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PUBLIC PROGRAMMING IN THE ARCHIVAL LITERATURE: REVELATIONS FROM A CONTENT ANALYSIS OF THE SUBJECT MATTER

Omwoyo Bosire Onyancha
Department of Information Science, University of South Africa
onyanob@unisa.ac.za

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Abstract

The purpose of this study was to identify keywords that can be used to assist in the construction and development of public programming projects since public programming is not an indexing term in key bibliographic databases. The study was conducted using informetrics approaches and more specifically content analysis whereby the subject terms, words in abstracts, titles and full texts as well as author-supplied keywords were subjected to analysis to extract the most common words that can be used to inform public programming projects. The trend of publishing literature on public programming was also investigated. It was found that the literature on public programming has continued to grow, albeit slowly; the most common words in the abstracts formed eight clusters, while the words in full texts formed a total of seven clusters. The subject terms that yielded high frequency rates and which are relevant to public programming activities included the following: access to information, institutional repositories, marketing, access control to archives, digital preservation, open access publishing, training of archivists, outreach programmes, publicity, social media, and public relations. Information and communication technologies (ICTs) may play a greater role in public programming as reflected by a number of ICT-related terms that occurred frequently in the public programming literature.

Keywords: Archives, public programming, outreach, informetrics, content analysis

Introduction

Ranganathan's five laws of librarianship, which initially applied to library science, were modified so as to be relevant in the broader field of library and information science, including archives and records management. Originally, the laws, which came into being in 1928 and which were formally published in a book in 1931 (Sen 2008), stated the following:

- Books are for use.
- Every reader his book.
- Every book its reader.
- Save the time of the reader.
- A library is a growing organism.

These laws were modified, as outlined in Thaker and Rawal's paper (cited in Sen 2008:88), which introduced the term *information* to replace the term *book* and read as follows:

- Information is for use.
- Every user his or her information.
- Every piece of information its user.
- Save the time of the information user.
- The universe of information is ever growing.

As a result of this modification, the laws are finding applications in different environments, especially in different organizations (Sen 2008). Other modifications have reflected this in their adoption of such terms as *documents, websites, files, records, relics* and *media* as the formats which are for the reader's use. It is interesting to note that the formats include the technology-based ones. Furthermore, the original as well as the subsequent modifications of the laws are user-centric. The implication of the central focus of the information services on the user is an important indication of the importance of the user and the use of information. The user and use of services and products have increasingly become a major concern for the providers of the services and products. Institutions around the world have endeavoured to improve their service delivery as well as their products. The continued existence and success of any institution (be it private or public business) is thus a matter of concern to many.

This scenario becomes more complex as the funding agencies' funds continue to dwindle (Nawe 1988; UNESCO 1998; Kavulya 2006:22). For example, many public-funded institutions, including libraries, have come under pressure to not only account for their continued government funding but also justify their existence amidst dwindling public funds. Governments tend to prioritise certain sectors which receive the lion's share of their budgets. These sectors more often than not do not include the information provision sector if the budgetary allocations for each sector are anything to go by. For example, out of R1.13634 trillion appropriated by South Africa's National Revenue Fund in 2014/2015, only R3.5 billion (accounting for a mere 0.31%) was allocated to the Ministry of Arts and Culture under which the information services (e.g. archives and libraries) fall (Republic of South Africa. National Treasury, 2015). The government's budget for 2015/2016 for the Department of Arts and Culture is R3.9 billion which is distributed as follows: Administration (R244.0 million); institutional governance (424.1 million); arts and culture promotion and development (R1.1 billion); and heritage promotion and preservation (R2.2 billion). The expenditure trends and estimates according to subprogrammes and economic classification show that the average expenditure of the National Archive Service on heritage promotion and preservation was about 2.7% of the total funds allocated in 2014/2015 and 1.9% by the mid-term of the 2015/2016 financial year.

The National Archive Services' expenditure was the third lowest among the subprogrammes which included Heritage Promotion, Heritage Institutions, National Library Services, Public Library Services, Capital Works, South African Heritage Resources Agency, South African Geographical Names Council, and the National Heritage Council. Most of the budget allocated to the archives (and libraries) goes to servicing operational salaries, leaving very little to go to other functions such as collection development, appraisal, or public programming. Capital expenditures (i.e. allocations for fixed assets such as new buildings, renovations, and installation of automated systems) are therefore often ignored as there is no budgetary allowance for this.

This situation of small and insignificant allocations by the national budget to information services is not unique to South Africa. Kavulya (2006:22) notes, "in Africa, the state of library and information services is generally perceived to be inadequate and financial support of library development viewed as small in scale, piecemeal and lacking in coordination". UNESCO (1998) points out that inadequate funding of library and information services in general is not unique to Africa but happens in all developing countries. Dealing with these small budgetary allocations, the national archives' situation, just as any other information services, e.g. national or public libraries, is made more difficult as their purpose and identity are not known to most users.

For example, reporting on an informal inquiry that Weir (2004:72-73) asked one teacher to conduct in Nottinghamshire on (a) what an archive service or office was; (b) what happens in the

archive service or office; and (c) why the students would visit the archive service or office, the author writes:

> First of all she asked the Year 10 students (the 14–15-year olds). Most simply replied that they did not know and one considered an archive to be 'a place that has mountains and caves' which had a real Lord of the Rings feel about it. However, one pupil said that it was 'a place where information and ideas are stored', while another said it was 'somewhere to store information that people have found out'. The same questions put to Year 12s (the 16–17-year olds) also produced quite a lot of 'don't knows', but as with the younger age group, some were heading in the right direction. One commented that 'you go to an archive to get information, old books and records'. Another said 'it's a place to look up something that happened— stuff they don't keep in a library'. One pupil commented that 'it's where the television programmes are stored to find out about a particular person or building'. Clearly they are destined to work for the BBC!

Clearly, there are different perceptions about the identity and purpose of the archives. The perception that should worry archivists is the "don't knows" or the one in which the users know about archives but because they have a poor perception of the service, they stay away. The poor perception of archives may be further compounded by the fact that the archives are competing with free online information providers such as Google (e.g. Google Scholar, Google books, etc). As early as 1989, Jimerson noted that archives do "compete with other information services and cultural organizations, both for limited budgetary resources and for customers" (Jimerson 1989:336). Another indicator of a paradigm shift in how archives should conduct their business is the social mandate that archives are required to conduct in their discharge of services. For instance, the following are among the objectives of the National Archives and Records Service (NARS) of South Africa:

- To preserve public and non-public records with enduring value for use by the public and the State.
- To make such records accessible and promote their use by the public.
- To promote an awareness of archives and records management, and encourage archival and records management activities.
- To generally promote the preservation and use of a national archival heritage. (Republic of South Africa, 1996).

