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Abstract

This paper considers the library and information science research that has been conducted in Botswana since 1979 when the library school at the University of Botswana was opened. The period considered is from 1980 to 2006, a period of 27 years. The paper attempts to link the research and publication trends with the historical, social and cultural factors in Botswana. The conclusion is that Botswana has a relatively young history of library and information services as well as library education; that the research activities have not been informed by a research agenda and that there has not been significant collaboration between practitioners and academics primarily because for practitioners, research and publication is not viewed as essential to their job progression. Research skills are very crucial for empirical research, and the fact that most research has been descriptive may point to some deficiency in that regard. Other factors that impinge on research have been identified as lack of funding, lack of time, and research that does not necessarily address the issues and challenges of the profession in Botswana. The paper concludes by providing recommendations on what needs to be done to address the current situation.

1. Introduction

Library and information Science (LIS) research in Botswana has a fairly recent history having started in earnest with the establishment of the Library School in 1979. Prior to that, most research was conducted by students studying abroad in partial fulfillment of their study requirements. Some research was however conducted by

professionals who were working in various libraries and research institutions, but was sporadic and generally documented work related projects and activities. With the establishment of the library school at the University of Botswana in 1979, academics and scholars teaching at the school added significantly to the amount of research that was being produced; students of the school also carried out research for purposes of their studies; and practicing librarians also engaged in research for various reasons. Thus, it is safe to say that a lot of research and publication in LIS has been undertaken since 1979. Much as this research was being conducted, it was not informed by any particular research agenda whether in the department or in the local profession itself. In addition, there has been no analysis undertaken to characterize the research and determine whether it was informed by developments in the profession in general, as well as the social, cultural and historical conditions in Botswana.

Elkin (1999), quoted by McNicol and Nankivell, (2002) defines research as original investigation aimed at gaining knowledge and understanding. He states that it should be relevant to the needs of commerce and industry as well as to the public and voluntary sectors. Mchombu (2002) further opines that research should be social development oriented especially in developing countries in order to be a catalyst in the development process. Research can be basic, applied and operational. McNicol and Nankivell (2002) state that: “Research in the LIS domain varies tremendously in scale and orientation; for example it may be local, regional, national or international and have a practical or academic focus”: 14. For research to be useful, it has to address problematic areas either in the profession or in the overall development process. Library and information science researchers should not be operating in a vacuum, researching on issues that do not impact anything.

For purposes of this paper LIS research includes all papers that have been published by LIS researchers in Botswana in various journals as indexed by Library and Information Science Abstracts (LISA). LIS researchers include LIS practitioners and academics who teach and research in LIS. Thus, this paper reports an analysis of research undertaken in Botswana from 1979 to the present. The analysis considers the social, cultural and historical conditions in Botswana and attempts to identify the link between these factors and the state of LIS research in Botswana.

2. Methodology

A search was conducted on the Library and Information Science Abstracts (LISA) database for items written on Botswana, developing countries and Africa. From the results, all those that were written by people who had been resident in Botswana at some point were isolated. Given the very small population of Botswana, and the fact that LIS professionals of the past and present are well known to the researcher, it was not a difficult task to isolate papers written by LIS researchers and practitioners in Botswana over time. The search results were considered over three periods of 1980 to 1990; 1991 to 2000; and 2001 to 2006. The analysis covered the following: topics covered in the three periods; who was publishing; the types of research that was published; and finally the journals that were mostly utilized for publication of results. An attempt was made to explain the above trends based on the historical, social and cultural issues at play in Botswana during the three periods under study. An attempt was also made to show how research in Botswana could have been influenced by trends in library and information science in general or the situation of Botswana in relation to the development of LIS in the country.

The researcher also sought to understand what the factors at play were that influenced the research conducted by posing questions electronically to a group of LIS academics and practitioners selected as a convenience sample. This method is not unusual since studies have sought to understand trends by identifying opinion leaders in a field to augment findings of surveys, etc. As such, a few individuals were asked to identify the factors that contributed to the research trends in LIS since 1979 up to 2006. The individuals who responded include 3 academics in the Department of Library and Information Studies, University of Botswana (UB); 2 librarians from the UB library; and 2 from the Botswana National Library Services (BNLS).

