

POLES APART OR A NATURAL FIT?

THE HEALTH LIBRARIAN IN THE RESEARCH ENTERPRISE

INTRODUCTION

The project reported here arose from the author's brief experience of working as a research assistant (RA), following many years' experience as a librarian in hospitals and educational institutions.

The librarian in a health or academic library is surrounded by published accounts of research, and deals with these in the course of managing information resources, providing information retrieval and similar services, and training users. In addition, many of the library's users are deeply immersed in conducting research investigations, and ask library staff for help during many phases of their research projects.

This had certainly been my experience, and led to a curiosity about "seeing inside" a health research environment. At a time of career change in 2012, I successfully applied for a part-time, fixed term RA position in a health informatics centre based in a Melbourne university. The role involves duties that blend the familiar with the new. It has provided an insight into the project-based nature of health research, with exposure to a range of common research techniques and challenges.

The present study steps back from my particular experience to investigate whether health librarians have the knowledge and skills to perform the role of a research assistant.

With a view to discovering whether health library and information professionals have the expertise to support and contribute to health research, this study attempts to answer the following questions:

- What is the nature of RA positions in health sciences in the Australian higher education and health services sectors?
- When compared with the competencies defined for Australian health librarians, to what extent are LIS professionals a "good fit" for the RA role? Are there skills or features that are common to both roles? Which RA skills aren't present in the health librarians' competencies?

This paper reviews the position and status of research assistants in Australian health settings. A sample of recent job advertisements for health research assistants was analysed to indicate the knowledge and skills that employers stipulate for these positions. The methods and findings of the analysis are reported. The paper then discusses the similarities and differences between RA requirements and health librarian competencies in Australia. The closing section suggests directions for further study.

RESEARCH ASSISTANTS IN THE HEALTH SETTING

If research is "formalised curiosity, poking and prying with a purpose" (Zora Neale Hurston), the research assistant is instrumental in conducting the study that searches for answers. In contemporary university settings, research is a high-level driver for academic activity, not least because it attracts external funding and bestows recognition for individual investigators as well as the institution. Thus it holds a privileged position compared to the other academic domains of teaching and community engagement.

Research is also conducted in clinical healthcare services, where the emphasis is on constant quality improvement and the enhancement of patient care. Translational research aims to bridge the gap between basic life sciences and health care, implementing clinically relevant findings into effective health interventions.

Research teams in the sciences and social sciences comprise a range of roles. A research team is led by a Principal Investigator (PI) and academic collaborators; research students, postdoctoral scholars may be involved, and there will always be research assistants.

Hobson, Jones and Deane (2005), who examined the research assistant workforce in Australia, noted it was difficult to define the RA role, though stated: “The research assistant role is well established as one involved in research not of the research assistant’s conception” (p. 360). Writing ten years ago, these authors observed there were problems in identifying RA roles within the higher education sector because data collection in the sector aggregated research academic and general staff classifications (p. 360). The current Australian and New Zealand Standard Classification of Occupations (2013, version 1.2) has no category for research assistants, which makes it difficult to derive a count of RA workers from the Australian Bureau of Statistics’ national employment data.

Thus it appears that research assistant work does not qualify for status as a profession, defined by the which the ABS defines as “performing analytical, conceptual and creative tasks through the application of theoretical knowledge and experience in...[a] field” (ABS, cited by Hobson, Jones and Deane, 2005, 360).

It is known that RA responsibilities and activities can vary widely according to the research project’s topic, the attitude and skills of the PI, and the interactions of the team members. Job titles also vary – examples include research analyst, research associate, research officer and project research officer – reflecting nuances in scope.

“The role of the research assistant can range across a broad spectrum of expected competencies. At one extreme, the research assistant can be expected to carry out mundane research tasks or even do cleaning and tea-making and at the other end of the spectrum there can be an expectation of exquisite specific technical and analytical expertise.” (Hobson, Jones and Deane, 2005, 359).