In view of the above mandate of the NARS, Ngoepe and Ngulube (2011) investigated the extent to which the NARS has conducted its business in terms of taking the archives to the people. The authors found that the basis for public programming can also be found in Blais and Enns' article (1991-1992) in which the authors have identified the following challenges faced by archives and archivists: gradual evolution of record-keeping practices, the medium of the record, the nature and number of record creators, and the changing information needs of society.

It is not surprising therefore to note that there has been a decline in the use of archival resources in some countries (Murambiwa and Ngulube 2011:95). In their paper entitled *Measuring access to public archives and developing an access index: experiences of the National Archives of Zimbabwe*, Murambiwa and Ngulube (2011) found that the number of visitors using the reading rooms in Botswana has dropped between 1998 and 2001. The other countries whose visitors' statistics were provided by Murambiwa and Ngulube recorded some positive trends in terms of the visitors using the archival institutions' reading rooms between 1999 and 2001 (see Table 1).

Table 1: Comparisons of trends of visitors to reading rooms in Botswana, Malawi, Swaziland, Zimbabwe and South Africa (Source: Ngulube in Murambiwa & Ngulube, 2011)

Visit to the archive facility	1998	1999	2000	2001
South Africa (including Pretoria)	5614	5190 (-8%)	5509 (-8%)	13930 (+153%)
National Archives repository (Pretoria)	850	959 (-12.82%)	410 (-57.25%)	2850 (+595)
Botswana	4282	3279 (-2342%)	2034 (-37.97%)	1342 (-0.34%)
Malawi	163	135 (-1718)	114 (-15.56%)	124 (+8.77%)
Swaziland	163	389 (+138.65%)	429 (+10.28%)	516 (+20.28%)
Zimbabwe	4586	2292 (-50%)	4020 (+75%)	4088 (+2.38%)

Citing several authors (e.g. Callinicos and Odendaal 1996; Koopman 2002), Ngoepe and Ngulube (2011) noted that access to archives was limited to a limited number of researchers. This trend of limited access and waning visitation to archival institutions may have contributed to some archival institutions' provision of digital archival materials through online platforms (e.g. National Archives of Canada and Royal Mafokeng in South Africa). Whether this approach will ensure increased visitation is another matter. What is evident, however, is the fact that these challenges that archives face require effective means of creating awareness about the archival resources. This includes an exploration and implementation of contemporary means which must be user- or customer-centred. And this is where we believe that public programming can play an important role. Blais and Enns (1991:110) advise the following:

> The future of archival institutions and of the profession is in large part dependent upon the degree to which we recognize that archives operate in a fluid environment, in which resource allocators, donors, supporters and various user groups play an increasingly prominent role. The four concepts outlined above (image, awareness, education and use) offer a framework for understanding how our interaction with these groups can proceed.

Public programming: a brief introduction

Gregor (2001:i) defines public programming as "a function performed by archives in order to create awareness of archives within society as well as to promote their use and educate their sponsors and **users** in how to use them". Similar definitions have been offered by Koopman (2002) and Bance (2012). Cox (1993:123), too, sees public programming as an archival function whereby archivists adopt a more client-centred approach to the administration of their holdings. Ericsson (1991), cited in Ngoepe and Ngulube (2011:6), considers public programming as an archivist's functional responsibility whereby public programming is intended to "support the activities of the institution by creating an image of archives, promoting awareness and appreciation of archives, ensuring the education of users and the general public about the value and potential use of archives, and enabling use of the archival record" (Ericsson in Ngoepe & Ngulube 2011:7). Furthermore, Cox (1993), citing Freeman, says that in public programming, archivists are advised to pay more attention to users of archives and their needs.

Public programming activities were limited in their scope in the late 1800s (Blais and Enns 1991). According to Blais and Enns (1991:101), "activities now known as outreach or public programming were limited to the preparation of research guides and assistance to historians as they performed their research". Gregor (2001) observes that public programming traditionally took the form of lobbying the archival institutions to ease restrictions on access to their holdings and engaged in publications, tours and exhibitions (Gregor 2001:iii). Gregor (2001) adds that recent programmes geared towards public programming have been influenced by computerized

technology. She observes that some of the most recent programmes involve the use of the World Wide Web. According to Theimer (2011) as cited in Saurombe (2015), the Web (and more specifically Web 2.0) is increasingly becoming a common tool through which the archives are creating awareness of their services and resources. Specifically, blogs, Youtube, virtual platforms, Facebook and Twitter are being used to promote archives (see Theimer in Saurombe, 2015). Blais and Enns (1991) and Hackman (2011) believe that user education is vital if archives are to attract a high number of users. Ngoepe and Ngulube (2011) suggest that archivists can use any of the following methods or strategies to reach out to create awareness among users: behind-the-scenes tours, presentations by archives staff, lectures and panels by researchers and authors, fairs, movie series, receptions to mark important archival events, press releases, press reviews, press conferences, exhibits, interactive kiosks, social media (for example Facebook), handouts and mailings. In their study on NARS' strategies to reach out and create awareness among users, Ngoepe and Ngulube (2011:10) found that the NARS used various strategies which included "internal and external exhibitions, periodical tours to rural and urban areas to explain and promote NARS services, holding of archives week where schools are invited to visit NARS, partnerships with other organizations such as the South African Broadcasting Authority (SABC) and visits to villages (rural communities)". The users of NARS the services reported that they became aware of the archives through:

- NARS exhibition at the Pretoria show,
- newspaper articles regarding NARS,
- referral by other government departments such as Home Affairs and Land Affairs,
- passing by the NARS offices on the way to work almost every day,
- meeting somebody who was working for the archives,
- television news (Mandela's archive and the honouring of Miriam Makeba), and
- working in government registries (Ngoepe & Ngulube, 2011:10).

A variety of strategies and methods can be lumped together under the banner of public programing or programs. With the emergence of the information and communication technologies, the strategies are likely to increase in number. It is worth noting that ICTs have ushered in a new era where some programs have adopted the use of technology-enhanced methods to create societal awareness of the holdings of archival institutions. This study does not purport to comprehensively cover all strategies/methods that comprise public programming. Rather, the study focused on the broad terms that are used to explain public programming functions, namely: *promotion, advertising, public relations, advocacy, publicity, marketing,* and *outreach* (see Blais and Enns 1990; Gregor 2001; Koopman 2007; Saurombe 2015; Saurombe and Ngulube 2016, as well as the section on methods and materials for a detailed description on the search strategy for publications on public programming).