3. Botswana: a historical overview

When Botswana attained independence from the British in 1966, the country was one of the poorest countries, with very little assets and infrastructure. The reason for the limited infrastructural development was mainly that the British were not really interested in Botswana as a colony because it had nothing to offer, but agreed to protect it because they were preempting the further advancement of Germany who had annexed South West Africa (Namibia) and the Dutch in South Africa. It was only

when diamonds were discovered that the country was able to provide basic infrastructure for its citizens such as: roads, hospitals, schools, etc. In a sense therefore, Botswana's history is characterized by starting from scratch to build infrastructure and train its citizens to be in a position to man the various government departments and agencies. This has impacted on many activities and endeavors, including the development of library and information services, education of library and information sciences, and research in the area.

1.1 Libraries and information services

Libraries in Botswana were introduced by colonialists who were mainly importing services that they had enjoyed in their mother countries. Thus early libraries were not really targeted at the Botswana population, as much as the expatriate population, besides, at independence very few Botswana could read or write. The Botswana National Library Service (BNLS) came into being in 1967, and by 1979, several public libraries were in existence, and efforts were afoot to make library services relevant to the population and the development process. By the 1990s several special libraries had been established in a variety of institutions such as colleges of education, colleges of nursing, other tertiary institutions, and research oriented institutions. Many libraries in secondary and tertiary institutions, as well as government departments were run by the BNLS. Clearly, BNLS had a lot on its hands; it was mandated to provide library services to all in Botswana; as well as ensure that libraries and information centers in schools, colleges and government departments were running smoothly.

1.2 Education

Such libraries, for the most part, were staffed by expatriate staff for slightly more than a decade after independence. By the late 1970s there were only a handful of local overseas trained librarians, and hundreds of untrained library staff who served in paraprofessional positions. The library school at the University of Botswana was thus set up in 1979 to train these paraprofessional staff and bring them up to diploma level. Thus the school started from humble beginnings training in-service staff and providing certificate and diploma level courses in library science. By 1986, a degree program had been introduced, as well as a postgraduate diploma in library and information studies. Eight years later, a masters program was introduced which

replaced the postgraduate diploma. According to Boadi (2002), the change was brought about by the need to produce information professionals who could be employed in what was perceived as emerging markets fuelled by technology. By 1995, the department had introduced archives and records management and school librarianship programs. A PhD program was introduced in 1999 and an information systems degree program was introduced in 2002, as well as a master's degree in archives and records management.

It is clear therefore that LIS in Botswana started with very few trained professionals to lead and develop a research and publication culture.

1.3. Research funding

Generally Botswana has not had a well established system of funding research. Many countries tend to encourage research and development by developing national research strategies and by providing avenues for funding. Such a system is crucial because the presence of funding bodies tend to determine the research strategy and focus. For instance, taking the British example, Ashcroft & McIvor (2000) state that the Library and Information Commission has influenced the direction and focus of LIS research in the UK. Botswana has not had this in place; up to the present moment there is no funding body as is the case in South Africa, the US, and UK. In general, in the past, most research was motivated by government and international bodies, such as the UN who would commission various research institutions, and consultancy firms. University academics however have always been funded by the University of Botswana. Unlike countries such as the UK, the US, and South Africa, Botswana has not developed an environment that encouraged research and innovations through bodies that set the research agenda and also made research funding available. The point being made here is that there has historically been no formal structure aimed at encouraging and funding research in all fields of study. A Ministry of Communication, Science and Technology was only established in 2002 and has been tasked with establishing a research funding agency and the agency is still not in place, although plans to set it up are at an advanced stage.

2. LIS Research in Botswana between the years 1979 to 2006

The Library and Information Science Abstracts (LISA) database was searched to identify research and publications concerning library and information science in Botswana. In total, 285 papers were published in the 27 year period covered in this paper. The period 1980 to 1990 had a total of 41 papers published; 1991 to 2000 had 159 papers; and 2001-2006 had 85 papers.

2.1. Areas of research and publication

2.1.1 1980-1990

Table 1: research areas published during 1980 to 1990

Area	Numbers
Library Education	11
Management and Planning	5
Publishing	5
Special Libraries	5
Library cooperation/Interlibrary lending	3
Bibliographic studies	3
Technology	1
LIS for disabled persons	1
Preservation and Conservation	1
Library services promotion	1
Cultural Documentation	1
Library Security	1
Botswana Library Association Report	1
Information transfer	1
SCECSAL, Botswana	1
TOTAL	41

A total of 41 papers were published in various journals during the period 1980 to 1990. Areas that were being researched included library education and the direction it should take, and most of these papers were written by academics in the newly established Department of Library and Information Studies at the University of Botswana. There were also a significant number of reports of conference or meetings reports, all published in the Botswana Library Association Journal and mostly written by practicing librarians who would be expected to present such reports after attending conferences. A number of papers also documented various aspects of library work and also were typically written by practicing librarians, most of who were in the University Library and a few by other librarians.