Research Assistant Tasks and Skills

A handful of studies have looked at the tasks performed by RAs in Australia. Organ & Svensen (1995, 2) list the following, based in part on feedback from RAs at University of Wollongong: data collection, entry and analysis, conducting fieldwork and experiments, undertaking library and archival searches, and writing and editing academic publications. Bridgstock and Wilss (2005) profiled 19 RAs in the Education Faculty at Queensland University of Technology. The authors composed a list of 43 RA research skills and competencies that might be used commonly in RA work, then asked the 19 RAs to rate their abilities on these skills. The five highest-ranked items were: writing, citation management, literature searching and reviewing, and data entry.

Hobson, Jones and Deane highlight the subject disciplinary differences that have a large effect on the range of duties an RA might perform, noting that “...the scientist typically requires a number of pairs of hands to carry out the experiment, observation, and description” (2005, 360-361).

Classification of RA positions

Employers need to classify RA positions, not least for pragmatic reasons. In Australian universities there appears to be two approaches, based on task analysis. The first is to rank RA positions in the Higher Education Worker classifications, which includes them in the professional body of university sector workers. The alternative is to classify RAs in the Academic award (level A or B), which acknowledges the self-direction, creativity and knowledge-sharing which are the markers required to build an academic career.

Queensland University of Technology's Classification Standards - Professional Research Staff instructs:

“Appointments to positions which are predominantly secretarial/ administrative/ computing or managerial should be made to the HEW position descriptors for professional staff. In making appointments to research only positions above the level of research assistant level 6, consideration should be given to classifying these positions according to the academic classification structure.”

RA Workers

Traditionally, research assistants have been either higher-degree students or postgraduates. This may be changing, as universities require shortened degree completion times which in turn make the prospect of RA work less sustainable for students. Since the majority of Australian research projects are funded on fixed-term contracts, the RA workforce is typically employed on a casual basis working a part-time fraction. Hobson, Jones and Deane (2005, p. 365) pose the question: “How does being a research assistant come about – is it only chief investigators who imagine themselves into science work? How do research assistants come to the role and how do they construct their experience and their identities in research?”

This is the question that underlies the current study.

METHODOLOGY

This study has two components:

1. An analysis of research assistant vacancies in the health sector which were advertised in the study period.
2. An examination of the recently-adopted competencies for Australian health librarians.

Job Advertisements

The survey of job advertisements was undertaken to compile a list of skills, qualifications, and knowledge being sought by employers for positions providing research support in the health domain.

Analysis of job advertisements is an increasingly-used approach in looking at positions in the Library and Information Services (LIS) professions. As noted by Harper, the data are readily and publically available, “organic and naturalistic”, independent of the researcher’s intervention, and do not require ethics approval (2013, 710). Majid and Mulia (2010) studied knowledge management (KM) competencies sought by employers by analysing the content of online job advertisements. Harper (2013) examined the similarities between KM and library work in the UK by analysing 165 KM job advertisements. Ferguson, Hider & Lloyd (2008) looked at the extent of KM practice and knowledge among library professionals; their 3-part design included a survey of 75 “knowledge” positions advertised in 2005. Kennan et al. (2006) and Wise, Henninger and Kennan (2011) have used job advertisement

“snapshots” to portray LIS knowledge, skills and competencies. Their data has enabled significant comparisons over time, as well as between Australia and the US.

No comparable survey of research assistant job advertisements has been found in the Australian literature.

For the present survey, vacancy announcements on a range of Australian websites were scanned to identify health research assistant jobs advertised in the period January-July 2014. Websites included The Conversation Job Board (jobs.theconversation.edu.au), ResearchJobs (www.researchjobs.net.au) and the jobs section of individual universities' and health systems websites. In addition, general job websites such as Seek (seek.com.au) were watched. Positions titled Research Assistant, Research Analyst, Research Associate, Research Officer and Research Project Officer were targeted. A handful of generically-labelled positions such as Administration Assistant were viewed if they appeared to be research-related or were located in a research facility. A number of positions with dual titles e.g. Research Fellow / Research Assistant were also examined.

Jobs were excluded from this study if:

- more than 50% duties of the position were of a non-research nature,
- they required a MBBS or nursing degree as the minimum educational qualification, or
- they were investigating a research subject outside of health.