Purpose of the study

The purpose of this study was to identify keywords that can be used to assist in the construction and development of public programming projects in view of the fact that *public programming* is not an indexing term in key bibliographic databases. The main research question therefore was: What are the keywords that may assist in the development of public programming projects and by which keywords can public programming research findings be obtained from key bibliographic databases?

In order to answer the above research questions, the study sought to determine the following:

- Database coverage of the literature on archival public programming
- Growth of the literature on archival public programming

- Most common words and phrases in the abstracts of archival public programming
- Broad subject terms describing the literature on archival public programming
- Subject terms related to archival public programming
- Author-supplied keywords in the literature of archival public programming
- Most common words in full texts of the literature on archival public programming

Methods and materials

An informetrics design was used to extract terms/words and subjects that might inform public programming projects. Diodato (1994:ix) defines informetrics as methodologies that examine "patterns that show up not only in publications but also in many aspects of life, as long as the patterns deal with information". This study thus investigated the patterns that show up in archival programming publications indexed in various electronic bibliographic databases, with special reference to the content of the literature in order to identify keywords that can be used to inform the construction and development of public programming projects. The publications count was used as the method of data analysis. One of the techniques commonly used in informetrics and more particularly in publications counts is content analysis. Content analysis is often used to investigate word occurrence in documents, titles, and subject fields of a bibliographic record. Krippendorp (2004:18) defines content analysis as a "research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use". The texts can take many forms and can be defined as any written communicative materials which are intended to be read, interpreted and understood by people other than the analysts (Krippendorp 2004:30). This technique was employed in this study to examine the occurrence of words in the titles, abstracts and full texts in order to identify the keywords that can be used to inform public programming projects and curricula. The theoretical foundation for word occurrence analysis is that the more frequent a word appears in any given document, the higher its significance in the document (Matsuo and Ishizuka 2004).

In order to obtain relevant data, we identified eight online bibliographic databases hosted by EBSCOHost publishing company. One of the reasons for the choice of EBSCOHost as the source of data was its coverage of two LIS-specific databases as well as journals. It was our belief that LIS-specific databases would yield better search results on archives and records management, specifically in general and public programming. The databases that were selected for the study are listed below:

- Library, Information Science & Technology Abstracts
- Library & Information Science Source
- Academic Search Premier
- MasterFILE Premier
- Newspaper Source
- Humanities Source
- SocINDEX with Full Text
- Communication & Mass Media Complete

The choice of databases was done in such a way that the list consisted of the LIS-specific as well as multi-disciplinary databases. The aim was to retrieve as much literature covering public programming as possible. The databases listed above were thought to cover archives and records management literature in which public programming would also be covered. Whereas the Academic Search Premier, Newspaper Source and the MasterFILE Premier are multidisciplinary databases, the rest are subject-specific in the fields of library and information science (including information technology), humanities, social sciences and communication and mass media.

EBSCO-host databases cover a wider range of journals and other serials (EBSCO-Host 2015) than mainstream databases such as the Web of Science citation indexes, which tends to cover publications from developed countries (Harzing 2010; Nwagwu 2010).

In order to extract relevant data from the databases, selected terms that were considered to be narrower terms (NT) of public programming were identified through a literature search. Various authors (e.g. Blais and Enns 1990; Gregor 2001; Koopman 2007; Saurombe 2015; Saurombe and Ngulube 2016) have each discussed different activities that constitute public programming and which this study identified to constitute the narrower terms of public programming. The terms that were identified, as search terms for the current study, are the following: *promotion, advertising, public relations, advocacy, publicity, marketing* and *outreach*. A search combining the two terms that comprise public programming (i.e. *public* and *programming*) with archives (i.e. i.e. public + programming AND archives) as search terms to extract data on archival public programming from the databases yielded a large number of documents that were not at all related to archival public programming as the term "programming" is applied in various disciplines, e.g. computer programming. However, when public programming was expressed as a search phrase (i.e. *public programming*) and combined with archives (i.e. public programming AND archives), the search yielded only nine documents. As a result it was decided that a search using the narrower terms would yield enough appropriate results to conduct the current study. Hence, an advanced search was performed by combining the narrower terms and archives or its variations, i.e. archiv* (to cover archives, archival, archivist, etc.) AND (promot* OR adverti* OR "public relations" OR advocacy OR publici* OR marketing OR outreach). The truncation of the terms was meant to retrieve documents in which the term and its variations appeared. The search for archiv* was conducted within the title field while the other terms were searched within the 'abstract' field to yield the most relevant documents. We attempted to search for data using the phrase *user education*, as one of the methods of public programming but as the search yielded results on formal education and training of archivists and records managers, we opted not to use it to extract data on public programming.

The search strategy adopted in the study yielded a total of 1388 documents and upon the removal of duplicates, a total of 751 documents were deemed to be relevant to the subject of investigation and thus analysed using different computer-aided software (i.e. Bibexcel, VOSviewer, TextStat, and Microsoft Excel). The following elements of each document were the focus of the current study and therefore formed the variables of the analysis:

- Title words
- Subject terms
- Author-supplied keywords
- Words in the full text

As the current study was meant to identify keywords that can be used to inform public programming projects and, perhaps, the curriculum, it was imperative that not only subject terms and keywords were identified as supplied in the subject terms and keywords fields of each document, but also the most common terms that appeared within the full text of each document. Words in the full-text documents were extracted using the VosViewer computer program. We set the minimum number of term occurrences to five, meaning that we wanted the program to extract the words that appeared five or more times in the documents. Once the program extracted the most common words, we exported the results to Excel, which was also used to present the findings. The network map was generated using VosViewer.

Limitations of the study

The following are the limitations of the study:

- The databases used to obtain data were EBSCO-hosted and therefore may not be deemed as exhaustively covering public programming literature.
- The search was limited to seven public programming functions/activities, namely promotion, advertising, public relations, advocacy, publicity, marketing, and outreach and their variations.

Results

The results discussed in this section cover seven aspects, namely:

- Database coverage of the literature on archival public programming
- Growth of the literature on archival public programming
- Most common words in the abstracts of archival public programming
- General subject terms describing the literature on archival public programming
- Subject terms bearing on archival public programming
- Author-supplied keywords in the literature of archival public programming
- Most common words in full texts of the literature on archival public programming

Database coverage of the literature on archival public programming

A search conducted for documents on archival public programming in each of the various databases which were used as sources of data in the current study yielded the results reflected in Table 2. The majority of documents were retrieved from the *Library, Information Science & Technology Abstracts,* and the *Library & Information Science Source,* which yielded a total of 488 and 411 documents respectively. Two of the databases that mostly cover documents of a multidisciplinary nature, namely *Academic Search Premier* and *MasterFile Premier*, which were expected to yield a higher number of documents than even the subject-specific databases, yielded 285 and 222 documents respectively. We expected more results from these two databases as they cover multidisciplinary research as opposed to the former journals which largely cover LIS research.