The fact that there were significant numbers of papers that covered library education is logical given the fact that it had begun in Botswana in 1979. Many of the papers were descriptions of the LIS program at the University, as well as general descriptions

of library education in Africa. Other areas included library management and planning, again mostly written by librarians at UB library. There were a number of papers that covered special libraries, library cooperation, interlibrary lending and bibliographic studies, etc.

2.1.2 1991 – 2000

Table 2: Research areas published during 1991-2000

Areas	Numbers
Library automation/ICT issues	25
Library education	24
Librarianship	23
Archives and records Management	11
Grey literature Documentation	9
Agricultural Information	9
Library operations	9
School libraries	8
Tracers/surveys	7
Information Seeking and needs	6
Bibliometric studies	6
Human Resource Issues	5
Information seeking and needs	5
Gender & information	4
Regional Library Cooperation	2
Infopreneurship	2
Conference reports	2
Publishing	1
Bibliographic control	1
TOTAL	159

During 1991-2000, research areas increased significantly, as did the amount of research itself. The increase in the number of publications was due to the fact that at this stage in the history of Botswana and in the LIS history of the country, there were more libraries, as well as more importantly, more trained LIS professionals, both expatriate and local, who were researching and writing. The Government and the University of Botswana were aggressively training professional librarians and academics who could teach in the library school. There was significant publication in library education and this was in line with developments in the library school which was experiencing growth and had been in existence for at least a decade. New programs were introduced such as school librarianship and archives and records management. New programs such as the postgraduate diploma in LIS, Masters in LIS and PhD were introduced during this time. New staff members in the area of archives and records management, school librarianship, and agricultural information were recruited and thus they contributed to the research and publication in these areas, hence the upsurge of papers in these 3 areas. As such, a significant amount of LIS

research and publication was carried out to the extent that a total of 159 publications on LIS issues in Botswana were published in varied journals.

Areas that featured prominently in the publication record of 1991 to 2000 included library automation and general accounts of various library activities and projects. Library automation and ICT issues were crucial at the time because UB library was transforming itself into an automated environment and many of the papers that were published addressed the progress and process of the automation exercise. Equally, there were significant numbers of publications that documented library activities, especially at the UB library, as well as general papers on librarianship in Botswana and Africa and its role in development.

2.1.3 2001 - 2006

Table 3: Areas published during 2001 – 2006

Areas	Numbers
ICT issues in general	29
Library Management	7
Information needs and seeking	5
Archives and Records Management	5
Library use and services	5
Library education	5
Publishing issues	5
Library Associations	3
Collection Development	3
Information literacy	2
Library Automation Issues	3
Library Cooperation	2
Indigenous knowledge	2
Freedom of information	1
Employment prospects	1
Intellectual Property	1
Information Communication	1
Information Audit	1
Media studies	1
Children's literature	1
Library Cooperation	1
Marketing	1
TOTAL	85

In the 6 years since 2006, 85 papers were published. For the first time, there are papers that are not so much centered on libraries and information centers, but which looked in a general way at information management; issues of the information society and how it is affected by the north-south digital divide, and what steps the Botswana government is taking to ensure that Botswana partakes and is a part of the information

society. Issues of library management, information seeking, information needs are still of interest they have declined considerably compared to ICT issues.

2.2. Who is researching and publishing what type of studies and why?

2.2.1 1980 to 1990

Table 4: researchers and types of research conducted

Who was publishing	Numbers	Type of research	Numbers
DLIS Academic staff	11	Empirical	0
		Descriptive/analytic	11
UB library staff	18	Empirical	0
		Descriptive/analytic	18
BNLS staff	4	Empirical	0
		Descriptive/analytic	4
Other library professionals	8	Empirical	0
		Descriptive/analytic	8
TOTALS	41		41

From 1980 to 1991, no empirical papers were published by any of the four groups of information professionals. Of the 41 papers that were published, 7 were reports of conferences or other meetings typically written by practitioners. Many of the papers (18) were published by the University of Botswana Library staff and were focused largely on documenting different aspects of library work, such as library management, library services, library cooperation, interlibrary loans, etc.

