cont'd

- Data analysis was a **two-phased** approach:
 - Quantitative data
Numerical data analysed using SPSS
 - Qualitative data
Thematic analysis to identify patterns and themes

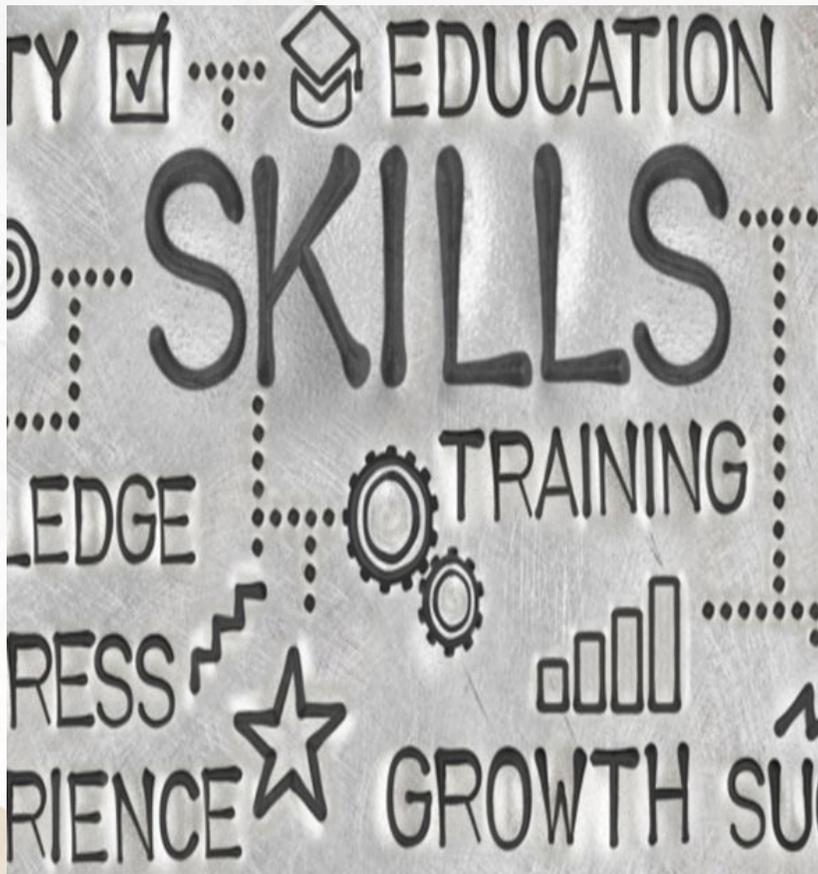
Conceptualising the study

- Two frameworks used to develop the blueprint for the study
 - Knowledge management framework
 - Citizen science framework
- Relevant constructs from two frameworks were identified to guide the study.

Framework to guide university libraries to support SDG using citizen science.



Skills development and training



- Academic librarians require capacity development to support SDG projects and initiatives
- Stakeholders such as LIASA, NeDICC and LIS schools to assist with skills development and training.
- Continuing Professional Development activities are proposed.

Technology infrastructure



- Hardware and software technological requirements are key.
- Citizen science projects produce a volume of research data.
- Technology is already in place, however, more is required due to large amounts of data to assist with SDG projects.

Policies and guidelines

- Good data management practices for retention and preservation of data for future use.
- Preserved data breaks the cycle for the collection of the same data.
- Policies and guidelines will ensure the authenticity of data.

Collaboration



- Internal and external stakeholders collaborating to produce quality research data for the realisation of SDGs.
- Internal – Academic departments, researchers, external community members, and citizen science associations.
- External – Global citizen science associations and international governments and organisations.

Management and access control



- Central platform for proper storage and management of data.
- Data repository for access control

Marketing and advocacy

- Academic librarians to come up with a marketing plan for SDG projects.
- Advocacy and awareness required to inform researchers and communities on the importance of sharing knowledge and using academic library resources to search for answers related to SDGs.

Findings and discussions

- Citizen science data **perceived** to be reliable to use for SDG projects.
- **Skills shortage** and lack of time to perform research data-related duties. Training is therefore a requirement.
- **CPD, workshops, and courses** to include all stakeholders in training.
- Advanced use of some **smart technologies** was displayed. There is a lack of knowledge of some technologies.

Findings and discussions cont'd

- **Smart technologies** are important to advance citizen science activities for the benefit of SDGs.
- There is a lack of **good data management practices** in university libraries.
- Research data to support SDGs should be **open and accessible**.
- **Data repositories** to make data open and accessible were ranked low.

Findings and discussions cont'd

- **Different platforms** are proposed for collaboration
 - Workshops
 - Social media pages
 - Physical discussion rooms
 - Communities of practice
- Academic librarians to **create awareness** and foster relationships.
- Research data stored on personal computers and cloud storage.

Findings and discussions cont'd

- **Support for data management** not clear.
- **Data repositories** available to store research data.
- No proper **guidelines** followed to manage research data.
- **No services** currently available to promote and support citizen science activities.
- Research support groups and a dedicated marketing unit are necessary.
- Trained and dedicated workforce for support and promotion.
- Data management, research activities, and digitisation are important.

Recommendations

- Staggered introduction of citizen science in university libraries.
- An introductory course in citizen science for academic librarians.
- Expansion of current technologies to accommodate citizen science.
- Development of a research data management policy / guidelines to include citizen science.

Recommendations cont'd

- Strong collaboration between academic librarians, academic staff members and community members is recommended.
- Community of practice among academic librarians internally and externally.
- Due to budget cuts in universities, current data repositories be used to house research data.
- Exhibitions in libraries, citizen science day, procurement of information resources, marketing plan, partnerships with communities and citizen science associations and a database of citizen science projects.

How can university libraries push boundaries?

- Citizen science has an influence on the traditional ways of conducting research in universities, libraries can push boundaries by;
 - Involving community members in research which is gradually changing how knowledge is produced in universities.
 - Provision of infrastructure and information resources to support SDGs.
 - Engaging in community projects and providing training.
 - Supporting scholars to advance SDGs
 - Play an advisory role in curriculum transformation to include SDGs and citizen science in universities.

Conclusion

- Citizen science is a fairly new concept in academic libraries, however its importance in achieving Sustainable Development Goals has been widely reported.
- University libraries do have systems and resources in place however there is a need to enhance and expand on what is available.
- Academic librarians are already involved in community engagements, they need to extend their services to cater for new clients in a form of citizen scientists.



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