Table 2: Coverage of public programming in the databases

Library, Information Science & Technology Abstracts	488
Library & Information Science Source	411
Academic Search Premier	285
MasterFILE Premier	222
Newspaper Source	108
Humanities Source	102
SocINDEX with Full Text	52
Communication & Mass Media Complete	26

Growth of the literature on archival public programming

Although the number of documents on public programming seems to be small when compared to the total number of documents on archives, Figure 1 shows that there has been a continuous growth in the literature on public programming.

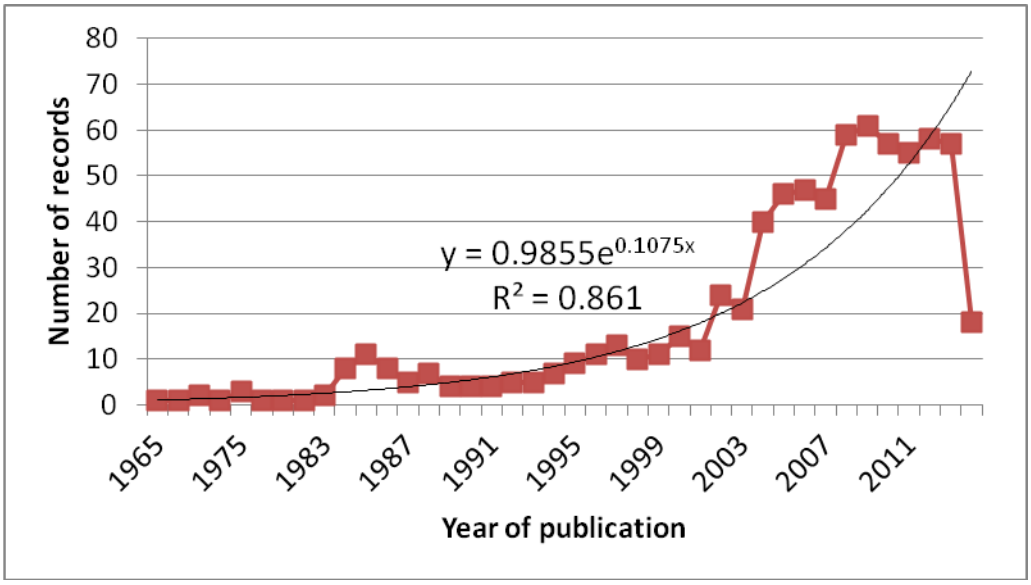

Figure 1: Trend of publishing in public programming, 1965-April 2014

The illustration shows that there were fewer than 20 documents each published from 1965 to 2001. The year 2002 recorded a total of 24 documents which fell slightly by three documents to 21 in 2013 but increased to 40 documents (a percentage increase of 90%) in 2004. This trend continued until 2009 which recorded a total of 61 documents. It is of concern that thereafter a downward trend is noticeable. The number of documents fell from 61 in 2009 to 57 in 2010 and then to 55 in 2011 before they slightly increased to 58 in 2012. There were a total of 58 and 18 documents in 2013 and 2014 respectively. The decline witnessed in 2014 can be attributed to the fact that the data for the current study was collected in April 2014 and that there was an indexing time lag. Diodato (1994:157) defines an indexing time lag as the "number of months or years between the publication of an article and the publication of an index that refers to the article". This period varies from one discipline to another. For example, according to Onyancha and Ocholla (2006), it took an average of three and half years to index HIV/AIDS research in the AIDSEARCH database. Rodriguez (2014) observed that the median time to index articles published in three pharmacology journals between 2010 and 2011 was 114 days. It is therefore possible that some articles that were published three years prior to the start of this study might have not been indexed in the databases which could explain the decline in the number of publications in 2013 and 2014.

Keywords, in abstracts, which can be used to inform archival public programming projects

Abstracts have been identified by most bibliographic databases as key sources of information. This information is valuable to both the users and bibliographic indexers or subject organizers. Reitz (2014) notes that "a well-prepared abstract enables the reader to: 1) quickly identify the basic content of the document, 2) determine its relevance to their needs, and 3) decide whether it is worth their time to read the entire document". Pinto (2006:213) also notes that "there is a general agreement concerning abstracts' relevance as documentary devices, perhaps the most complex and sophisticated of such devices and those endowed with the biggest information capacity". This could explain why abstracting is one of the core activities performed by LIS professionals. Most information abstracts contain key information reflecting the content of the main document, which explains why various studies have been conducted to investigate various aspects of scholarly communication using abstracts as the source of data. For instance, Hartley,

Pennebaker and Fox (2003) conducted a study to determine how different or similar abstracts are when compared to introductions and discussions in a full-text article. Rotto and Morgan (1997) conducted a study on the application of computerised text analysis techniques to all U.S. engineering doctoral dissertation abstracts to determine the techniques' potential utility in identifying technology-related word indicators of industrial relevance. It is on this basis that abstracts were used to identify the keywords that can be used to inform archival public programming projects.

Figure 2 provides the map of the keywords that occurred five or more times in the abstracts of public programming literature. The terms that belong to the same cluster exhibited strong links among themselves and are depicted using similar colours. Eight clusters emerged from the analysis of the abstracts using the VOSviewer software. The clusters varied in terms of the number of items that formed each cluster as follows: cluster one (42), cluster two (36), cluster three (36), cluster four (29), cluster five (23), and cluster six (17), cluster seven (14) and cluster eight (13). Some of the words in the clusters comprised stop words which were not considered in the ultimate analysis of data.

