

From practice to academia: 50 years of LIS education in Australia

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Abstract

The central place that education has in the strength and well-being of any profession is widely accepted. Australia presents an interesting case study of a country where LIS education moved from being conducted by practitioners under the guidance of the professional association to being provided in institutions of higher education in 1959. The 50 years (1959-2008) saw substantial changes in Australian LIS education with a rapid proliferation of schools which was later followed by closures, mergers and changes of focus. This chapter charts LIS education during this period focusing on organizational and structural aspects of the placement of LIS education in tertiary institutions, on the academization of LIS educators who had in the early days mainly been drawn from practice, and on the development of LIS educators as academic researchers and authors as represented by their productivity and visibility in national and international databases. In addition to giving an account of these areas of LIS education over the 50 years the chapter seeks to offer explanations for what has occurred and some views of strategies which may assist the development of LIS education in Australia and in other countries which possess similar characteristics.

Introduction

The central place that education has in the strength and well-being of any profession is widely accepted. Programs for professional Library and Information Studies (LIS) education in universities are relatively recent phenomena. Australia presents an interesting case study of a country where LIS education moved from being conducted by practitioners under the guidance of the professional association to being provided in institutions of higher education. Half a century of LIS education in tertiary institutions provides a useful timeframe for analysis and reflection. It should also provide insight and guidance for the future development of LIS education in Australia. While some of the information and discussion presented in this chapter is idiosyncratically Australian, some has wider applicability for LIS education and educators.¹

This chapter presents an account of a detailed investigation of LIS professional education in Australian tertiary institutions for the fifty-year period (1959-2008). The initial investigation pursued three interlinking strands which are blended in this chapter: a history of the introduction and development of LIS education in Australian tertiary institutions (Wilson, Willard, Kennan, & Boell, in preparation), a study of the academization of the staff in these institutions (Wilson, Kennan, Willard, & Boell, 2010) and an investigation of the publication output and research visibility of these academics (Wilson, Boell, Kennan, & Willard, under review). This chapter provides a background to LIS education in Australian Higher Education, followed by sections on history, academization of staff, and

¹ The generic acronym *LIS* indicating ‘Library or Librarianship’ and ‘Information or Knowledge’ and ‘Science, Studies, Services or Management’ is used variously in Australian higher education institutions. *Academic staff*, *academics* or *educators* are terms used in Australia to denote the *faculty* members in higher education. *LIS programs* refer to teaching units which are variously called departments, schools or programs and can be free-standing within parent institutions or, more recently, part of larger academic units.

productivity and visibility of research. It concludes with a summary of the current state of affairs in Australian LIS education, and proposals for the future.

LIS education in Australia prior to 1959

Australia is within the Asia Oceania region which has experienced substantial social and economic development over the last decades. While the LIS field is growing rapidly within the region, particularly China and India (Abdullahi, 2009; Khoo, Majid, & Lin, 2009), Australia has not had a similar experience as this paper will show.

Australia, a large country with a relatively small population, is divided into six states and two territories. The federal system with power distributed among the state and territory and the federal governments, has been influential in the development of the Australian education system including LIS education. More than 60% of the population is concentrated in five of the state capitals. The remaining population is spread over the rest of the continent with only a few cities having a population exceeding 100,000. Australia's structure is, therefore, both highly metropolitan and highly rural. Furthermore, Australia's population is growing quite rapidly. Since 1976 the population has grown by 53 percent from 14 million to its current size of 21.4 million (Australian Bureau of Statistics, 2008).

Three major reforms to the Australian higher education system since the Second World War have transformed it from a system bearing close resemblance to the British education system at that time to the current Australian education system. The first of these reforms led to increased spending on tertiary education and the founding of new universities (Murray, 1957). At this time in Australia there were three tiers of higher education: universities, institutes of technology and teachers colleges (TC) / institutes of higher education (IHE). The second reform also underlined the importance of tertiary education in Australia, but favored a binary system of research oriented universities on the one hand and more practically oriented colleges on the other (Martin, 1964-1965). From 1967 colleges of advanced education (CAEs) took over from TCs and IHEs and a number of other diploma awarding educational institutions. This binary system introduced by the 'Martin report' in the mid 1960s shaped the Australian tertiary education landscape until the 1990s, when the dual system was abolished by amalgamating colleges into existing universities or granting institute of technologies and some colleges, or amalgamations of colleges, the status of universities (Dawkins, 1988). These three reports have had a profound influence on LIS education in Australia.

