

RESEARCH COLLABORATION IN THE ARCHIVES AND RECORDS MANAGEMENT FIELD ACROSS AND BEYOND UNIVERSITIES IN AFRICA: AN INFORMETRIC ANALYSIS

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ABSTRACT

Due to technological developments, innovation and globalisation, research is becoming more complex, requiring wide-ranging skills. A lack of resources and publishing platforms has led to low research output in archives and records management (ARM) in most developing countries in Africa. However, experienced researchers from different countries can collaborate by sharing and transferring knowledge and making optimal use of resources that will lead to the sustainability of research output. Utilising informetrics analysis, as well as co-authorship as the measure for collaboration, this article examines the nature, trend and type of ARM research collaboration in Africa by identifying individuals, institutions and countries that collaborate in order to recommend ways of improving such activities. Quantitative data was extracted from the database of African Journals Online (AJOL) and analysed. The key finding suggested a low level of collaboration among ARM researchers, with the work produced emanating mostly from one institution. The

study argues that social and physical proximity contribute to research collaboration in ARM in Africa. The scarcity of literature on ARM in Africa led the article to recommend more collaborative projects whereby established researchers nurture and mentor novice researchers to become self-sustainable in producing scholarly literature. Hopefully, this would help to formulate research agendas to address grand societal challenges, such as a lack of accountability, poor audit results and poor service delivery, which all stem from a breakdown in the records system and a non-sustainable ARM profession in Africa, in order to become on par with the rest of the world.

KEYWORDS

research collaboration, co-authorship, archives, records management, Africa, universities

1 INTRODUCTION

The importance of research in any field cannot be overemphasised. In the field of archives and records management (ARM), more specifically in Africa, research can add value to the ailing and collapsing national archival and records systems (Nengomasha 2013:2). The output of such research can help to propel the image of archival institutions in Africa to new heights and catapult it to unchartered territories. This in turn will empower archivists and records managers to deal with the challenges of governance in an electronic environment, and to formulate research agenda to address grand societal challenges, such as a lack of accountability, poor audit results and poor service delivery, emanating from a breakdown in the records system. However, the lack of resources and platforms to publish research outputs, as well as the complexity of technological development, seems to have contributed to the dearth of research in ARM in Africa. Many scholars in Africa lament the paucity of ARM research. Indeed, a growing body of literature confirms Africa as a minor contributor to research output in ARM. For example, scholars such as Keakopa (2009), Khayundi (2011), Kemoni (2009), Mnjama (1996), Ngoepe (2011) Thurston (1996), and Yusof and Chell (1998) indicate that in many African countries, ARM research has been given little attention. The key findings of studies by these scholars have been consistent, with emphasis on the little input that researchers in Africa have into ARM. The gap in research is widening when Africa is compared with developed countries such as Canada, Australia, the United States (US) and China, to mention just a few. A study conducted by Onyancha, Ngoepe and Maluleka (2012) confirmed that ARM in Africa is marginalised and less researched when compared to library and information studies (LIS) which are progressing. Onyancha, Ngoepe and Maluleka (2012) identify possible reasons that attributed to this as:

- (1) few ARM researchers, (2) Few mainstream journals, (3) few institutions offering ARM education and training – for example, in South Africa out of 25 universities, 10 offer LIS education and training, of which only 3 offer ARM education and training, (4) lack of skills in scientific writing, (5) insufficiency of financial and material means required

for publishing, (6) lack of institutional requirement, (7) attitude of international journals to African authors. The challenge is compounded by the unwillingness of practicing archivists and records managers to contribute to research outputs.

