





Library, Information Science, and Archives Doctoral Research Trends in Australia

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Abstract. Research in the fields of the LIS, Archives and Recordkeeping sectors faces challenges as a result of course closures, which could have an impact on the number of future “academic-research-trained LIS professionals” and consequently the volume and quality of future research in Australia. This short paper aims to introduce a project currently underway in Australia to identify emerging trends in related PhD research, identify community needs and provide a summary of relevant background literature.

Keywords: Library and information science · LIS research · Archives research · Research trends · Subject trends · Topics trends

1 Introduction

Research in LIS, Archives and Recordkeeping in Australia has faced and is currently facing many challenges. First, as a result in recent years of declining enrolments and a decision by many universities to focus on higher volume disciplines with a greater rate of financial return to the institution [1], there have been a significant number of course closures in the fields of Library and Information Science (LIS) and Archives. These include the undergraduate program offered by Curtin University, and the postgraduate programs offered by Queensland University of Technology, the University of Technology Sydney, RMIT and Monash University [1].

Second, there is a certain “lack of incentive for doing a PhD in Australia because very few jobs have this as a requirement” [2]. Third, communication between scholarly research and practice is flawed within the field of LIS [3]. As a result, practice does not always benefit from formally defined research, nor is such research always informed by the experience of practitioners. This is a primary concern of the ALIA’s Research Advisory Committee, a body that is dedicated to seeing LIS practice-based research flourish in Australia.

Of particular concern is the impact these challenges will have on the number of future academic-research-trained LIS professionals coming into the sector, and consequently the quality of future research. This problem had already been recognised by Macauley et al., who in 2010 noted that “the sustainability of LIS research and research training for the next generation in Australia is under threat” [4]. If anything, the trends noted in 2010 appear to have accelerated over the past decade. A further issue, as noted by Christine

Mackenzie (then President of IFLA) at the 2018 RAILS Conference held at Monash University, is that there appears to be a significant disagreement between practitioners and academics about the nature of research and the needs of the sector [5].

The project “Library, Information Science, Archives and Recordkeeping Doctoral Research trends in Australia¹” is one response to this gap. The project aims to update previous studies of LIS and related research, notably those by Macauley, Evans and Pearson [4] and the environmental scan of Australian Library and Information Studies (LIS) research undertaken on behalf of ALIA by Middleton and Yates [6]. As with those studies, it is designed to assist with the development of a future research agenda, advocacy, and funding.

In particular, the project aims to:

1. Identify recent trends in LIS and Archives and recordkeeping related research by analysing theses completed since 2014 and those in progress
2. Identify emerging areas of research in LIS and Archives and recordkeeping, including those of potential interest to researchers in other disciplines, and
3. Identify priority areas for future research of interest to both academics and practitioners.

The research, which is currently underway, involves three stages:

1. Identification of relevant PhD theses completed or commenced since 2014, together with a content analysis based on their abstracts. Theses will be identified using the National Library of Australia’s TROVE service. The initial focus will be on the output of the known university faculties. In order to identify relevant theses from other disciplines, keyword searches and searches based on relevant Australian and New Zealand Standard Research Classification (ANZSRC) codes will also be undertaken. It will include only doctoral theses that have appeared in the national databases and individual university databases.
2. A series of interviews (8–10) with academics and representatives of professional associations, is being undertaken in order to gain an in-depth understanding of needs and future directions. A small number of additional interviews may be added if it appears that key individuals have been missed.
3. Once Steps 1 & 2 have been completed, an online survey of academics and practitioners will be undertaken, using Survey Monkey. It is intended to provide an opportunity for a broader validation of the results, particularly in relation to areas of future research. This will be promoted through social media and the professional associations.

In what follows, we will provide a review of existing literature, from Australian and other sources, concerning doctoral research in LIS and related fields. But first, the circumstances that prompted the project will be examined.

¹ Both ALIA and RIMPA have endorsed the need for this research, and that it is funded by the Whyte Fund, Monash university.

2 Why is This Research Needed in an Australian Context?

The motivation for this research is based on discussion from ALIA's Research Advisory Committee regarding the shrinking LIS presence within academia, including a reduction in the number of LIS educators/researchers in Australia. Given these circumstances, we see the proposed project as relevant and timely, potentially holding considerable value to library and information services in Australia. We believe that the findings can a) prove of direct relevance to a number of ongoing projects within the sector, b) help support strategic planning for LIS research, including cross-disciplinary research, and c) feed into areas of ongoing work - including ALIA's major Professional Pathways project, which concerns the future of professional recognition for the library and information service profession.

As the Records and Information Professionals of Australasia (RIMPA) has likewise recently raised concerns about the future of available education for the information, records and archives industries, it is hoped that our proposed research will add value to RIMPA's Education Portfolio by providing up to date information for future projects.

From a practical perspective, research such as this study can motivate discussion about progress in LIS, Archives and Recordkeeping areas, and promote further growth. The project will suggest research guidelines aligning research needs with those arising from community needs, and which should help in the design of new, more targeted, research projects in an era of shrinking budgets and fewer library schools.