In **cluster one** we identified the following terms that occurred five or more times in the literature of public programming of archives: *accountability, advocate, Africa, agency, archives service, assessment, Brazil, China, congress, cooperation, correspondence, democracy, electronic record, exhibition, file, France, general public, government record, historical record, human right, ICA, international cooperation, international council, Japan, journalist, legislation, letter, nation, national archives, public archive, public record, public service, questionnaire, records administration, records management, representation, South Africa, transparency, UNESCO, US national archive* and *war*. **Cluster two** comprised the following terms/phrases: *American archivist, archival education, archival profession, archival record, archival repository, archival science, archival study, career, collaboration, college, comment, cultural institution, curator, curriculum, discipline, first century, information management, information science, learning, manuscript, New York, primary source, profession, professional, public awareness, public library, sharing, special collection, teaching, Texas, tour, twentieth century, United States, university archive, university archivist,* and *visibility*. **Cluster Three**: *account, administrator, advertisement, advertiser, advertising, company, customer, database, digital content, digital library, email, evolution, Indiana, information technology, Internet, magazine, methodology, Michigan, news, newspaper, nineteenth century, online service, photograph, reader, reference service, reprint, SAA, search, selection, social medium, software, Taiwan, video, web site,* and *woman*.

Cluster four consisted of *Artist, Australia, Britain, chief executive, community archive, council, dialogue, digital resource, documentary heritage, England, expertise, Great Britain, language, London, museums, music, national council, national library, office, online access, oral history, organization, promote, recording, Scotland, teacher, United Kingdom, Wales*, and *website*. **Cluster five** comprised *accessibility, age, copyright, creation, copyright, dissemination, faculty, forum, information professional, institutional repository, interoperability, metadata, network, newsletter, OAI, open access, open archives initiative, professor, profile, self archiving, social science, standard, trust*, and *workshop*. **Cluster six**: *archival service, Cologne, conference, conservation, cultural heritage, digitization, distribution, Germany, historical archive, integration, Netherlands, outreach program, public access, public relations, restoration, television*, and *treatment*. **Cluster seven**: *acquisition, appraisal, archival, archival administration, archival practice, arrangement, design methodology approach, educator, originality value, outreach, relationship, scholarship and theory*. ***Cluster eight**: Amherst, Andrew W Mellon Foundation, archival description, archival information, archival processing, archivists toolkit, California, function, grant, libraries, open source software, staff,* and *standardization*.

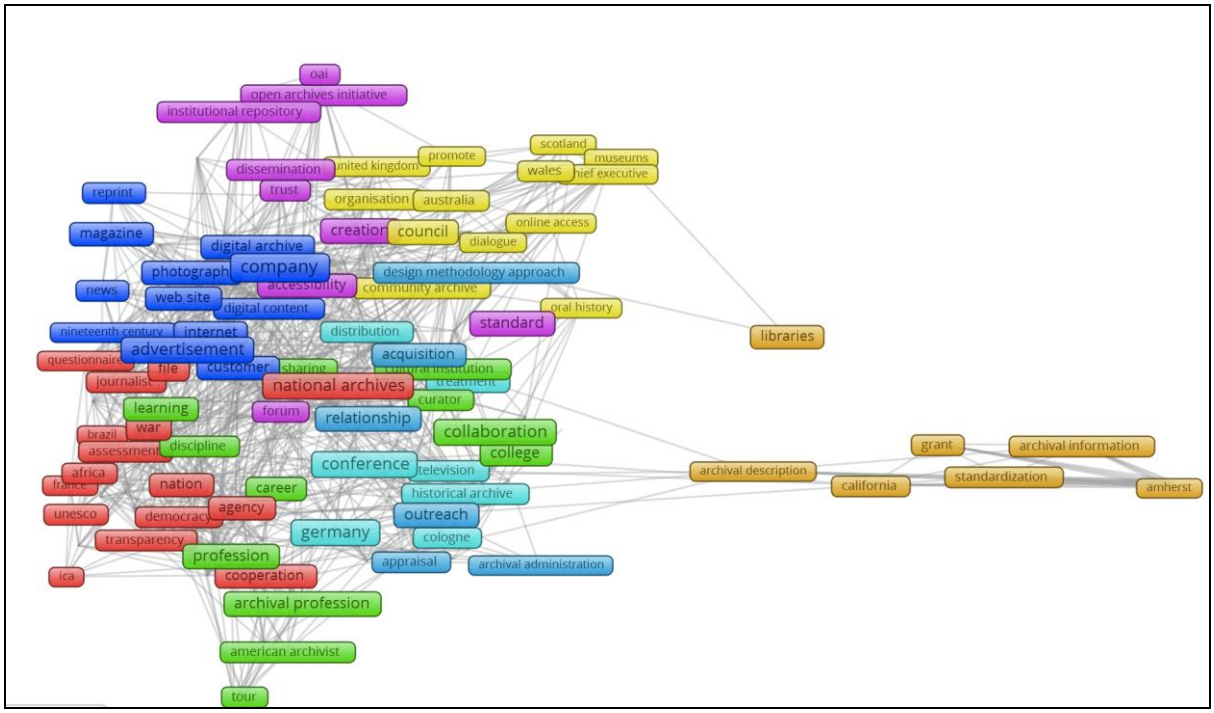

Figure 2: Label view of public programming terms as reflected in the abstracts.

NB: (In the label view, terms are displayed by label and marked with a bar. The colour of the bar was used to distinguish between different clusters which are based on the VOS technique. In order to avoid overlapping labels, only a sub-set of all labels was displayed.)

Table 3 is divided into two main columns that explain the most common terms (column A) and the terms with the highest relevance scores (column B). Column A shows that the most common terms in the abstracts of the publications on archival public programming included: *company*, which occurred 45 times followed by *Germany* (38), *conference* (35), *advertisement* (34), *national archives* (34), and *collaboration* (33). In terms of the relevance of terms, some terms did not feature in the list of the most common terms which recorded high relevance scores. These included *Amherst, Andrew W Mellon Foundation, archival processing, archival toolkit,* and *open source software tool*, which recorded a relevance score of 3.1137 each. *Archival information* recorded a score of 2.6982 followed closely by *reprint* (2.5014) and *advertiser* (2.3587).