The fact that there were no empirical studies that were reported is logical given the fact that there were very few information professionals at that stage and that there would have been limited time available to dedicate to empirical research as libraries, information centers and the library school were basically being set up.

2.2.2 1991 to 2000

Table 5: researchers and types of research conducted

Who was publishing	Numbers	Type of research	Numbers
DLIS Academic staff	87	Empirical	27
		Descriptive/analytic	60
UB library staff	53	Empirical	10
		Descriptive/analytic	43
BNLS staff	9	Empirical	0
		Descriptive/analytic	9
Other library professionals	10	Empirical	3
		Descriptive/analytic	7
TOTALS	159		159

The period 1991 to 2000 saw an increase in the research and papers published by DLIS academic staff who published a total of 87 papers out of the 159 that were published. Out of these 87, 27 were a result of empirical research and 60 were descriptive in nature. Although the number of descriptive studies was still large, one can see an increase nevertheless in empirical based research from the 0 in 1980 to 1990 and 27 in 1991 to 2000.

At this time too, University of Botswana librarians were publishing considerably and this was largely due to the fact that they were required to publish and research and publication were used as a measure of their performance together with service to the university, professionally and in the community. Altogether UB library staff published a total of 52 publications. Many of the studies were reporting on the work activity with 6 of those reporting the process of automation that the library was going through. Empirical research reports also increased from zero during 1980 to 1990, to 10. A total of 42 papers were descriptive in nature.

Other library practitioners in the public service and special libraries (besides the UB library staff) were also publishing and this is also largely due to the increase in the number of professionally trained librarians. BNLS staff published descriptive studies, and other librarians in special libraries, published 3 empirical studies.

2001 to 2006

Table 6: researchers and types of research conducted

Who was publishing	Numbers	Type of research	Numbers
DLIS Academic staff	55	Empirical	20
		Descriptive/analytic	35
UB library staff	24	Empirical	8
		Descriptive/analytic	15
BNLS staff	3	Empirical	0
		Descriptive/analytic	4
Other library professionals	3	Empirical	3
		Descriptive/analytic	0
TOTALS	85		85

In the period 2001 to 2006, more empirical research papers were published. DLIS

staff published a total of 20 out of 55 papers. Many of the papers are based on research conducted by masters and PhD students, as well as research by academic staff. A total of 24 papers were published by UB library staff and 8 of them were reports of empirical studies, some of which were carried out by the staff whilst they were in graduate education in Botswana or abroad. Even given the fact that this period is only 6 years compared to 10 of the other two, it is clear that publication by BNLS staff has declined to 4 with no empirical research being reported.

3. Where were LIS researchers in Botswana publishing?

Publication of research at the beginning in the period 1980 to 1990 was generally limited to non-peer reviewed journals such as the *Botswana Library Association Journal*. Overall, only 7 papers were published in peer reviewed journals. The situation improved over the years and papers were increasingly published in peer reviewed journals. Again this is a function of more LIS academics publishing and the requirement that they publish in peer reviewed journals.

3.1 1980 – 1990

Out of the 41 papers published during this period, 24 were published in the *Botswana Library Association (BLA) Journal*; 3 in *Information Development*; another 3 as conference reports and 3 more in the *Quarterly Bulletin of International Association of Agricultural Information*. At this time one realizes that the BLA Journal published the most papers as a new journal of the newly established Botswana Library Association. Researchers were encouraged to write for the Journal at a time that BLA itself was gathering momentum. Subsequently one does not see any reference to publications in the BLA journal and one can only surmise that LISA stopped indexing it, or its publication became sporadic, and it lost its earlier impetus, the sad story of many journals in Africa.

3.2 1991 – 2000

During this decade the researchers began to expand their publication horizons by choosing a variety of journals, with papers published in a total of 45 journals. Twenty two (22) papers were published in conference proceedings; 17 papers in the *African Journal of Libraries, Archives and Information Science (AJLAIS)*; 14 papers in *Information Development*; 13 papers each in *Libri* and *International Information and*

Library Review; 12 papers in *Library Management*, 8 papers in *Library Review* and *African Research and Documentation*; and finally 5 in *South African Archives Journal*. The rest were spread in the remaining 38 Journals. An observation to make is that apart from conference proceedings, the *AJLAIS* began to attract papers from researchers in Botswana, because it had become the premier journal for LIS research in Africa. Researchers also began to publish in international journals.