Duplicate positions were removed, and the attributes for each health research assistant job were extracted, and placed into categories: qualifications, specialist research skills, and generic attributes. In many cases the job description also included duties or responsibilities for the position, which helped in understanding the scope of the role.

Job Classifications

To gain an understanding of the classification levels for research assistant positions, the policies and procedures (available online) concerning job classification in research areas for a selected number of Australian universities were examined in June 2014. This was supplemented by discussion with human resources management in the health faculty of one Melbourne university.

Competencies for health librarians

Examination of competency statements for Australian health librarians was aimed at identifying the knowledge, skills and attributes required for the Health Professional certification awarded by ALIA through its professional development scheme.

The competencies for Australian health library staff are set out on the ALIA website¹. While these are closely modelled on the US Medical Library Association's Professional Competencies, they are also congruent with ALIA's 2003 Core knowledge, skills and attributes for library professionals². Taken together these two statements detail the currently-recognised generic and specific characteristics and competencies for health librarians in Australia.

¹ <https://alia.org.au/sites/default/files/HLA%20Competencies.pdf>

² <https://alia.org.au/about-alia/policies-standards-and-guidelines/library-and-information-sector-core-knowledge-skills-and-attributes>

SUMMARY OF JOB ADVERTISEMENT FINDINGS

This six-month survey of Australian recruitment sites yielded 56 advertisements for research assistants, research associates or similarly-titled positions within Australian health settings. When examined in detail, 17 positions were found to be out of scope – some appeared to cover laboratory-based research (i.e. taking and testing body or tissue samples), others described positions which managed research operations or research co-ordination. Three positions that had senior classifications were judged out of scope because they were responsible for leading, facilitating and / or conducting systematic reviews in defined research areas (paediatrics, transport and workplace safety, and health policy and performance).

There were 39 advertisements that met the criteria for inclusion in this study. The following sections present analyses of this data.

Job characteristics

Three-quarters of the positions were advertised by universities, 15% were placed by health services, and 10% came from medical research institutes.

Table 1 shows the assessed classifications for the positions, and the level of formal qualifications specified as essential. In light of the discussion above on whether an RA job is viewed as academic vs professional/general work, it is notable that there are equal numbers of HEW and Research Assistant classifications in this dataset.

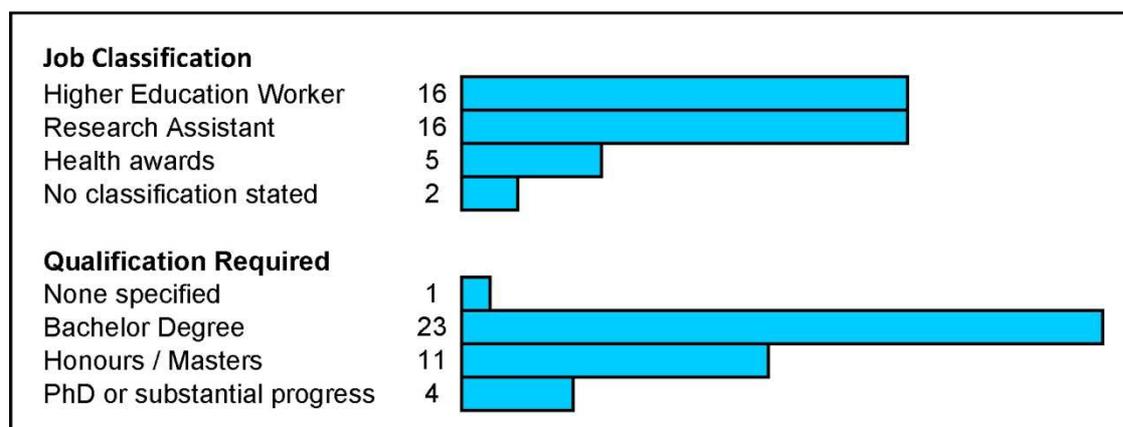


Table 1 : Job Classifications and Job Qualifications

Statements for qualifications contained some ambiguous terms. One position asked for “graduate qualifications”; another specified a “higher degree”; a third position specified “a PhD or masters”. All three have been coded in the Honours / Masters group. In summary, a clear majority of the positions required a bachelor (or undergraduate degree), 28% asked for honours or masters qualifications, and 10% required a PhD or substantial progress towards a doctorate.