Although distinct from LIS education in Great Britain and in the US, Australian LIS education was strongly influenced by both countries in its development with the British approach in the ascendancy in the earlier years and the influence of the North American system greater in more recent years. The British apprenticeship approach through which some large libraries established educational procedures with their staff teaching courses (Whyte, 1956) was a dominant influence in the early development of Australian LIS education (Wilson et al., in preparation). In Britain the professional association, the Library Association (LA), established a system of examinations in 1885. To become a qualified librarian it was necessary to join the LA and take their examinations, and the LA didn't fully withdraw from the examination process until the 1980s.

The United States (US) followed a different course in the development of professional LIS education though it too had origins in apprenticeship. In 1887 a library school was established at Columbia College (now Columbia University) (Vann, 1971). The two avenues of apprenticeship and formal courses co-existed until the end of World War I. In 1923 the Williamson Report (Carroll, 1970; Vann, 1971), was released which had a profound influence on the development of LIS education in North America. This report was influential in the establishment of the Graduate Library School at the University of Chicago in 1926 (Carroll, 1970) and the further development of LIS education in tertiary

institutions. Unlike Great Britain, in the United States the American Library Association (ALA) did not get involved with examinations and the registration of those who successfully completed college/university programs (though at one stage certification of librarians had been favored by Williamson), but from 1925 it followed the practice of accrediting schools (American Library Association, 2010).

In Australia the lack of a national professional association prior to 1937 had hindered the development of a national education system. Processes associated with formalizing library education began in the late 1930s using the British professional association examinations as a model and a curriculum specified by the Australian Institute of Librarians (AIL) founded in 1937, which in 1949 became the Library Association of Australia (LAA), now the Australian Library and Information Association (ALIA). The need for a formal preparation for school librarians was also accepted during the 1940s when Teacher's Colleges began to offer short courses tailored to training staff for libraries in government school systems (Rochester et al., 1997). The establishment of the AIL followed some years after publication of a report (Munn & Pitt, 1935) which in addition to criticizing the poor state of Australian public libraries, was critical of the lack of any general scheme of examination and certification of library personnel. By 1942 the AIL Board of Examination and Certification was formed and the first examinations were conducted in 1944. The syllabus and the examinations were set by the AIL.

While an examination system under the control of the professional association was an improvement on no formal education system for librarians, Australian librarians saw the limitations of their system. As increasing numbers of them traveled to Britain and the United States, the approach to the provision of professional education through tertiary institutions gained increasing support. In addition, in order to practice in a number of overseas countries a tertiary degree was required. Higher education was expanding in Australia with support from the federal government of Sir Robert Menzies so the time was ripe for the Australian library profession to begin the process of moving education from the professional association to universities. At this time John Metcalfe, an activist in the development of several aspects of Australian LIS, argued for the development of an Australian university-based LIS School which was achieved in 1959 (Jones, 2007). The remainder of this chapter tracks the development of LIS at universities and colleges of advanced education after 1959.

Motivation and Method

The last 50 years have seen substantial changes in Australian LIS education with a rapid proliferation of schools which was later followed by closures, mergers and changes of focus. In this climate of constant change, data, information, and the lessons that can be learned from the past, can be lost. The desirability of capturing data about schools and their staff for the future record as well as using it more immediately to better understand the field was a powerful motivation for this investigation. In order to investigate institutions and their staff an extensive literature review was conducted. This included the investigation of a wide range of sources, including academic yearbooks, calendars, records from tertiary institutions and the *Australian Library and Information Association* (ALIA), and local/national journals. These sources were tracked for the 50 years and the pre- and post study period. The next step involved the compilation of detailed lists of all Australian LIS schools and their staff which enabled profiling of institutions and staff (Wilson et al., 2010; Wilson et al., in preparation). Every effort was made to have this data complete, including communication with LIS professionals. Source data tended to be less complete and reliable for the early years as programs emerged, and in the most recent years as programs declined, closed or were absorbed into larger academic units.

In order to analyze staff productivity and visibility, eight databases were searched for the publications of 382 Australian LIS academics with more than two years' employment in LIS programs from 1959 to 2008 (Wilson et al., under review). These databases were: *Library and Information Science Abstracts (LISA)*, *Library Literature and Information Science (LLIS)* – formerly known as *Library Literature*, *Library Information Science & Technology Abstracts (LISTA)*, *Australian Library and Information Science Abstracts (ALISA)*, the *Australian Education Index (AEI+)*, the *Social Sciences Citation Index (SSCI)*, the *Science Citation Index (SCI)*, and the *Arts and Humanities Citation Index (AHCI)*. This method enabled an empirical investigation of the Australian LIS education scene over the last 50 years: specifically its institutions, its academics and its publications.