3.3 2001 – 2006

In a space of five years, papers were published in 35 journals, with *AJLAIS* taking the lead with 13 papers. *Information Development* published 9 papers; *Library Management* 7 papers and 5 papers each for *Electronic Library*, *Library Review*, *Malaysian Journal of Library Science*, and *South African Journal of Library and Information Science*. *AJLAIS* has remained the journal of choice as it was during 1991 to 2000 period.

4. Factors affecting the LIS researcher in Botswana

Questions on the historical, cultural and social factors that affect the LIS researchers in Botswana were sent to LIS professionals at the University of Botswana Library School, the UB library senior staff, and to some staff of the BNLS. The factors highlighted by these colleagues are outlined below.

4.1. Absence of an LIS research agenda

An issue that was brought up was the lack of a research agenda that would guide the focus of research within the country. This means that in general, researchers in the LIS field are researching for their own purposes and on their own interest, and there are no general research areas that have been identified as being important enough to warrant special treatment by all. Another issue was that fact that if research findings are to be implemented, the research itself must address current issues and challenges. Indeed, as stated by Mchombu (2002), LIS research in Botswana, as in Africa has failed to address social issues and this has worked against strengthening information science in the country and contributed to its poor image. The fact that there has been no study into the LIS landscape in Botswana and the issues and challenges therein means that research is largely undirected and uncoordinated. It has been posited that there is a need for an empirical study that will highlight the LIS research landscape in

Botswana and identify the areas that need to be paid attention to. This would not only identify the research output in Botswana but also how this output is disseminated to other LIS practitioners in Botswana.

4.2 Research skills

Historically, higher education curricula in countries such as Botswana focused on generating manpower for the new independent states and research was not given that much emphasis. For example, the emphasis in training at a higher level was to produce educated workers rather than to develop scholars.

Although students at the library school are taught research methods, these are offered in order to equip the students to write dissertations or term papers and not for applied research which is what practitioners would need to be engaged in. Indeed the feeling is that practitioners feel they do not have adequate research skills and most of them only do research when they are on study leave where they find themselves bound to undertake research for the award of the program they are studying. After study, and going back to work environments that do not encourage research, the acquired skills are soon forgotten. Indeed, the fact that much of the LIS research in Botswana is descriptive rather than empirical would beg the question whether students of LIS are trained to be able to conceptualize and undertake this type of research; and whether students are trained to the extent that they are able to conceptualize research studies that arise from their work and its impact to others and the development process. Another question is whether research is seen as an integral part of carrying out LIS work either as a practitioner or as an academic?

4.3 Work environment conduciveness to research activities

Practitioners have stated that in most cases, their work environment does not encourage or require research, and therefore, if they conduct research it must be in their own time and not as part of their work. For example, staff at BNLS are not required to research or publish and their upward movement in the organization is not determined by this. Indeed, BNLS staff members have not had significant research output in the past 27 years, although there were a few staff members who did research and write. A point made was that the younger professionals have realized that publishing does not necessarily advance them in the organization, and hence

publication from BNLS has declined over the years. Another factor mentioned was that the recommendations that have emanated from studies on BNLS are hardly implemented – and this may suggest a dissemination issue, or the fact that the research conducted is not taken seriously since it is carried out by students.

For a long time, library practitioners in the UB Library were expected to research and publish in the same way that their teaching colleagues were doing. Indeed LIS is a field that constantly changes and requires one to keep abreast through research. However, the restructuring of UB library service in 2000 which saw them viewed as support staff has to a large extent contributed to the reduction in research and publication from library staff.

4.4 Availability of time to conduct research

The fourth concern relates to lack of time to conduct research. LIS professionals appear not to have the time to undertake empirical research and this is borne out by the number of empirical research papers published. For instance the academics at DLIS are faced with growing numbers of courses and students to teach. Their primary concern will be to teach in such instances and research will be relegated to second even third position. Even practitioners are faced with a similar situation. They have to attend to the needs of their clients and think of research as something which can be done where time permits. Another factor contributing to the lack of time amongst practitioners at BNLS is that the service is relatively young and is grappling with ensuring that library services are available for everyone in the country. Secondly, there is a lack of a critical mass of staff to ensure that this goal is attained. As such, therefore, staff members are literally overwhelmed and can hardly find time to conduct research.