All the above factors have relegated archivists, records managers and scholars in Africa to be the consumers of research rather than the producers of new knowledge. These challenges illustrate the need for developing robust mutually beneficial collaborative research between academy and practice. The Eastern and Southern Regional Branch of the International Council on Archives (ESARBICA 2009) through its resolution makes a strong plea to archival schools in the region to collaborate among themselves, as well as with archival institutions to ensure that their training programme remains relevant and meets the needs of archivists and records managers. In this regard, academic institutions and practices can identify research agendas that they can work on together. Through collaboration, researchers with a wide range of knowledge, skills and techniques from different countries, sectors, institutions or individuals can share and transfer knowledge and the optimal use of resources that will lead to the sustainability of more research output. Collaboration is defined as the working together of researchers to achieve a common goal of producing new scientific knowledge (Katz & Martin 1997:11). Sonnenwald and McLaughlin (2005:1) view collaboration as a human behaviour that facilitates the sharing of meaning and completion of tasks with respect to a mutually shared super-ordinate goal and which takes place in a particular social or work setting. Ocholla (2008:468) is of the opinion that collaboration is a 'process where two or more individuals or organisations deal collectively with issues that they cannot solve individually'. It is, therefore, safe to say that collaborative research can be seen as a process where people work together in pursuit of a common research-related goal. Adams, Gurney and Marshall (2007:2) also indicate that collaboration is encouraged at policy level because it provides access to a wider range of facilities and resources.

Utilising informetrics analysis, as well as co-authorship as the measure for collaboration, this article examines the nature, trend and type of ARM research collaboration in Africa by identifying individuals, institutions and countries that collaborate in order to recommend ways of improving or strengthening such collaborative activities. It is hoped that the study will stimulate interest for research collaboration in ARM and thus increase research output in this field in Africa. This in turn will help to formulate research agendas to address grand societal challenges and sustain the ARM profession in Africa to be on a par with the rest of the world.

2 PROBLEM STATEMENT

Ngulube (2001:156) posits that research is a fundamental underpinning the improvement of ARM in Africa, yet there is very little research in the field in most countries in Africa (Katu 2009; Keakopa 2006; Kemoni 2009; Khayundi 2011; Mnjama 2005; Yusuf & Chell 1998). This paucity of research in archives and records management affects policy

formulation and advocacy, hence, the perilous state of archives and records management in African countries. Keakopa (2009:79) argues that research in ARM has received much more attention in developed countries such as Australia, Canada and the US than countries in Africa. The limited research outputs in Africa might be because there are only three mainstream journals in the entire African continent dedicated to ARM, namely: *Journal of the Eastern and Southern Regional Branch of the International Council on Archives*, *SASA Journal of the South African Society of Archivists* and *African Journal for Library, Archives and Records Management*. The latter hardly publishes any articles on ARM. Keakopa (2009:87) cites the high costs of conference participation as another possible reason for the low turnover of literature. Indeed, research needs resources which are often difficult to find in developing countries. Lack of collaboration between seasoned and novice researchers may also contribute to the paucity of research outputs. Therefore, it is necessary to examine the nature, trend and type of collaboration in ARM research in Africa by identifying individuals, institutions and countries collaborating in ARM research.

3 RESEARCH OBJECTIVES

The general purpose of the study was to examine the nature, trend and type of collaboration in ARM research in Africa by identifying individuals, institutions and countries collaborating in ARM research in the region. The specific objectives were to:

- Examine the trends and patterns of collaboration in ARM research in Africa.
- Identify the top collaborating authors, institutions and countries in Africa.
- Identify the number of single authored articles versus multiple authored articles.
- Identify journals with the most collaboration articles.

4 LITERATURE REVIEW

As research becomes more complex due to technological development, more attention is given to the benefits of collaboration. Research collaboration is generally presumed to be valuable and useful, particularly to policymakers (Tang & Shapira 2012:96). A number of studies have indicated a positive correlation between collaboration and research performance. According to Katz and Martin (1997:23), collaboration builds partnerships; helps to empower researchers to accomplish projects that would have been very difficult to accomplish individually; and brings together experiences, skills, knowledge and the know-how of different researchers into one particular project. Collaboration is a crucial factor in bringing together expertise that resides in different sectors and institutions in order to enhance research productivity (Shari, Haddow & Genoni 2012:592). As a result of technological developments, research collaborations are increasingly multifaceted and large-scale.