Australian LIS programs

Following the Murray report (1957) several new universities were established. It was in one of these that Metcalfe, the University of New South Wales (UNSW) Foundation Librarian, established the first university level school of librarianship in 1959. The first intake in a UNSW one year full-time postgraduate diploma program was in 1960. (The term 'postgraduate' used here is equivalent to the US term 'graduate'.) In 1961 the LAA recognized the UNSW postgraduate diploma as providing an appropriate education for professional librarianship (Bryan, 1971) and thus started the process of moving responsibility for the education of librarians from the professional association to tertiary institutions.

The postgraduate diploma was well received in the profession though during the 1960s arguments were presented for undergraduate programs to be started in the newly established CAEs. An influential endorsement for this came from the government funded report (Martin, 1964-1965) recommending the establishment of these colleges. The Martin Report favored a binary system which included both universities and institutes or colleges (which later developed into the CAEs), with the universities placing more emphasis on postgraduate education and research and the colleges on professional and vocational courses and undergraduate teaching (Raymond, 1966). The development of the CAE sector not only resulted in a rapid increase in the number of library schools but also the introduction of undergraduate LIS degrees, the first of which started at the Canberra CAE in 1970. It was granted LAA accreditation as a qualification similar to the university one-year postgraduate diploma in 1973.

There was opposition to undergraduate college-based programs from some quarters, particularly when they were proposed to be of three year full-time duration; the postgraduate diploma option added another year to a three-year undergraduate degree. Radford (1969) argued that the introduction of three year programs was a lowering of standards for the profession. Raymond (1971) pointed out that the policy to support the establishment of new library schools only in CAEs was not in line with the US and Great Britain where LIS education was expanding to include university postgraduate programs in addition to the college-based system (Wilkinson, 1968).

In addition to the postgraduate diploma and the bachelor degree, a research master degree was established in 1964 at UNSW (Metcalfe, 1963) which was followed some years later by a coursework master degree. Master degree programs at professional entry level have become increasingly available since the 1990s, partially to bring Australian professional graduates into line with their international counterparts. This qualification has not replaced the one-year postgraduate diploma to the extent that perhaps was envisaged as it is of longer duration and requires more time and money. Currently a qualified LIS professional may attain professional membership of ALIA with any of these three qualifications (Harvey & Higgins, 2003; Rochester et al., 1997). The number of institutions offering

doctoral programs has increased in recent years, a natural consequence of all schools now being universities and the demand within the field for educators with doctorates.

Figure 1 shows 19 tertiary institutions (horizontal bars) in the seven states/territory of Australia (first column) with LIS schools/ programs over a fifty-year period from 1959 to 2008 (horizontal axis). Name changes and changes in institutional affiliation including those arising from amalgamations are included. Five originating institutions shown by dotted lines were teachers colleges (TCs); the lighter hatched boxes indicate colleges and various types of institutes while the darker boxes, the universities. The rise of each school/program is shown generally by an initial start-up year before the commencement of teaching and an additional year after closure for ‘teach-out’. For example, the LIS school at the University of New South Wales started in 1959, commenced teaching in 1960, closed in 2005 and ‘taught-out’ in 2006.