Although practitioners in UB library qualify for sabbatical leave which would enable them to conduct research, many of them do not take it and therefore because the work in the library is intensive, they do not find the time to conduct research unless it is at their own private time. The 2000 restructuring of UB library staff which resulted in a change of status from academic to support staff may also have contributed to staff members' decreasing research output from 2001 to date.

4.5 Availability of research funding

Generally, in Africa a very small number of governments sponsor or fund LIS research. In Botswana, LIS research is supported by the University of Botswana for university staff members but it is not given special attention as it is funded in the same way and with the same conditions as other types of research. For library practitioners in BNLS and other libraries outside the university system, research funding and time off to conduct such research is not easily forthcoming. To conduct research, especially empirical research in a country as spread out as Botswana, it is imperative that financial support is provided. However, all is not lost, as students at university are given limited research funds for their dissertation and thesis work.

4.6 Lack of collaborative climate

One colleague observed that it seems as though there is no real focus on collaborative research; that many colleagues seem to be doing their own research without involving others to solve or understand the issues of the profession in Botswana. Furthermore, collaboration between government, industry and academia would go a long way towards fostering LIS research environment. However, there is no such avenue and researchers largely conduct research that is of their own interests and may not be very useful to other partners such as industry and government. It is also quite evident that until recently in Botswana, there was no inkling that researchers could commercialize their findings, and it is only recently that the university has been talking about government, industry and academia collaboration with a view to also produce goods and services.

4.7 Research unfriendly environment

An issue that impacts on research in Botswana is identified as an environment that is not research or researcher friendly. This has been linked with the fact that Botswana has a small research market in the sense that the same people are asked to participate in research as respondents resulting in their being over researched and therefore unwilling to give their time to researchers. Additionally, researchers cannot conduct research without a research permit. The application for a research permit is riddled somewhat with levels of bureaucracy and it can take a considerable amount of time for researchers to be granted permission and to be given the requisite documentation

that will open doors. Without the documentation, no one will allow researchers' access to people or the research site.

One colleague mentioned the fact that generally in Botswana, research may be seen as alien, especially if people asking for information are strangers and often people are not sure what the information will be used for. This is particularly the case when information is being sought from those in authority be it in government or in private organizations where researchers are treated with suspicion because perhaps one is not sure what the information is to be used for. Furthermore, there are other issues such as the feeling that little is known in Botswana about the LIS profession and what they do.

4.8 Lack of a strong Library Association

Although the library association in Botswana is still alive, it has lost its strength and ability to influence developments in the LIS field and LIS research areas. The reasons for this are that membership has dwindled, and for a long time was restricted to the same individuals who were inevitably elected to office only to find that support from members was somewhat not forthcoming. The BLA was particularly strong and alive in the 1980s, but went into decline in the 1990s, when most of the pioneers of BLA took a backseat to encourage younger members to take over leadership. In addition, the flagship publication of the BLA where many LIS researchers published and cut their teeth was reduced to a newsletter due to people's reluctance to publish in an un-refereed journal and also to its infrequent publication.

5. Discussion

McNicol and Nankivell (2002) identified a number of problems besetting LIS researchers in the UK which in my view also apply to the Botswana situation:

- Nature of LIS education;
- Lack of skills and knowledge for conducting research;
- Lack of a research agenda that is directed to current problems;
- Lack of employer incentive and interest in research;
- Limited practitioner involvement in research;
- Research practice gap;
- Research that does not address issues that are problematic to the profession;
- Research is disseminated to journals that others cannot get access to;

- Student dissertations are not disseminated adequately most of the time and yet are empirical in nature.

The fact that LIS education is relatively young when compared with other countries in the region, has contributed to the trends in research and publication. Although the library school started in 1979, there were no local LIS academics and an aggressive training strategy was adopted to the extent that local staff members with PhDs have increased from zero to 7 with 4 more in the pipeline. Comparatively speaking, in Botswana there are fewer LIS scholars and practitioners than in other countries. A critical mass of researchers is required if LIS research in Botswana is to flourish, and at the moment, it is not there.