Several informetrics studies have used co-authorship to measure collaborative activities. Katz and Martin (1997:17) indicate that collaboration can be adequately defined in terms of a multi-authored paper. Sbrubramanyam (1983); Melin and Persson (1996); Avkiran (1997); Katz and Martin (1997); Glanzel and Danell (2004 as cited by Ajiferuke 2005) have indicated that it is most common in bibliometrics studies to equate co-authorship with collaboration. Onyancha, Ngoepe and Maluleka (2012) are saddened by the lack of collaboration research projects in ARM in Africa.

Onyancha (2007:72) and Gauthier (1998:13) argue that co-authorship is the most commonly used and preferred informetrics indicator in describing research collaboration and cooperation in all areas of research. Katz and Martin (1997:3) also agree that the multi-author publication, frequently referred to as a co-authored publication, has been used as a basic counting unit to measure collaborative activity. Measuring research collaboration by using co-author analysis is based on the principle that, when two or more researchers jointly sign a paper, intellectual and/or social links can be assumed to exist between them (Gauthier 1998:13). Smith and Katz (2000) classify the levels at which research collaboration can take place into six categories, namely, individuals, groups, departments, institutions, sectors and countries (see Table 1 for these levels), hence Katz and Martin's (1997) identification of three types of collaboration, namely, inter-individual, inter-institutional, and inter-national. Macias-Chapula and Mijangos-Nolasco (2002) mention three collaborations, namely, inter-institutional, inter-national and North-South types of collaboration. Kreiner and Schultz (1993) and Smith and Katz (2000) categorise collaboration into informal and formal collaboration, the former being the most common in research cycles. It is widely acknowledged that countries per se do not collaborate, but it is the individuals who collaborate in research. Nevertheless, it is generally agreed that policies and agreements about research collaboration are either formulated or entered into by individuals on behalf of the institutions and/or countries which they represent, hence, country and institutional collaboration. Therefore, it is clear that accountability for donor research funds allocated for research collaboration is, to a large extent, the responsibility of either institutions or countries, which in turn require that researchers account for the funds they receive to conduct research.

Table 1: Different levels of collaboration and distinction between *inter* and *intra* forms (Katz & Martin 1997)

Level	Intra	Inter
Individual	–	Between individuals
Group	Between individuals in the same research group	Between departments (in the same department)
Department	Between individuals or groups in the same department	Between departments (in the same institution)
Institution	Between individuals or departments in the same institution	Between institutions

Sector	Between institutions in the same sector	Between institutions in different sectors
Nation	Between institutions in the same country	Between institutions in different countries

Onyancha (2007) observes that collaboration between individuals, institutions and countries has been increasing steadily for decades, covering different disciplines, development categories, institutions, geographical regions, and countries. Katz and Martin (1997:1) indicate that the increase in research collaboration across disciplines is propelled by the notion that ‘collaboration in research is “a good thing” that should be encouraged’. ARM research in sub-Saharan Africa can also benefit from these partnerships where information, knowledge and technologies can be shared. Experienced researchers in the field of ARM need to get together and collaborate more often. In a study conducted by Anderson (2007), the researcher indicates that it is clear that the route to truly productive and useful research lies in collaboration. Katz and Martin (1997 as cited by Onyancha 2007), indicate that one of the paradoxes of measuring research collaboration is making a conceptual distinction between different types of collaboration.

Anderson (2007) observes different levels of collaboration that can occur in ARM, namely, collaboration between researchers within local archival organisations, national collaboration and international collaboration. Furthermore, according to Ocholla (2013), there are different possible areas of collaboration, for example, conceptualisation of research problem, conducting of research, dissemination of results, funding, provision of advice and resources. For the purpose of this study, the research collaborators will be individuals, organisations and countries whose names appear on the articles.