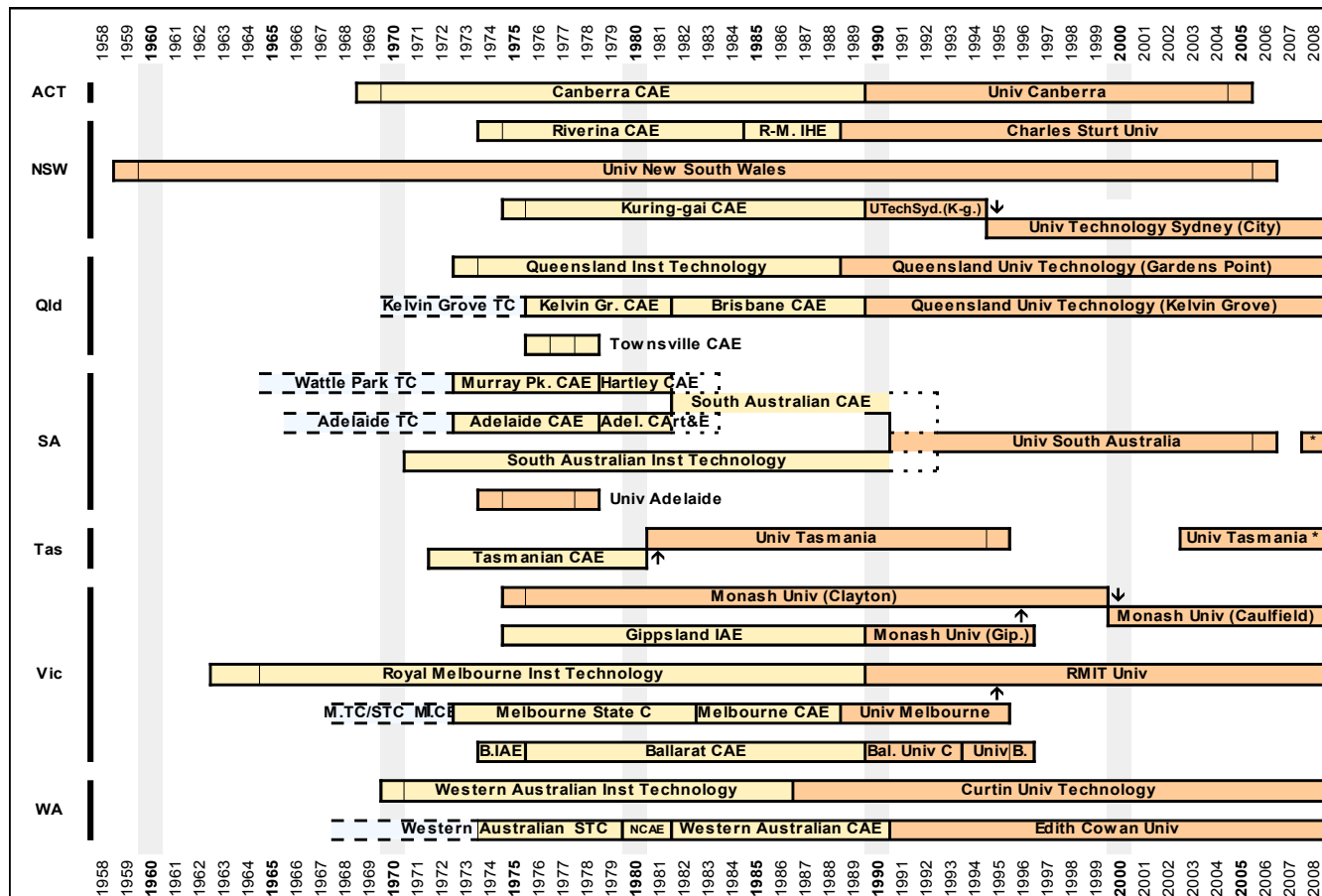


Figure 1. Australian Tertiary/Higher Education Institutions with active LIS programs by States and territory: 1959-2008

Figure 1 legend:

States and territory: ACT (Australian Capital Territory), NSW (New South Wales), Qld (Queensland), SA (South Australia), Tas (Tasmania), Vic (Victoria), WA (Western Australia).

Institution types: CAE (College of Advanced Education), Univ or U (University), IHE (Institute of Higher Education), TC (Teachers College), CArt&E (College of the Arts and Education), Inst (Institute), IAE (Institute of Advanced Education). State C (State College), STC (Secondary Teachers College).

Institution place names: R-M (Riverina-Murray), Murray Pk (Murray Park), Adel. (Adelaide), M.TC/STC/CE (Melbourne TC/STC/CE), B. or Bal (Ballarat), NCAE (Nedlands CAE).

The proliferation of schools and professional level programs in the CAEs was rapid in the 1970s (see Figure 1). This can probably be attributed not only to an increasing demand for librarians (both generalist and school) but also to the desire of CAEs, some of which were new institutions and some expanded TCs, to offer programs over a number of disciplines. There were TCs in all the state capitals and many regional cities, many of which were offering some content relevant to preparing teacher librarians. Most of these colleges expanded their offerings to school librarianship programs and some added a generalist LIS program. This set the scene for the start-up of more librarianship programs than was likely to be viable (Nimon, 2004).

The Australian economy slowed from the mid-1970s and the federal government, the major funder of tertiary education, reduced funding. Federal government funding is tied to full-time equivalent (FTE) student numbers, yet in the period 1977-1987 while higher education enrolments rose 32%, real funding rose only 11% (Rochester et al., 1997). Changes introduced by universities and colleges included the enlargement of tutorial sizes and the elimination of programs and courses with very small enrolments, foreshadowing what was ahead for LIS.