More than 90% of the advertisements specified one (or more) subjects in which the degree was to be held. Predictably, health and related subjects, including behavioural science, social sciences, sociology or psychology, were the main areas nominated. More than a third of the position descriptions simply asked for a degree in a “relevant discipline”. Degrees in more specialised subjects – such as nursing, allied health areas and science – were

nominated in approx. 18% of the positions, while two advertisements required a 4-year psychology qualification. The data are shown in Table 2 below.

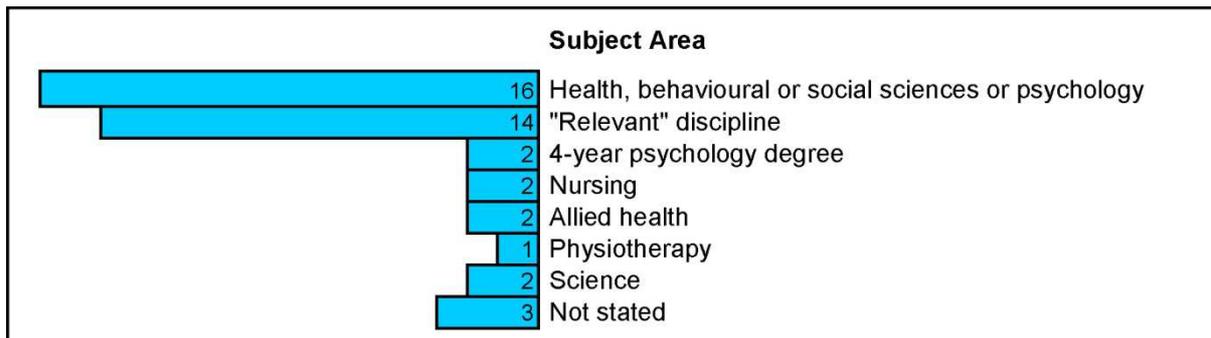


Table 2 : Subject Areas Specified in Qualifications

Two of the research positions were reserved for Indigenous Australians, with scope to conduct research with Aboriginal communities. In one additional job which aimed to research Closing the Gap initiatives, “an interest in the field of racism and health” was included in the Desirable category of the selection criteria.

As mentioned earlier, much of the funding for research is project-based, and this is reflected in the advertisements dataset. Three-quarters of the positions were fixed-term, ranging from less than six months to three years; 6-12 months was the mode. Four positions had no term specified and were described as casual or hourly, and data for two positions was not available. Only three of the 39 positions were ongoing. Interestingly, 41% of the jobs were either full-time, full-time but open to flexible arrangements, or were 0.8 FTE. The majority of positions (59%) were 0.6 FTE or less time fraction.

Job Competencies

The essential criteria for the included jobs were examined, and concepts were manually tabulated from the language in the text. From this data, it was possible to construct a table showing knowledge, skills and competencies specified in the advertisements.

Table 3 below shows the resulting 17 categories, accompanied by the number of advertisements asking for each competency. They are shown using Kennan et al’s scheme which displays jurisdictional characteristics in one cluster and generic characteristics in another (2006: 191).

There is a strong demand for RAs to have research knowledge and experience, most often in RA positions which were classified as part of the academic workforce. Some criteria included phrases such as “knowledge of research methods” and “ability to adhere to research study protocols”. A track record of publications and/or research grants was specified in nearly a quarter of the positions, again predominantly in academic RA jobs.

Knowledge or experience of quantitative or qualitative methods also ranked highly. Three analysis packages – SPSS, SAS, and STATA – were named in nine position criteria, while NVivo was mentioned in two. Several positions specified skills in data collection or data analysis, using phrases such as “ability to gather, analyse and interpret quantitative and qualitative data” or “experience and ability to effectively analyse information and produce clear, succinct reports”.