There are many benefits to collaboration. With more minds brainstorming a specific project, they have the benefit of generating more ideas and more manpower is dedicated to that particular project. Collaboration brings about a combination of strengths which will most likely minimise weaknesses. Sooryamoorthy (2009) argues that internationally co-authored publications have a higher citation impact than single-authored papers. Gazni, Sugimoto and Didegah (2011) also indicate that the benefits and merits of research collaboration include the sharing and transferring of knowledge and research equipment; connecting scholars to a large scientific network; expediting the research process; and increasing the visibility of articles. Ocholla (2013) identifies the benefits of collaboration as follows:

1. it enables researchers to share knowledge, skills and techniques;
2. it is one way of transferring knowledge (especially tacit knowledge);
3. it could bring about a clash of views, a cross-fertilisation of ideas which could, in turn, generate new insights or perspectives that individuals working on their own, would not have grasped;

4. it provides intellectual companionship (eg within a community of practice);
5. it plugs the researcher into a wider network of contacts in the scientific community; and
6. it can enhance the potential visibility of the work.

Anderson (2007:39) is of the opinion that professional associations have a role to play in encouraging research. In this regard, archival associations can provide small grants for research that advance the profession. However, the challenge in Africa is that most if not all archival associations are dysfunctional. For example, Ngoepe (2011) indicates that in the ESARBICA region, archival associations exist only in South Africa, Botswana and Kenya. Of all these associations, only the South African Society of Archivists has been in existence for a long time, but it still battles to make an impact in terms of research and policy contribution on ARM in the country. The associations in Botswana and Kenya are still battling to get off the ground. Duranti (2012) recommends the following:

- Records offices and archives become a locus of research by establishing a partnership with academics involved in international research, professionals involved in standards development, experts in law and information technology and, mostly, with the creators of the records under their jurisdiction.
- Archival associations focus on demonstrating to regulatory and auditing bodies and to policy makers that they ought to embed digital records keeping and preservation requirements in any activity that they regulate, audit or control. Digital records must become a government priority
- This would result in (1) the production of new knowledge; (2) the achievement of action-oriented research outcomes; (3) the education of all participants; (4) results that are relevant to the local setting; (5) appropriate research and development methodology; and (6) and the empowerment of the archives.

5 SCOPE AND RESEARCH METHODOLOGY

The study adopted an informetrics approach in order to quantitatively examine the nature, trend and type of collaboration in ARM research in Africa by identifying individuals, institutions, and countries collaborating in ARM research in the region. The study covered 15 LIS journals indexed in the African Journals Online (AJOL) database covering articles from 1990 to 2013. The search query covered the topics 'Archives' OR 'Records' as subject terms. As reflected in Table 2, a total of 312 ARM articles indexed in the AJOL database from 1990 to 2013 were obtained. The data was captured in spreadsheets prepared using Microsoft Excel software before being exported to the UCINET and NetDraw visual network analysis software. The data was then converted to UCINET file format and opened in NetDraw to create the networks, and analysed in

line with the research objectives and presented using different graphical representations as indicated in Section 6.

6 RESULTS AND DISCUSSION

This section presents and discusses the results of the study as per the research objectives.

6.1 TRENDS AND PATTERNS OF COLLABORATION IN ARM RESEARCH IN AFRICA

As reflected in Figure 1 and Table 2, of the 312 articles, only 58 were co-authored. It is distressing to note that only one out of 37 articles was co-authored between 1990 and 1994. This implies that research skills were not transferred to novice researchers through collaboration. However, the number of collaborations increased to five between 1995 and 1999, but decreased to four between 2000 and 2004. It started to rise between 2005 and 2009 with 12 co-authored publications out of 43. Between 2010 and 2013, the number of collaborations increased to almost 50 per cent with 36 out of 73 articles having been co-authored.