Table 3: Most common words/phrases in the abstracts of public programming literature

A			B		
Term	**Occurrences**	**Relevance score**	**Term**	**Occurrences**	**Relevance score**
Company	45	0.5938	Amherst	5	3.1137
Germany	38	0.771	Andrew W Mellon Foundation	5	3.1137
Conference	35	0.4368	Archival processing	5	3.1137
Advertisement	34	0.7722	Archivists toolkit	5	3.1137
National archives	34	0.4716	Open source software tool	5	3.1137
Collaboration	33	0.3489	Archival information	8	2.6982
Profession	28	0.6919	Reprint	7	2.5014
Public relation	28	0.5432	Advertiser	6	2.3587
Standard	26	0.2874	US national archive	5	2.2714
Advertising	25	0.5972	Standardization	9	2.2702
Council	25	0.583	Michigan	5	2.1327
Staff	25	0.3458	Museums	5	2.0894
Network	24	0.4461	Tour	7	2.0197
Description	24	0.4195	Chief executive	5	1.9989
College	23	0.4104	Grant	12	1.9567
Relationship	22	0.372	California	10	1.909
Function	22	0.2844	ICA	5	1.9036
Archival profession	21	1.0437	Magazine	19	1.8858
England	21	0.658	SAA	5	1.8695
Outreach	21	0.4868	Restoration	6	1.8692
Creation	21	0.4244	Treatment	9	1.8544
Libraries	20	1.2576	Scotland	5	1.8145
Photograph	20	0.8293	Archival study	5	1.7785
Agency	20	0.491	Online access	5	1.7783
Magazine	19	1.8858	Public awareness	5	1.7763
Great Britain	19	0.7305	Self archiving	7	1.7726
Outreach program	19	0.5563	Indiana	5	1.7147
Copyright	19	0.4659	Human right	5	1.7027
Digitization	18	0.8747	OAI	8	1.6581
Records management	18	0.6535	National council	6	1.6505

Most common terms in the full texts

The terms extracted from the full-text papers are listed in Figure 3. There was a total of 258 terms which were selected from among the terms that met the threshold requirements when the full-text papers were subjected to VOSviewer analysis.

Figure 3 provides the map network of 258 terms. The map consists of a total of seven clusters, which comprised a varied number of terms as follows:

Cluster one (90 items) – *Advocacy effort, American archivist, annual meeting, archives, archival advocacy, archival community, archival enterprise, archival facility, archival institution, archival literature, archival material, archival outreach, archival profession, archives budget, audience, basic service, best practice, blog, blogger, budget, campus patron, Canada, case study, college, communication, content, conversation, creator, dialogue, digitization, discussions, display, email, environmental sustainability, exhibit, exhibition, facebook, faculty, framework, Georgia archives, graduate program, green library movement, individual archivist, Internet, Internet work, issues and advocacy roundtable, legislator, library blog, library literature, marketing, money, natural resources, outreach, outreach activity, outreach committee, outreach program, patron, planet, platform, popularity, presentation, presidential address, press, press release, primary source, professional organization, promotion, public library, question, records management, reference, reference work, respondent, SAA, SAA newsletter, social medium, supervisor, survey, sustainability, task force, technology, theory, tool, United States, university archive, university archivist, volunteer, web* and *website*. **Cluster two** (50 items) – *account, analysis, anthropology, archival*

collection, archiving, China, church, community partner, context, culture, data collection, digital technology, digitization, expertise, fieldworker, folklore, gala, gala project, gospel music, image, informant, Kenya, knowledge, language, material culture, medical missionary, missionary, missionary medicine, museums, nineteenth century, online archive, oral history, oral text, organization, paradigm, partnership, photo, photograph, photographic collection, photography, postcard, recording, recordist, reputation, social archive, strategic plan, subject, tradition, transformation and *workshops*.

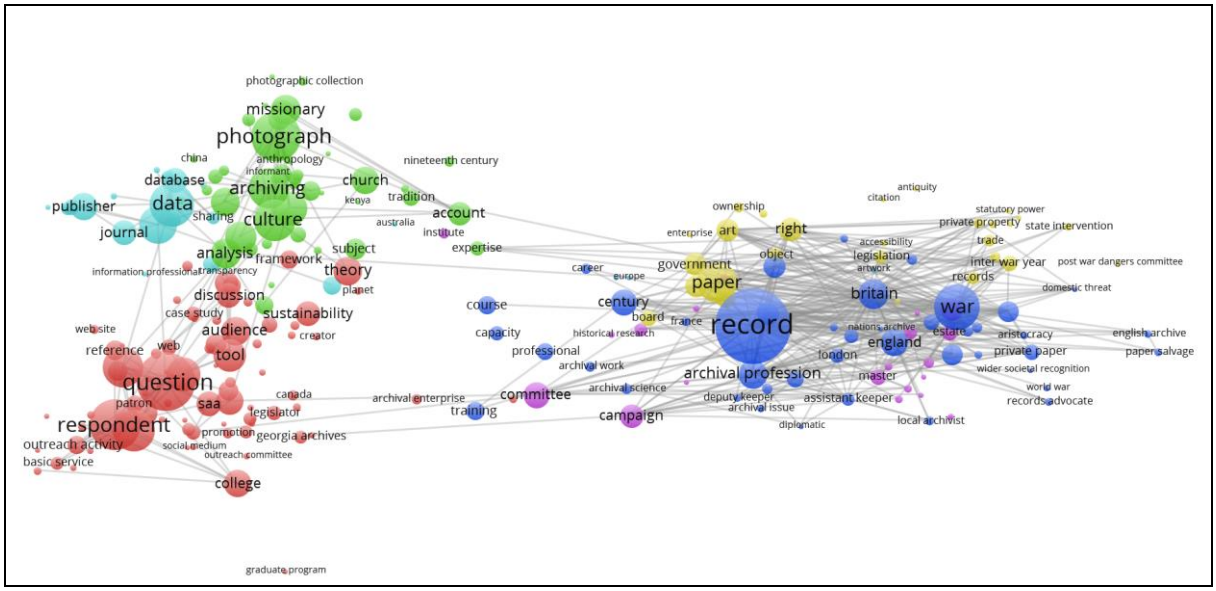

Figure 3: Label view of public programming terms as reflected in the full texts

NB: (In the label view, terms are displayed by label and marked with a bar. The colour of the bar was used to distinguish between different clusters, which are based on the VOS technique. In order to avoid overlapping labels, only a sub-set of all labels was displayed.)

Cluster three (43 items) – *archival issue, archival profession, archival professionalism, archival science, archival work, aristocracy, assistance keeper, attitude, Britain, capacity, career, century, course, deputy keeper, diplomatic, domestic threat, England, English archive, France, local archivist, London, nations archive, own record, paper salvage, post war year, private paper, private property rights, professional, professional archivist, professional association, professionalism, protection, public record, record, records advocate, training, twentieth century, war, wider societal recognition, world war, world war I*, and *world war II*. **Cluster four** (28 items) – *Accessibility, antiquity, architecture, art, authority, board, citation, enterprise, government, inter war year, legislation, national gallery, national importance, national register, object, ownership, paper, parliament, personal paper, post war dangers committee, private property, public interest, records, rights, situation, state intervention, statutory power* and *trade*. **Cluster five** (22 items) – *business, campaign, committee, congress, destruction, estate, general public, historical research, institute, landowner, law, local library, local repository, manuscript, master, official record, old paper, provincial repository, record office, records preservation, rolls archives committee*, and *waste paper*. **Cluster six** (22 items) – *Australia, data, data archiving, data sharing, database, health, health research, heloise, information professional, information service, journal, open access, open repository, participant, Philippine, policy, primary researcher, publisher, self archiving, sharing, stakeholder*, and *transparency*. **Cluster seven** (3 items) – *artwork, collective memory* and *Europe*.