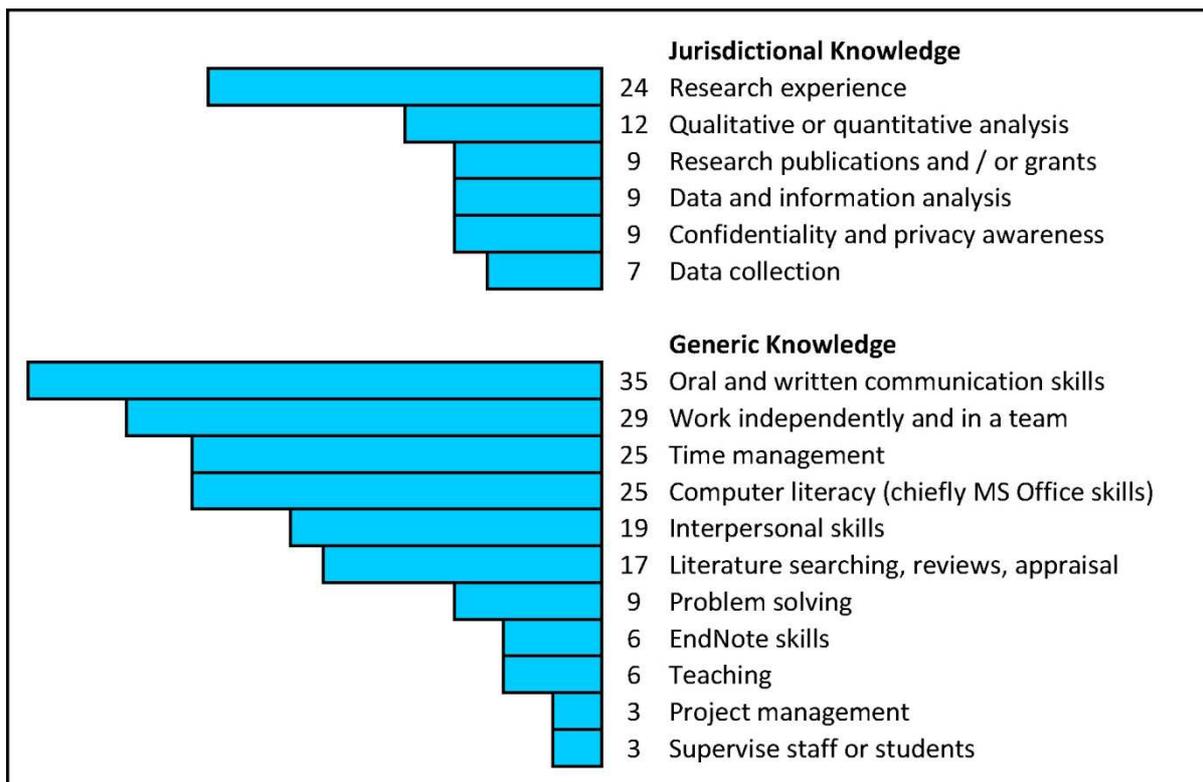


Table 3: Competencies specified in RA advertisements

There is a breadth of generic knowledge criteria outlined in the advertisements. Strong emphasis was found for communication and interpersonal skills, ability to be self-directed and to contribute as needed to multi-disciplinary teamwork, organisational and time management skills, and computer expertise (which included word processing, use of databases and internet).

More than 40% of the positions required experience in performing literature searching, literature reviews, synthesising or critical appraisal of health literature. Skills with reference management software (e.g. EndNote) were explicitly mentioned in six positions. What distinguishes these two competencies is that they are also claimed by library professionals as jurisdictional knowledge. Their presence in RA job criteria raises questions about the overlap between the two occupations.

The picture which emerges is that, jurisdictionally, the RA role relies heavily on research knowledge and experience, demonstrated in either previous involvement in research or publications of a research nature. To work in a health RA position, candidates require a degree in health, behavioural or social sciences. Generic and behavioural skills are also in high demand.

In the following section, the RA requirements derived from the job advertisements data are compared with the competencies specified for Australian health librarians.