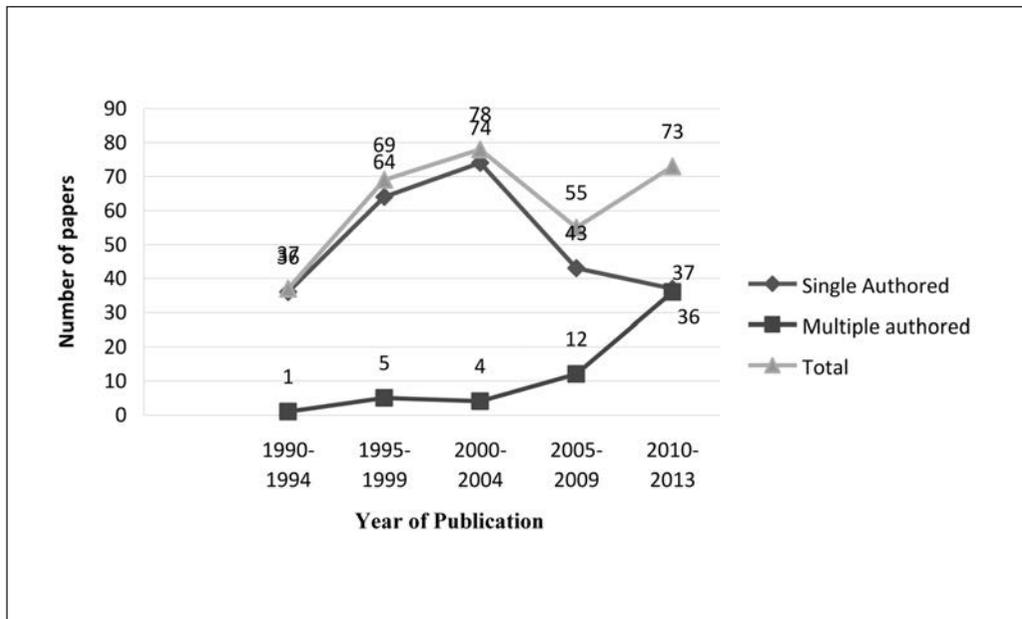


Figure 1: Trends of single and multi-authored articles

Table 2: Trends of single and multi-authored articles

Year	Total number of articles	Number of authors	Single authored articles	Multi-authored articles
1990–1994	37	38	36	1
1995–1999	69	74	64	5
2000–2004	78	82	74	4
2005–2009	55	69	43	12
2010–2013	73	123	37	36
Total	312	386	254	58

6.2 COLLABORATING AUTHORS, INSTITUTIONS AND COUNTRIES

This objective is divided into top collaborating authors, institutions and countries.

6.2.1 Collaborating authors

There were a total of 89 collaborating authors out of 385. As reflected in Figure 2 and Table 3, topping the list of the most collaborating authors was Ngulube, who collaborated in 15 articles, followed by Kemoni (6), Ngoepe (5), Wamukoya (5) and Hamooya (3) to mention just the top five. Then it goes without saying that, in another study by the current researchers, in which a different database was used, Ngulube topped the list as the most productive researcher, followed by Kemoni (Onyancha et al 2012). It is worth mentioning that the top five collaborating authors were all attached to academic institutions.