Considering the trends in research and publication by LIS academics and practitioners in Botswana, one notes that the relatively young history of both library and information services and library education has had some impact on the research and publication of LIS researchers. This is especially noticeable in the early years from 1979 to 1990 where research did not seem to be paramount and the publication avenues were limited to the *Botswana Library Association Journal* and a few other journals. The fact that research and publication seemed to be concentrated at the UB Department of Library and Information Studies and UB library could be explained by the fact that up to 2000, both groups were required to research and publish. It was only after restructuring of UB library and their conversion to support staff status that research became a choice rather than an expectation. Indeed the period 2001 to 2006 had more academic LIS personnel researching and publishing than UB library practitioners. A situation that is different during 1991 to 2000.

LIS research in Botswana has focused on library automation, technology for LIS and the information society, library management, but has not researched in areas that would enable it to grow. Moahi (2002) identified some areas in the area of ICT that LIS researchers should be focusing on and these include digital libraries, impact of ICT on development of the information society, information needs, seeking and retrieval, issues of content on the Internet, ICT and development, to mention a few. Considering international research trends in areas such as digital libraries, information retrieval systems, etc., Botswana has not really delved into these areas, nor has it

tackled areas that would build the field by contributing to national endeavors and hence increasing the visibility of the profession. This state of affairs is largely due to a lack of research direction spearheaded by both academics and practitioners.

Botswana LIS research has been descriptive rather than empirical. This issue as stated elsewhere in this paper poses the question of research skills. Although over the years the situation has improved, there is still a preponderance of descriptive studies. At issue is a need to understand to what extent LIS students are provided with research skills and whether these are sufficient to make researchers out of them. Indeed, it is felt that the research skills imparted during training are not sufficient and should not only be taught as a course preparing students for their dissertations, but should be incorporated in all courses.

It has been pointed out that generally, there is a lack of incentive and interest in conducting research amongst practitioners. This is due to the fact the employers do not encourage research nor provide a conducive environment in which it will thrive. Where research is seen as distinct from the normal everyday work of practitioners, there is no way that they will conduct research because then it has to be done in their own time.

The lack of funding for research activities is a big factor in impacting LIS research. Research funding targeting LIS research is not available. To conduct empirical research requires time and money, without these, individuals are going to be content with writing papers based on what they have read and what they think. Certainly this has been the case in Botswana.

The participation of practitioners in research activities has declined somewhat which is unfortunate because practitioners research and provide information on their activities. This research may then be used by other practitioners who are faced with the same issues or may cumulatively show the state of LIS in the country. Furthermore, it would seem that research conducted over the years has not really addressed any specific problem area and thus there would seem to be research for the sake of research and not much else. Research carried out by academics also does not seem to address issues faced by practitioners.

It is clear that a lot of research findings are not disseminated in fora where they will be discussed and possibly taken on board by employers. Much of the research of students at DLIS is hardly ever publicized or disseminated as publications. When researchers publish they elect to publish in international journals which for the most part, are not subscribed to by many libraries, including the university library.

6. Conclusion

Clearly LIS research in Botswana is impacted by historical, social and cultural factors, and this paper has shown how. There is a need to ensure that research coming out is relevant so that it can feed into the entire LIS system in Botswana and also contribute to making Botswana an information society. This can be done if a number of basic things are put in place:

1. LIS educators need to ensure that students who graduate appreciate the fact that librarianship is greatly impacted by technology and other forces, and therefore changes all the time, necessitating continuous research to be able to understand and apply new developments. Practitioners should be encouraged to write about what they do and its impact.
2. LIS students should be equipped with sound research methods so that they are in a better position to conduct research in an effort to provide better service and solve any problems.
3. Individuals in leadership positions must be sensitized about the importance of research in LIS work and the need to create an environment that is conducive to research
4. The BLA must be supported by all to develop it into a body that will increase the visibility of the profession and will set the tone for research and education issues.
5. There is a need to conduct a LIS research landscape study that hopefully will identify the research areas where concerted effort must be expended.
6. Collaborative research between academics as well as academics and practitioners must be encouraged.
7. Botswana is a small country and it should be possible to hold seminars where research can be disseminated to various stakeholders.

This paper has analyzed the trends and patterns of LIS research in Botswana. Attempt has been made to link the publication trends with the historical, social and cultural factors in Botswana. Recommendations have also been provided to try and redress the situation where the research is not informed by any agenda and collaboration between the LIS practitioners and educators is minimal.

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