Table 4 lists the occurrence frequencies for each of the top most common and relevant terms in the full-text papers. The table reveals that the most common terms included *record* (109), *question* (81), *respondent* (69), *photograph* (68), and *war* (61), just to name the terms with over 60 occurrences. The terms that recorded highest relevance scores are *self archiving* (R_s=2.9236), *postcard* (R_s=2.92), *Heloise* (R_s=2.7656), *open repository* (R_s=2.5187), *supervisor* (R_s=2.4744), *information service*

(R_s=2.4637), *graduate program* (R_s=2.3483), *campus patron* (R_s=2.3211), and *university archivist* (R_s=2.1273), among others.

Table 4: Most common and relevant terms/phrases in the public programming literature

Term	Occurrences	Relevance score	Term	Occurrences	Relevance score
Record	109	0,2764	Self archiving	6	2,9236
Question	81	0,863	Postcard	5	2,92
Respondent	69	1,4047	Heloise	14	2,7656
Photograph	68	1,2233	Open repository	6	2,5187
War	61	0,5968	Supervisor	7	2,4744
Data	58	1,2095	Information service	18	2,4637
Culture	55	0,6696	Graduate program	5	2,3483
Outreach	54	1,3378	Campus patron	7	2,3211
Survey	52	1,1977	University archivist	9	2,1273
Archiving	52	0,8429	Internet work	6	2,0997
Paper	52	0,2199	Publisher	34	2,082
Policy	50	1,1319	Basic service	14	2,0373
Blog	43	1,2201	Green library movement	6	2,0123
Image	43	0,9715	Photographic collection	10	1,9768
Tool	41	0,8328	Social medium	7	1,9604
Knowledge	39	0,6352	Reference work	5	1,9409
Missionary	38	1,5051	Social archive	6	1,919
Analysis	38	0,7095	Facebook	5	1,9114
Britain	38	0,5059	Outreach activity	22	1,9003
Context	36	0,852	Press release	7	1,8586
Archival profession	36	0,3647	Health	7	1,7526
Audience	35	0,7164	Outreach committee	7	1,7397
Theory	35	0,5017	Faculty	11	1,6989
Publisher	34	2,082	Missionary medicine	15	1,6969
College	34	0,8338	Records management	6	1,6626
England	34	0,5892	Journal	30	1,6277
Church	33	0,8767	University archive	8	1,6123
Task force	33	0,7845	SAA newsletter	5	1,5813
Committee	32	0,4178	China	8	1,5622
Century	32	0,2278	Health research	7	1,5487
Database	31	1,1956	Press	7	1,5254
SAA	31	0,9962	Web site	10	1,5195
Sustainability	31	0,6596	Missionary	38	1,5051
Journal	30	1,6277	Transformation	8	1,5009
Outreach program	30	1,1486	Medical missionary	28	1,4933
Discussion	30	0,825	Data archiving	15	1,4891
Campaign	29	0,507	Recordist	9	1,4812
Right	29	0,3818	Archival professional	7	1,4676
Account	29	0,3433	Email	7	1,4587
Medical missionary	28	1,4933	Data sharing	7	1,4411

By subject terms

Overall, there were a total of 1990 subject terms that were used to index 725 publications on public programming. Table 5 shows that the subject term archives appeared in most of the publications (i.e. 223 times), accounting for 30.76% of the total number of publications while the frequency of archivists amounted to 53 (7.31%); archival resources appeared in 40 (5.52%) publications, followed closely by records management (37 or 5.10%), information services (34 or 4.69%) and libraries (33 or 4.55%).

Table 5: Most common subject terms in the public programming literature (N=725)

Term	Count	%	Term	Count	%
Archives	223	30,76	Information resources management	19	2,62
Archivists	53	7,31	Periodicals	18	2,48
Archival resources	40	5,52	Internet	18	2,48
Records management	37	5,10	History -- Sources	17	2,34
Information services	34	4,69	Electronic information resources	17	2,34
Libraries	33	4,55	Germany	17	2,34
Archival materials	31	4,28	Websites	17	2,34
Documentation	27	3,72	National archives	16	2,21
United states	27	3,72	Museums	16	2,21
History	27	3,72	Archives & education	15	2,07
Universities & colleges	22	3,03	Information resources	15	2,07
Archives collection management	22	3,03	Computer network resources	15	2,07
Digitization of archival materials	21	2,90	Librarians	14	1,93
Conferences & conventions	20	2,76	Information storage & retrieval systems	13	1,79
ASSOCIATIONS, institutions, etc.	20	2,76	Archival research	13	1,79
Archives -- Public relations	20	2,76	Research	13	1,79
Digital libraries	20	2,76	Library science	13	1,79
Academic libraries	20	2,76	Education	13	1,79
Great Britain	19	2,62	Online information services	13	1,79
Advertising	19	2,62	Cultural programs in archives	12	1,66

When we isolated the subject terms that could be closely associated with public programming, it was found that public programming was represented with subject terms that occurred in a fewer number of publications as shown in Table 6. Leading the pack was *access to information, institutional repositories* and *marketing* which were used to describe 12 publications, each followed by the following: *archives – access control* (11); *digital preservation* (10); and *open access publishing* (10), just to name the subject terms that appeared in ten or more publications.

Table 6: Subject terms relevant to public programming

Term	Count	Term	Count
ACCESS to information	12	Electronic publishing	6
Institutional repositories	12	Archives reference services	6
Marketing	12	WEB development	6
Archives -- Access control	11	Web archives	6
Digital preservation	10	Exhibitions	6
Open access publishing	10	E-mail systems	6
Archivists -- Training of	9	MASS media	6
Library outreach programs	9	Archivists -- Education	5
Archives -- Collection management	8	INTERNATIONAL cooperation	5
Archivists -- Congresses	8	SOCIAL networks	5
PUBLICITY	7	E-mail	5
Public relations	7	Archival materials -- Digitization	5
Social media	7	Web 2.0	5
Archives -- Administration	7	Archives advocacy & activism	5
Archives -- Congresses	6		

Author-supplied keywords

Table 7 provides the most common author-supplied keywords (ASKs) in the archival public programming literature. The analysis of the ASKs in the current study was based on the fact that most authors tend to draw their keywords from their papers/projects titles, which more often than not inform the subject organization processes (Babaii & Taase, 2013) and more so the indexing processes. It was therefore worrying to note that there were only 179 publications which provided ASKs. The majority of the publications, accounting for 75.3% of the total number of publications which discussed public programming in archives, did not provide ASKs. This may indicate that information access to the literature on public programming may be limited to some extent as searching for the information using keywords may yield fewer results than normal.