Another major review of Australian higher education was released in 1988 by John Dawkins, the federal Minister for Employment, Education and Training (Dawkins, 1988). At that time there were over 70 federally supported tertiary institutions located in both rural and urban centers. They varied substantially in size with many of the colleges having fewer than 2,000 full-time equivalent (FTE) students across all disciplines. The review recommended the abolition of the college and institute sector and the establishment of a single university system, the Unified National System, and the number of small institutions be reduced through closures and amalgamations producing economically and academically more viable larger units. In 1988, 12 of the 16 schools offering professional LIS programs were in non-universities (Figure 1). The small size of some of the schools made them the sort of units which Dawkins considered unviable. The LAA responded to the Dawkins plan for fewer and larger units with the position that the number of LIS schools should be reduced to eight (McMullin, 1989). No strategy for reduction was formally proposed and the goal has not been achieved; in 2008 there were ten LIS schools (see Figure 1). Over the previous decade or so there had been school closures in the US, the implications of which would not have been lost on Australian LIS academic staff. Reasons suggested for these American closures included *inter alia*, a lack of university support due to LIS educators' inability to "present a compelling case of program need" (Haycock, 2010), academic isolation, small size, and lower market demand (Logan & Hsieh-Yee, 2001), all of which were present in Australia to at least some extent.

Changes along the lines proposed in the Dawkins review began within a year and by 1991 the Unified National System of tertiary education in universities was in place (see Figure 1). Amalgamations within and between institutions leading to structural changes and relocations not only between institutions but also within them continued until 1996 as shown in Figure 1 and in Willard, Wilson, & Pawley (2001).

During the three-year period of maximum growth (1976-1978), there were 19 institutions: three Universities, four Institutes of Technology, and twelve CAEs and other colleges/institutes offering LIS programs. From 1979 to 2008, the number of institutions offering LIS education went from 17 to 10.² Four of the changes were amalgamations and three were closures (see Figure 1).

² Between 1992 and 2006 Charles Darwin University (CDU) (prior to 2003, the Northern Territory University) offered an ALIA accredited Bachelor of Library and Information Studies. The small numbers of enrolled students, the reliance on another school for program and course development and the lack of full-time LIS academic staff led to the decision to exclude CDU.

The rapid growth in the number of schools during the 1970s can be seen in retrospect as likely to lead to problems further down the track given the relatively small Australian population. Australia quickly had a much higher ratio of LIS schools per head of population than countries with which comparison can be made, for example Canada a similarly vast country with a dispersed although larger population, had two LIS schools before 1960 and seven in 2008 (American Library Association, 2010). The Dawkins reform presented an opportunity for a review of LIS professional education which produced a small number of relatively large schools. While the number of schools has decreased over the years it has not been to an extent or in a way which produced a small number of larger schools; in fact, Figure 1 shows two ALIA accredited LIS programs re-established since 2002.

The Dawkins report recommended amalgamation at institutional, faculty (broad academic units) and school levels as a means of addressing the issue of small size. Figure 1 shows the impact of this on LIS at the institutional level. In some cases the amalgamation involved the joining of two or more LIS schools which continued as 'independent' LIS units within a broader academic unit such as a faculty. For convenience we refer to LIS schools in this chapter; however, this requires some clarification. In Australian universities the faculty is usually the largest unit and within each faculty there are sub-units often called schools. Within each school there are then departments or program areas. Many LIS programs began as independent units (schools). However this independence was short lived and the trend has been toward the movement of LIS within its institution into faculties and then within them being joined with other schools. In most cases the change has been by absorption as the LIS component has been substantially smaller than the rest of the unit it has joined. In 2008, the ten LIS programs were located in the following environments: five in *Information Technology, Computing/Communications* (ITC), two of which are combined with *Science, Health, Agriculture, Technology, Engineering* (SCI); two in *Education* (EDN); two in *Arts, Humanities, Social Sciences, including General, Community, Liberal, Information Studies* (AHSS), and one in *Business, Commerce, Economics* (BUS).

Moving in with other disciplines offered the potential to enrich LIS programs; however, it also carried risks. These included the possibility of lower program visibility and competition for resources with colleagues from other disciplinary backgrounds. The placement of LIS programs within academic units such as Computer and Information Systems or Business Information Technology does not make identification easy for intending LIS students or practitioners and employers. As reported in Cox (2010) with regard to LIS Schools/programs in general and Archival Studies in North America in particular, the nomenclature and placement of LIS programs in diverse academic environments may indicate how LIS is viewed in the Australian academic world – not as a discipline in its own right, but more as a track within the broad fields of information technology, education or business. Hand-in-hand with the variability of academic locations is the variability of the qualification names obtained which generally reflects the name of the larger academic unit. For example, ALIA (2010) lists LIS postgraduate courses/programs at Monash University as Master of Business Information Systems; at Curtin University, it is a Master of Information Management (Librarianship); and at Queensland University of Technology (Gardens Point), a Master of Information Technology (Library and Information Science).