COMPETENCIES FOR AUSTRALIAN HEALTH LIBRARIANS

Health Libraries Australia (HLA) is a Group of the Australian Library and Information Association (ALIA). HLA is the professional body for library staff working in, or with an interest in, the health sector, and it advocates for recognition of the specialised skills and knowledge of health librarians. In July 2013, ALIA launched the voluntary Certified

Professional (Health) specialisation, which is linked to the Association's professional development scheme. Library and information professionals can seek certification for skills and competencies they hold which are related specifically to the health sector. The Certified Professional (Health) specialisation, the PD scheme requirements and associated statement of competencies are a response urged by the Health Libraries section to the increasing trend for certification and regulation in the broader Australian health sector professions.

There are eight competencies in the Health Librarians specialisation³:

No.	Item	Examples
1	Understand the health sciences and health care environment and the policies, issues and trends that impact on that environment.	Developments in the health sector; health care policy; health sciences profession; medical education; ethical and legal issues.
2	Understand the principles and practices related to providing information services to meet users' needs.	Reference services; information access; document delivery; liaison activities; clinical librarianship.
3	Understand the management of health information resources in a broad range of formats.	Collection development and management; electronic licensing; copyright; digital repositories; digitisation of collections; cataloguing; classification; metadata.
4	Know and understand the application of leadership, finance, communication, and management theory and techniques.	Strategic planning, organisational policy, planning and decision making; financial management; marketing and public relations; review and evaluation of library services; human resources planning and management.
5	Understand and use technology and systems to manage all forms of information.	Library systems; web management, network management; mobile technologies, database creation and management; authentication and authorisations; content management; learning management systems.
6	Understand curricular design and instruction, and have the ability to teach ways to access, organise and use information.	Educational needs assessment; health information literacy; instructional methodologies; eLearning management; program development, delivery and evaluation.
7	Understand scientific research methods and have the ability to critically examine and filter research literature from many related disciplines.	Qualitative and quantitative methodologies; data analysis; reporting and disseminating research findings; quality improvement; evidence-based practice.
8	Maintain currency of professional knowledge and practice.	Participation in professional organisations; attending formal conferences and workshops; participating in informal workplace learning activities; research and publishing in LIS.

³ <https://alia.org.au/sites/default/files/HLA%20Competencies.pdf>

These eight competencies also build on ALIA’s statement on Core Knowledge, Skills and Attributes for LIS professionals. This 2003 statement comprises seven areas of information expertise, plus a cluster of generic skills. The generic skills relating to research work are listed below, and are worth noting precisely because of their universal flavour:

- communication
- ethics
- project management
- critical and creative thinking
- problem-solving
- human resources
- partnership building
- team relationships
- ICT
- supervision.

Comparing competencies

The competencies in the Health Librarian framework were compared with the six jurisdictional attributes required in the RA positions. Each item was categorised to indicate either:

- A full match existed in the health librarian framework
- A probable match existed in the health librarian framework
- A possible match existed in the health librarian framework, or
- No match was found in the health librarian framework.

Table 4, left side below, shows the results of this comparison. In essence, competencies in research methods, data collection and analysis are nominated in the health librarian framework statement #7 Understand scientific research methods, and thus were marked as possible matches. Confidentiality and privacy awareness are included in the health librarian competency statement #1, which includes ethical and legal issues, so this item was marked as a full match. Research publications and grants are flagged as a probable match, because conceptually they are present in health librarian competency statements #4 and #7.

COMPETENCIES			
Research Assistant (RA)	HL Match?	Health Librarian (HL)	RA Match?
Research experience	Possible	Health sciences & health care environment	✓
Qualitative or quantitative analysis	Possible	Information services	✗
Research publications and / or grants	Probable	Health information resources	Possible
Data and information analysis	Possible	Leadership, management, strategy	Possible
Confidentiality and privacy awareness	✓	IT & systems for information management	✗
Data collection	Possible	Teaching and instruction	Possible
		Research methods	✓
		Continuing professional development	Probable

Table 4: Comparison of RA and Health Librarian competencies

For interest, the RA competencies – both jurisdictional and generic - were examined through the lens of the Health Librarian framework. Each item was categorised to indicate either:

- A full match existed in the RA framework
- A probable match existed in the RA framework
- A possible match existed in the RA framework, or
- No match was found in the RA framework.