Last but not least, we anticipate that helping to identify recent research trends will prove useful for relevant professional associations in deciding how to allocate their own research funds.

3 Literature Review

There have been a number of mappings of outputs in the LIS field that address the published literature on the topic [7–14]. However, in this study we focus only on studies that examine PhD theses in LIS, beginning with what can be learned from the experience of other countries.

Franklin and Jaeger [15] investigated 34 doctoral dissertations completed at 13 US LIS schools over a ten-year period (1993–2003), identifying five main subject categories: issues related to librarians and librarianship (47%); information issues, including information literacy, information overload, information behaviour, and information retrieval (21%); literature with a specific focus on African American perspectives (15%); technological themes (12%), and educational issues (6%). Also in North America, Prebor [16] studied research trends at a number of information science departments worldwide between 2002–2006. She identified 228 doctoral dissertations and 107 master's theses published mainly in USA and Canada via the ProQuest Digital Dissertations database, with the most important research topics being: user studies (29%), information economics and management (14%), data organization and retrieval and information/learning society (both 13%), and foundation of information science and information technology (both 12%).

In another study, Shu, Larivière, Mongeon, Julien and Piper [17] performed an analysis of the evolution of research topics and interdisciplinarity in 3450 LIS doctoral dissertations between 1960 and 2013 in North America. Information science, library science, computer science, educational technology, and higher education were identified as the top 5 topical terms used, with information science becoming the dominant research topic. The study also found that most of LIS theses are interdisciplinary.

Two large surveys have been conducted in China. Song, Zhu and Shu [18] categorised 1018 LIS doctoral dissertations completed between 1994 and 2018 in three areas: information science, archive studies, and library science. They found no significant changes in topics over that period, suggesting that the academic background of library and information science doctoral advisors does not affect the interdisciplinarity of their students' doctoral dissertations. They identified knowledge management, informetric and research evaluation, corporation and government services, resource construction, networks and community, and innovation as the main themes. Similarly, Zong, Shen, Yuan, Hu, Hou and Deng [19] mapped the research topics of 640 doctoral dissertations in Library and Information Science in China, awarded between 1994 and 2011. They found the most popular topics to include: knowledge management, digital library, Network, ontology, and Information service.

In India, Singh and Babbar [20] studied doctoral research carried out by LIS departments, tracing the development of LIS research in India since the award of the first PhD in 1950, through to 2012. Data was collected by questionnaire from 81 departments located in the 22 states of India. They found that the volume of LIS research by PhDs has been continuously increasing since the 1970s, due to improved research infrastructure, and having a PhD becoming an essential qualification for higher positions both in libraries and LIS departments. They further discovered that only a limited number of studies had explored the theoretical aspects of LIS, with research topics dominated by surveys of emerging areas such as: web resources, search engines, open access, E-learning, and total quality management. Finally, they reported that the outcomes/suggestions of these studies were not normally communicated to libraries.

Several other Indian studies covering roughly the same period were also identified. Chatterjee, Rath and Poddar [21] examined 212 PhD theses completed between 1950 and 1993, and found academic libraries, bibliometric/citation studies, cataloguing, classification, and indexing to be popular research areas in LIS during this period. Lahiri [22], studying 255 PhD thesis from 1950–1995 found a similar list of topics: bibliometrics, academic libraries, information needs and user studies. Manjunatha and Shivalingaiah [23] reported the same broad areas, but also included information systems design. Finally, Maity and Hatua [24] analysed 1058 PhD theses awarded by various Indian universities from 1950–2012. Popular subject areas included ICT applications, and studies of specific libraries, and scholarly communication.

In a more recent study, Madasamy and Alwarammal [25] looked at 171 theses completed between 2003 and 2008, and reported that topics such as library information sources and services, user studies, library and information management, and bibliometrics continued to be dominant.

Topics like bibliometrics, user studies, planning and management topics were dominant research topics between 1950 and 1992 in Chandrashekara and Ramasesh [22] study who studied 802 doctoral theses awarded between 1957 and 2008.

As for Pakistan, Samdan and Bhatti [26] analysed 28 LIS PhD theses to provide comprehensive and current information about all the doctoral degrees awarded by various universities inside and outside that country between 1947 and 2010. They reported significant growth in terms of numbers of theses, university programs and subject areas over the period, with academic libraries, archives, bibliometric studies, cataloguing, and collection development being identified as significant research areas.