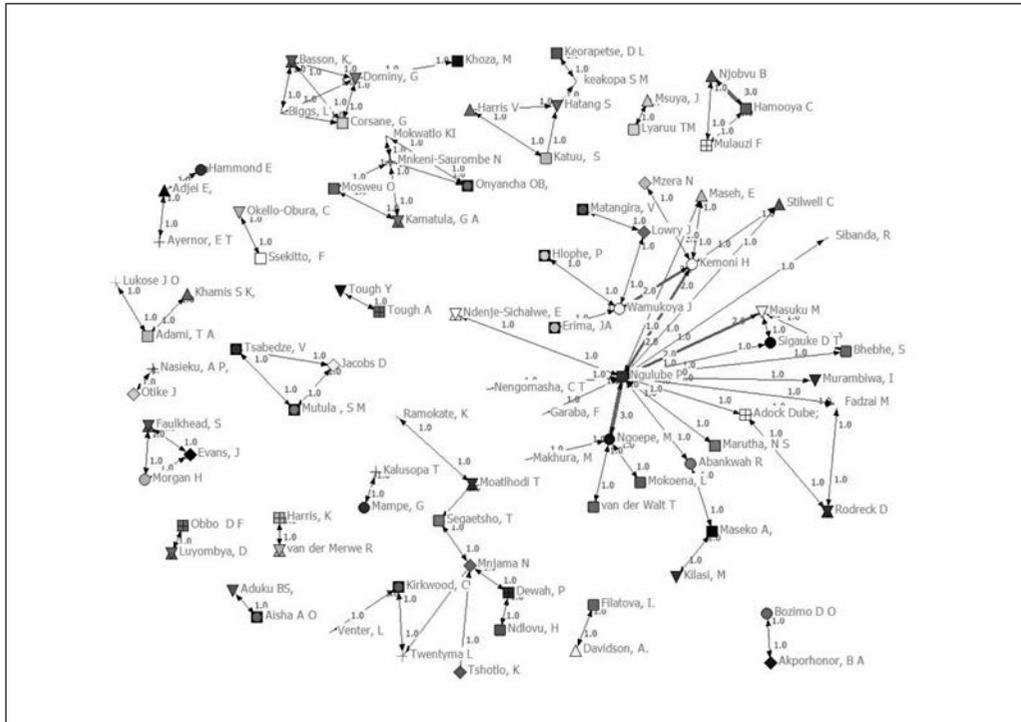


Figure 2: Network of collaborating authors

Table 3: Top collaborating authors

No.	Author	No. of co-authored papers
1	Ngulube, P	15
2	Kemoni, H	6
3	Ngoepe, M	5
4	Wamukoya, J	5
5	Hamooya, C	3
6	Njobvu, B	3
7	Mnjama, N	3
8	Abankwah, R	2
9	Adjei, E	2
10	Bhebhe, S	2
11	Dewah, P	2
12	Dominy, G	2
13	Keakopa, M	2

No.	Author	No. of co-authored papers
14	Khamis, SK	2
15	Kirkwood, C	2
16	Lowry, J	2
17	Masuku, M	2
18	Mnkeni-Saurombe, N	2
19	Mokwatlo, KI	2
20	Onyancha, OB	2

6.2.2 Institutions behind ARM research in sub-Saharan Africa

The institutional affiliations of authors were analysed in order to find out what their contribution to ARM research collaboration in Africa is. As reflected in Table 4, a total of 21 institutions contributed to research collaboration in ARM in Africa during the period under study. Leading these institutions was the University of South Africa (Unisa) with 12 collaborations followed by the National University of Science and Technology in Zimbabwe (4) and the University of Botswana (4). Apart from institutions of higher learning, organisations such as the Auditor-General of South Africa (3), International Records Management Trust (2) and the National Archives and Records Service of South Africa featured among the top ten collaborating institutions. The table excludes articles co-authored within one institution.

Table 4: Institutions behind ARM research in Africa

No.	Institution	No. of collaborations
1	University of South Africa	12
2	National University of Science and Technology, Zimbabwe	4
3	University of Botswana	4
4	Auditor-General of South Africa	3
5	Moi University, Kenya	3
6	National Archives and Records Services of South Africa	2
7	International Records Management Trust	2
8	University of Nairobi	2
9	University of Namibia	2
10	Tanzania Public Service College	2
11	Department of Provincial and Local Government, SA	1
12	Institute of Development Management	1
13	International Monetary Fund	1