In addition to co-existing with other schools in large academic units in which LIS program visibility was greatly diminished, the names or titles of the smaller academic units (e.g., schools, departments, etc.) which housed the LIS programs also changed considerably over time. By the late 1990s few LIS programs were located within units which clearly flagged a relationship to libraries and librarianship. Another measure of the decreasing visibility is the extent to which 'independent' or stand-alone programs declined. In the 1970s growth period the percentage of 'independent' programs averaged about 80%. In 2008 only one (of ten) institution had an independent LIS academic unit – the School of Information Studies in the Faculty of Education at Charles Sturt University.

In addition to institutional re-organizations, other factors have been influential in more recent years, a major one being the re-introduction in 1987 of student tuition fees which had been abolished in 1974. The impact of fees on student numbers was initially expected to be for postgraduate students as their fees had to be paid up-front (Willard et al., 2001); however, there has been a greater decline in student numbers from undergraduate programs where fees are lower and payment may be deferred until post study work remuneration is above a specified level. This suggests that factors other than tuition fees play more important roles (American Library Association, 2010; Myburgh, 2003). Other changes have also occurred. In line with what was happening more widely in the tertiary sector, LIS schools had to allow students more flexibility in determining their workload each session to enable them to more easily undertake paid work and so meet the costs associated with their education. Subsequently the proportion of students doing their degree part-time and/or through distance education increased as did the duration of their enrolment. This did not necessarily increase university funding overall as this is determined on the basis of the percentage of FTE load and not raw student numbers.

A reaction to the decline in government funding was the introduction and expansion by universities of places for fee-paying international students (Ryan, 1986). Accepting more fee-paying international students was seen by LIS and other schools as not only providing necessary funds but also as providing students to fill places in programs with declining numbers of local students. Despite making participation in programs more attainable and recruiting international students, most of the schools now offering LIS programs are still quite small – in 2008 there were ten LIS programs in nine universities with one university (Queensland University of Technology) housing two programs in different campuses (see Figure 1).

The amalgamations following the Dawkins reforms did not produce LIS schools with larger staff numbers. A partial explanation of a fall in numbers may be that courses such as management or computing, which in the days of standalone LIS schools had been taught by LIS staff, whereas in the new academic structures were taught by other non-LIS academics of the schools. Even allowing for this to be seen as a ‘good thing’, it does not counter the argument that there surely is a ‘critical mass’ of LIS staff necessary to run a quality LIS program with a reasonable number of electives. Furthermore “professional” programs such as LIS are better as “stand alone” programs because in addition to providing professional education and training, they exist to acculturate people to a particular profession (Kelley 2010). Thus, the amalgamation of LIS into other related schools and the teaching of some of the content of LIS programs by non-LIS academics, themselves not “acculturated” in the LIS field, may lead to further weakening of the LIS field.

The account above provides a broad brush picture of contextual forces and events in the development of professional level LIS education in Australia. Government policy has obviously been a major influence, but as can be seen the profession itself has had opportunities to influence the course of events. One such occasion was in the response to the recommendations flowing from the Dawkins review of 1988 when a window of opportunity was open for the LIS profession and LIS educators specifically to propose strategies to rationalize the national provision of LIS schools. The exuberant growth period of nearly 20 years when Australia went from the establishment of its first LIS school to having 19 should have flagged the need for rationalization. The externally enforced decline to the present 10 schools has not been accompanied (unfortunately) by a healthy growth of the remaining schools but by their shrinkage as can be seen in the decline in the number of full-time LIS academic staff discussed below.

Academic Staffing

Over the 50 years from 1959-2008 there were 693 academics in LIS programs throughout Australian higher education institutions with from one to 37 years of service for a total of 4711 staff-years. Of the total of 693 academics only 382 (55%) of academics were in academia for more than two years. The short length of service of many academics may have been due to the relatively sudden and large demand for LIS educators and the associated practitioner take-up of teaching posts to fill the need. It is likely that some of these practitioners did not find a “fit” with some of the demands of their new workplace, such as the requirement for research and publication, and so moved out fairly quickly. Initially LIS academics came from practice in Australia and, less frequently, from overseas. Table 1 summarizes the types of organizations from which LIS educators were drawn. The analyses of previous positions held were restricted to those with at least three years of service in LIS education (382) and for whom data on previous positions were obtainable (281). Most LIS academics came from positions in libraries, particularly university libraries, and only a relatively small proportion (20%) from other academic positions in tertiary education (Table 1).