Tveit [27] investigated which research topics have been of interest in Nordic LIS institutions, studying 79 doctoral dissertations published between 2005 to 2014, by 13 research institutions in Norway, Denmark, Finland and Sweden. The five categories of research topics identified in the study were:

- Information behaviour including information seeking, information sharing, reference work, information practice and information and learning
- Knowledge organization and information retrieval including cataloguing, classification, other metadata issues, information systems and information architecture, generally emphasizing the system.
- Information and society including a variety of studies related to social sciences, for instance politics of libraries and information, library and information management, including library & information organisations' planning, staff, economy, decision-making and communication.
- Sociology of culture/literature including studies mainly related to humanities and the social sciences, like library and book history, cultural politics, sociology of literature, as well as mediation and promotion of literature, cultural studies and general (not scholarly) publishing.
- Scholarly communication including bibliometrics, webometrics, studies of communication genres, systems of communication among scholars and scholarly publication

Of these, information behaviour was the focus of the biggest group of dissertations (29%), followed by knowledge organization (23%), sociology of culture/literature (20%), scholarly communication (18%) and the relationship between information and society (10%). Only seven theses used quantitative methods, 15 used mixed methods, with the most frequently used qualitative methods being document analyses, interviews and observations.

In Australia, Macauley, Evans and Pearson [4] analysed 114 theses from LIS schools or completed by LIS educators, researchers or practitioners in non-LIS schools from 1948 to 2006. ANZSRC schema was used for coding of the subset of 114 LIS PhDs. Dominant research topics were library and information studies, librarianship, information retrieval and web search, organisation of information and knowledge resources, human information behaviour, records and information management, informatics, information systems. An interesting finding showed that the proportion of educators with PhDs increased during the study period, however, the proportion of practitioners with PhDs decreased because LIS practitioners in Australia who receive a PhD move into academia shortly afterwards. The generation and production of LIS knowledge is reduced because

of the diversity and commitment to research outside the LIS field, which in turn dilutes the strength from within the field. Since a number of the authors of the 114 theses were overseas students who returned to their home countries upon graduation, the diversity combined with low numbers of LIS graduations already at this point in time indicated some challenges for future LIS research.

In the ALIA LIS research environmental scan conducted by Middleton and Yates [6], which focused on the period 2005–2013, 115 dissertations were identified of which 95 (83%) were at the doctoral level. This study was in turn a partial follow-up to earlier work that reported Australian LIS thesis output up to 2006 [4]. Of the 115 dissertations identified, 72 (63%) of all the dissertations were supervised by LIS schools in universities and colleges. Amongst these, 27 (23%) identified library and information science as the major topic, with information behaviour (28%), information literacy (14%), and management (13%) comprising other significant research topics. That study also looked at the methodologies used, reporting that while interviews were employed 43 times (37%), surveys or questionnaires were used in 19% of cases, and case studies in 14%. A small number drew upon grounded theory (5%), historical/historiography (4%), and phenomenography (4%) as methodological frameworks [6]. Sample table for the main topics identified (Table 1).

Table 1. Summary of literature review

Research topic	Countries	Studies
Knowledge management	China, Nordic countries	Song, Zhu and Shu [18], Zong, Shen, Yuan, Hu, Hou and Deng [19], Tveit [27]
Information management	USA, Canada, Australia	Middleton and Yates [6], Prebor [16]
Library and Information Studies	Australia, India	Macauley, Evans and Pearson [4], Madasamy and Alwarammal [25]
librarians and librarianship	USA, Australia	Franklin and Jaeger [15], Macauley, Evans and Pearson [4]
Information science and related issues including information behavior, information literacy, information overload, and information retrieval	USA, Canada, Nordic countries, Australia	Franklin and Jaeger [15], Tveit [27], Middleton and Yates [6]
User studies	USA, Canada	Prebor [16]
Web resources	India	Singh and Babbar [20]
Academic libraries	India, Pakistan	Chatterjee, Rath and Poddar [21], Lahiri [22], Samdan and Bhatti [26]
ICT applications	India	Maity and Hatua [24]
Bibliometric/citation studies	India	Chandrashekara and Ramasesh [28], Chatterjee, Rath and Poddar [21], Lahiri [22]

These previous studies have largely investigated dominant research topics, predominant research techniques and methodological frameworks in the library, information science, and archives via quantitative methods based on knowledge of research going on in the studied countries. Since the position of LIS is different across the world, there is a need to get a broader understanding of the range of research topics in different countries based on quantitative and qualitative methods to motivate discussion about progress in the area and find future directions.

4 Conclusion

There has been an increased interest in recent years in studying the trends of research in LIS in different countries. The studies discussed above have, for the most part, considered the quantitative output, growth pattern, and popular areas of research. While such studies typically concluded that more doctoral research needed to be carried out in particular areas - for example, digital libraries and ICT applications - there has often been less follow-up to chart the response to their concerns.

The above-mentioned studies provided useful information, but it was noted that most of the studies are limited to quantitative methods, they do not provide the latest information about doctoral studies in the Australian context. Thus, the need was felt for a study like this, which seeks to explore the current state of PhD research through a mixed methods approach. On the quantitative front, our study will aim to identify relevant PhD theses both through a content analysis and an online survey of academics and practitioners. On the qualitative front, we will continue to interview a relevant sample of academics/representatives and/or nominees of the professional associations across Australia, in pursuit of an in-depth understanding of research needs, possible current problems and disconnects, and desirable future directions. Through undertaking this research, we hope to supplement previous studies based on current actual needs, to plot the similarities and differences between research trends in Australia and those elsewhere.

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