Table 4 above, right side, shows the result. RAs will possibly have skills in three items: health information resources; leadership, management, strategy; and teaching & instruction. They will definitely have skills in research methods, and health sciences / health care

knowledge. Continuing professional development is marked as a probable match, since it implicitly aligns with the RA competency 'Research publications and/or grants'. In two areas, RAs have no matching skill requirement: provision of information services, and use of technology and systems to manage information.

These comparisons suggest there are skills common to the RA and health librarian roles. Where research is information-intensive, a health librarian is well-equipped to take roles that include data management, and involvement in research publication. However, the reasonable match on research skills may be superficial, as neither the job advertisements data nor the health librarian competencies statement give detail about the depth of knowledge required.

LIMITATIONS

The key problem with using job advertisements is that they describe a hypothetically perfect candidate. In Harper's words "They may be written to reflect a desired future state" (2012, p. 31). The "reality check" – for example, the skills possessed by successful RA candidates, or the skills actually used in performing the job – is harder to obtain.

As noted above, the selection criteria seen in this survey rarely conveyed a sense of the depth required in a competency; in most cases these were expressed as needed instead of giving an indication of the level of expertise. There were exceptions in some generic skills; for example a number of positions sought 'high-level' organisational skills or 'highly-developed' communication skills.

Capturing the advertisements is also an imperfect science. With internet advertising, some positions display for only a very short time (e.g. 14 days or less), and it's possible for an advertisement to vanish overnight. This makes retrospective analyses impossible. As always, some positions may not be advertised openly but rather are filled through informal or personal networks.

The use of software tools for content analysis would have provided richer data from the advertisement text. In particular, term co-occurrence and correlation analyses might have shown the relationship between certain selection criteria.

CONCLUSIONS

This study has sought to examine the extent of overlap or congruence between the competencies identified for health librarians with the attributes specified for research assistants in the health setting in Australia. While the RA has an integral place in the work of research, there is little available analysis of the dimensions of the role. Contemporary RA job advertisements provided an interesting if incomplete source of data about the knowledge and skills that employers required. Comparison with health librarian competencies showed that both roles have involvement in information and data management as well as research publication. The extent of the health librarian's understanding and experience of research methods would determine whether this skill is also one held in common with RAs.

[END OF PAPER]

REFERENCES

ANZSCO - Australian and New Zealand Standard Classification of Occupations, 2013, Version 1.2. Available at <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/88D80BA6E3468DC4CA257B9500131132?opendocument>. Viewed 18 July 2014.

Ferguson, S., Hider, P., & Lloyd, A. (2008). Are librarians the ultimate knowledge managers? A study of knowledge, skills, practice and mindset. *Australian Library Journal*, 57(1), 39-62.

Harper, R. (2012). The collection and analysis of job advertisements: A review of research methodology. *Library and Information Research*, 36(112), 29-54.

Harper, R. (2013). Knowledge management through the lens of library and information science: A study of job advertisements. *Library Trends*, 61(3), 703-734.

Hobson, J., Jones, G., & Deane, E. (2005). The Research assistant: Silenced partner in Australia's knowledge production? *Journal of Higher Education Policy and Management*, 27(3), 357-366.

Kennan, M. A., Cole, F., Willard, P., Wilson, C., & Marion, L. (2006, May). Changing workplace demands: what job ads tell us. *Aslib Proceedings* 58(3), pp. 179-196).

Majid, S., Mulia, R. (2010). Competencies sought by knowledge management employers: Content analysis of online job advertisements. pp. 317-326. In Chu, S. ed. *Managing knowledge for global and collaborative innovations*. Singapore: World Scientific. (Chapter doi: DOI: 10.1142/9789814299862_0025)

Organ, MK and Svensen, S. (1995). *Research assistants in the clever country*. University of Wollongong, Dept. of Economics. Working Paper WP 95-4. 17p.

QUT Classification standards - professional research staff.
Available at <http://www.hrd.qut.edu.au/managers/creating/classification/resprofessional.jsp>.
Viewed 18 July 2014.

Wise, S., Henninger, M., & Kennan, M. A. (2011). Changing trends in LIS job advertisements. *Australian Academic & Research Libraries*, 42(4), 268-295.

[END]