No.	Institution	No. of collaborations
14	Kilimanjaro International Corporation	1
15	Limpopo Department of Health	1
16	Ministry of Infrastructure, Science and Technology	1
17	Nelson Mandela Foundation	1
18	Sokoine University of Agriculture, Tanzania	1
19	University of KwaZulu-Natal	1
20	University of Zululand	1

In addition to the discussion above, Figure 3 demonstrates how the institutions discussed linked with one another. It was found that research universities, such as Unisa, University of Nairobi, University of KwaZulu-Natal, University of Botswana, Moi University, the National University of Science and Technology, University of Zululand, as well as the Tanzania Public Service College are in the centre of participation when it comes to collaboration within ARM research in Africa. There was evidence of strong collaboration links between Unisa and the National University of Science and Technology. The majority of researchers from the research universities collaborated with people from the industry, an example being the collaboration between Unisa and the Limpopo Department of Health, the Auditor-General of South Africa, as well as the National Archives and Records Services of South Africa. In these instances, collaborations were between students and supervisors.

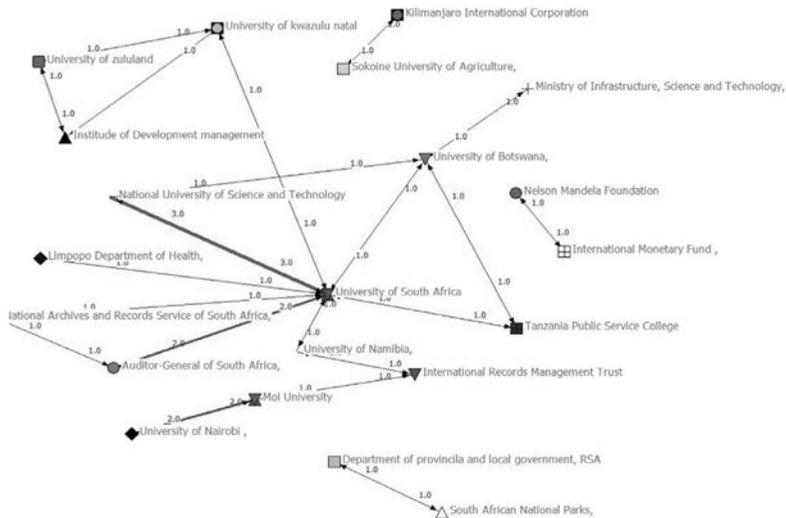


Figure 3: Collaboration network of ARM institutions

6.2.3 Collaborating countries

As reflected in Figure 4, researchers from nine countries collaborated with each other in the area of ARM research. South Africa had the most collaboration links from the data set of the current study; as a result, Figure 4 suggests that there were collaboration links between South African and countries such as Zimbabwe, Swaziland, Namibia and the US. South Africa showed stronger collaboration links with Zimbabwe and a total of four collaborations were recorded between the two countries. There were also collaboration links between the United Kingdom (UK) and African countries such as Kenya and Namibia. Swaziland also showed signs of collaboration with Botswana and Tanzania, while there were also some links between Botswana and Zimbabwe.