Table 1. Previous positions of academic staff with ≥ 3 years service in Australian LIS programs in approximately ten-yearly periods for 1959-2008

<i>Organizational types</i>	1959-‘69	1970-‘79	1980-‘89	1990-‘99	2000-‘08	Total
Tertiary libraries	10	51	26	13	4	104
Tertiary educational	3	24	16	6	8	57
Government libraries	7	18	14	7	5	51
Primary/secondary educational libraries	1	29	10	7	3	50
Commercial libraries	0	3	6	4	0	13
Other	0	1	4	1	0	6
Total	21	126	76	38	20	281

The adjustments of those coming from practice to the demands of academic life, especially the demands of research and publication were extremely challenging. Coming from practice, early Australian LIS educators typically held undergraduate degrees, library registration qualifications or equivalent, and had years of practice in libraries, but they rarely held research degrees. Thus a large percentage entered the academy without the research training of a research masters or doctorate, or experience in scholarly communication (Figure 2).

As a result, the first LIS programs were developed by academics from a *professional practice education* perspective rather than from an *academic education* perspective. This professional practice education perspective was shared with fields such as social work, and the teaching and health professions which also have had difficulty in establishing their positions in academic institutions; particularly institutions with a strong research focus (see for example, (Fejgin, 1995; Maurana, Wolff, Beck, & Simpson, 2001; Murray & Aymer, 2009; Newland & Truglio-Londrigan, 2003).

This practice perspective and lack of research training was in contrast to academics from more traditional areas of learning and research who typically had undergraduate and postgraduate degrees including research masters and/or doctorates, and pursued career paths balancing the ‘academic triad’ of teaching, scholarship and service.

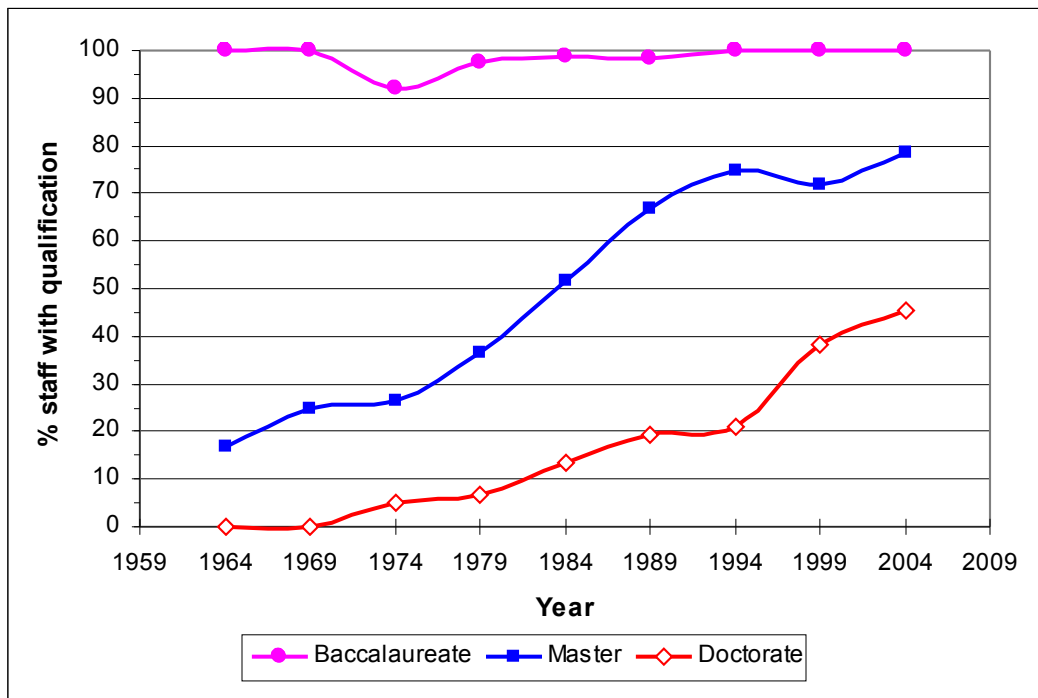


Figure 2. Percentage of staff with qualifications: Bachelor, Master or Doctorate in five-year intervals: 1964-2004

However, Figure 2 does illustrate that despite a slow beginning, the number of academic staff with higher degrees has been increasing over time, and that by 2004, about 45% had doctorates. As this upward trend continues and more LIS academics gain doctorates, they are better able to encourage and supervise potential PhD students and thus contribute to the increasing trend. Not all those LIS academics who have PhDs, have PhDs in LIS. Many are in related disciplines and the actual annual number of LIS doctorate graduates is still very low, especially when international graduates who return home and Australians who seek work overseas are factored in (Macauley, Evans, & Pearson, 2010).

There was a sharp rise in the number of academic staff in the *growth* period of the 1970s peaking in 1978 with 167 LIS academics Australia wide; the numbers fluctuated through the 1980s, but by the early 1990s the *decline* started and by 2008, there were only 64 academic staff and of those only 58 had more than two years experience as academics (Figure 3).