Out of the 656 keywords that were supplied by authors, *archives* appeared in 12 documents, followed by *preservation* which appeared in ten documents followed by *archive* (6) while *archival education* and *digital archives* appeared in five documents each. Table 7 further reveals that there were eight keywords that appeared four times each in the publications. These include *information needs, open access, methodology, history, electronic data archives*, *outreach archiving* and *administration*. The rest of the terms appeared three or fewer times each.

Table 7: Author-supplied keywords in the archival public programming literature (N=179)

	Count	%		Count	%
Archives	12	6,70	Spots	3	1,68
Preservation	10	5,59	Bibliotecas digitales	3	1,68
Archive	6	3,35	Metadatos	3	1,68
Archival education	5	2,79	Archivistica	3	1,68
Digital archives	5	2,79	Archives management	3	1,68
Information needs	4	2,23	Archivos	3	1,68
Open access	4	2,23	Qualitative data	3	1,68
Methodology	4	2,23	Curriculum	3	1,68
History	4	2,23	Collections	3	1,68
Electronic data archives	4	2,23	Information specialists	3	1,68
Outreach	4	2,23	Institutional repository	3	1,68
Archiving	4	2,23	Multimedia systems	3	1,68
Administration	4	2,23	Video	3	1,68
Memory	3	1,68	Development	3	1,68
Marketing	3	1,68	Secondary analysis	3	1,68

Discussion, conclusions and recommendations

The study sought to determine the keywords or terms that can be adopted to inform projects conducted in the subject domain of archival public programming. One of the aspects that was investigated was the coverage of the subject in selected databases which were deemed to be custodians of archives and records management literature. It was found that LIS-specific databases indexed most literature on archival programming. This was not at all surprising as this pattern establishes and reinforces the belief that archives and records management in general and in public programming in particular resides in the broader discipline of library and information science. Several authors (e.g. Griffiths, 1983; Pemberton & Nugent, 1995; Markey, 2004; Zins, 2007; Walia & Kaur, 2012) as well as most LIS schools have situated archives and records management within the broader field of LIS. Furthermore, Shaheen (2012) has shown that archives and records management is part and parcel of information science. It is thus not surprising that some LIS schools have changed their names to include the word *archives* in their names (e.g. School of Library, Archives and Information Science at the Hebrew

University of Jerusalem) to incorporate archives and records management, which is seen as a constituent discipline of information science and at times as a distinct discipline.

One other finding that is worth mentioning is that a total of 47735 documents was published between 1868 and April 2014 that contained *archives* and related search terms (i.e. *archivist, archive*, or *archival*) in their titles. If the total number of documents published on public programming was to be expressed as a percentage of the total number of documents published on archives, the result would be a mere 1.6%, thus reflecting the minimal attention given to public programming by scholars and practitioners. We therefore need to ask whether or not the topic is of particular importance to the archival profession or whether it is relatively marginalized compared to other subjects. Despite the meagre number of publications on public programming, there has been an exponential growth of the number of documents published on public programming. This pattern is encouraging as it may imply the following:

- Increased attention of scholars and practitioners on the subject.
- Growth of knowledge in the area of public programming. Some scholars (e.g. Tague, Beheshti and Rees-Potter, 1981) have noted that the growth in the number of publications can be used as an indicator of the growth of knowledge in a given field or discipline.
- Increased activities around archival public programming at the workplace.

In terms of the most common terms with which projects on public programming can be informed, the keywords in abstracts produced eight clusters, each containing a number of terms. The terms which have a direct bearing on public programming include the following: *advocacy effort, accountability, cooperation, democracy, exhibition, general public, archival education, archival repository, collaboration, public awareness, sharing, teaching, tours, visibility, advertisement/advertising, customer relations, emails, internet, magazine, newspapers/newsletters, online services, reference services, social media, websites, promotion, accessibility, dissemination, forums, open access, conferences, cultural heritage events, outreach programs, institutional repositories, public relations, television,* and *scholarship and theory*, among others. We believe that these and other concepts/terms may inform projects undertaken on public programming, be they curriculum development, research projects, marketing, public programs, and so on. These terms occurred in the titles and/or full texts.

Similar patterns were witnessed in the analysis of the subject terms relating to public programming (see Table 6) as well as the author-supplied keywords. Whilst the former provided a clearer picture, the picture of the latter was not as clear. There were nevertheless overlaps between Table 6 and Table 7. Issues of *access to information, institutional repositories, marketing, access control to archives, digital preservation, open access publishing, training of archivists, outreach programmes, publicity, social media*, and *public relations*, each yielded a total of six records and more (see Table 6). Some of these terms constituted the terms used to conduct the search for the publications on public programming in this study. It is worth noting the occurrence of ICT-related terms such as *open access publishing, institutional repositories, digital preservation, social media, electronic publishing, web archives, e-mail systems, social networks,* and *web 2.0* in the list of terms. These terms may imply a paradigm shift in public programming from the traditional means of conducting public programming to ICT-driven programs. Although tours and exhibitions are still used, social media, social networks, emailing systems, online/electronic publishing, and perhaps online exhibitions may be taking centre stage in public programming. The use of websites to conduct public programming is also a possibility. This trend confirms Gregor's (2001) prediction on the use of computerised technology to conduct public programming activities. The emphasis that has been placed on accessibility, in general and access to information in particular is encouraging. We believe that access to information may be a precursor for or the goal of public programming projects. In other words, the need for public programming is being driven by the need to

provide access to information. Alternatively, public programming can be aimed at achieving a higher degree of access to information. This will hopefully result in more usage of the archives, as opposed to the situation described by Murambiwa and Ngulube (2011).

It was encouraging to note from the findings that increasing attention is being given to archival public programming as reflected in the growth of the literature. This may imply that public programming is starting to play an increasingly important role in the functions of national archives and other similar agencies. The activity or function as well as projects associated with it can be conducted in several ways such as through marketing, promotion, advertising, public relations, advocacy, publicity, and outreach programmes as well as conferences, workshops, and seminars. The use of ICTs to conduct these activities may boost accessibility and use of the archives. Projects geared towards public programming can thus be informed by a variety of processes and resources outlined in the findings of the current study.

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