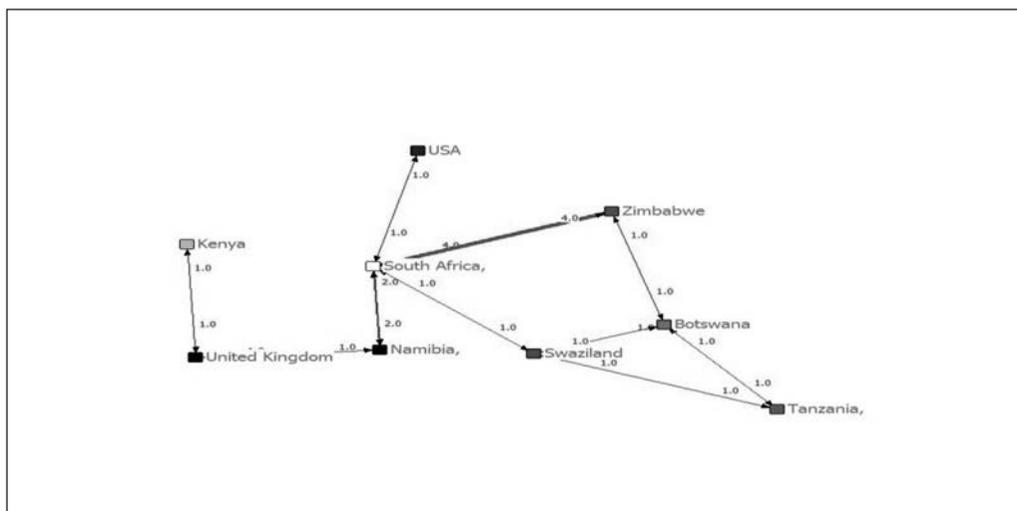


Figure 4: Network of collaborating countries

6.3 TOP JOURNALS

The question on where most co-authored articles are published was addressed through an analysis of the sources in which the researchers publish their articles. Topping the list was the *Journal of the South African Society of Archivists* (previously *SA Archives Journal*) with 150 articles (17 co-authored), followed by *ESARBICA Journal* (106) with the most co-authored articles (32), *African Journal of Library, Archives and Information Science* (24) and *Innovation* (19). Not surprisingly, the top three journals are the mainstream journals for archives and records management. The bottom three did not produce a single article on ARM during the period covered. An assumption is that as the bottom journal is publishing articles in French, it is possible that our search might have missed the words ‘archive’ and ‘record’ written in that language.

Table 5: Top journals

Name of Journal	No. of articles	No. of co-authored articles
Journal of the South African Society of Archives	150	17
ESARBICA Journal	106	32
African Journal of Library, Archives and Information Science	24	3
Innovation	19	2
Ghana Library Journal	4	2
Lagos Journal of Library and Information Science	3	0
Information Manager	2	1
University of Der es Salaam Library Journal	1	0
Samaru Journal of Info Science	1	0
Nigerian Libraries	1	0
Information Technology	1	1
International Journal of Pedagogy, Policy and ICT in Education	0	0
Journal of Librarianship and Information Science in Africa	0	0
Nigerian School Library Journals	0	0
Revue d'Information Scientifique et \Technique	0	0
Total	312	58

7 CONCLUSION AND RECOMMENDATIONS

It is clear from the results that the contribution to research collaboration by practising archivists and records management practitioners was low, as the majority of contributions were from the academics. In the case where the practitioners contributed, it was mainly between the student and supervisor. It appears that social and physical proximity are some of the factors contributing to research collaboration in ARM in Africa as most of the collaborated works were by authors from the same institution. South Africa is the leading producer of research in ARM. This can be attributed to the resources that the country has as compared to other African states. Furthermore, the top universities that produced more collaborating work, such as Unisa, National University of Science and Technology, University of Botswana and Moi University, all offer courses in ARM.

Bearing in mind the scarcity of literature on ARM in Africa, the study recommends more collaborative projects between novice and established researchers in the view of nurturing and mentoring novice researchers to become self-sustainable in producing scholarly literature. Students may be given the opportunity to conduct research on a smaller scale through either a directed research project or a directed study involving

in-depth investigation of a specific issue or problem. Furthermore, students may work closely with a faculty member on an ongoing research project through a collaborative research course, or they may work as paid research assistants on faculty research projects. Several course offerings can enable students to engage in scholarly enquiry of various kinds, with the most obvious example being a thesis. Failure to nurture novice researchers to be able to produce high scholarly work independently would lead to African countries continuing to be consumers of knowledge rather than producers. It is through research collaboration that experienced researchers can transfer their skills to budding researchers. Furthermore, ARM practitioners and scholars should find ways of getting into discussions with other fields and expressing what is offered by the field. Therefore, there is a need to start identifying the best multidisciplinary opportunities and prioritising them.

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