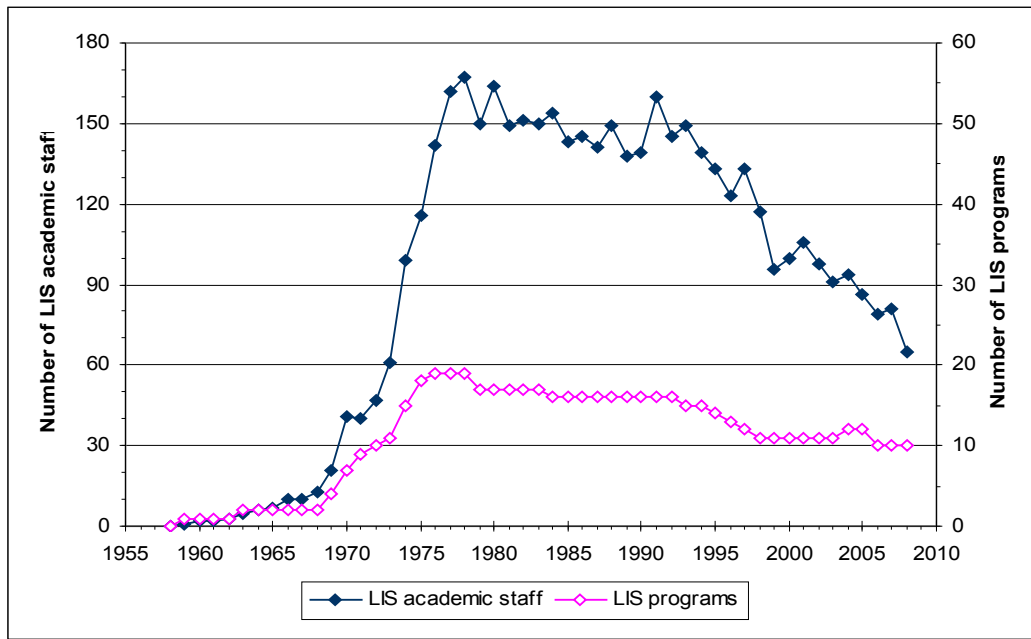


Figure 3. Number of LIS academic staff and number of LIS programs: 1959-2008

In addition to a workforce which moved in and out of the academy, LIS schools in Australia were of a very small size. For selected years from 1960 to 2008, the mean number of academic staff per LIS School never exceeded ten (the highest was 9.6 academics in 1980). Furthermore, most LIS programs had fewer than ten academics. Throughout the 50 year period most schools have been small and only in the late 70s and early 80 were there two schools with more than 20 staff (Table 2).

Table 2: Number of academic staff in LIS programs for stated years: 1960 to 2008

Year	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2008
Total number of academic staff	2	7	41	116	164	143	139	133	100	86	64
Total number of LIS programs	1	2	7	18	17	16	16	14	11	12	10
Academic staff range:	Number of LIS programs with academic staff ranges per stated years										
1-4	1	2	3	11	1	2	1	2	2	3	2
5-9	0	0	3	4	9	7	9	5	4	6	6
10-14	0	0	0	2	4	7	5	5	4	2	1
15-19	0	0	1	0	2	0	1	2	1	1	1
20-24	0	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	1	1	0	0	0	0	0	0
Mean	2.0	3.5	5.9	6.4	9.6	8.9	8.7	9.5	9.1	7.2	6.5

Downward trends in numbers of academic staff from 1996 to 2005 are evident in Figure 3 and Table 2 and in earlier reports (see for example Hallam (2007)). In contrast, LIS faculty numbers in North America increased slightly during the same ten-year period (ALISE, 2009). LIS programs with fewer than five academics appeared in all years from 1960 to 2008 (Table 2). Over 20 years ago, Rayward (1989) noted, *inter alia*, the perils of small-staffed LIS programs; a few years later Rochester (1992) provided comments from Australian Heads of LIS programs such as: *too many library schools, each of which is too small; five is the minimum number of full-time academics to provide a good educational environment; ten is the minimum staff number; and there is a lack of understanding of the role of academics in universities by the LIS profession*. Maguire (1996) noted reasons for the poor rating of LIS in *The Good Universities Guide* – small numbers of LIS students and academic staff, among others. (Pawley, Willard, & Wilson, 2001) discussed the issue of ‘critical mass’ with all but two of 12 LIS programs having fewer than ten academics. Harvey (2001) noted that one crude measure of the quality of LIS programs is the number of academic staff and according to White (1998), the larger the faculty, the higher the ranking among LIS schools in North America. Harvey and Higgins (2003) remarked on the comparatively large number of Australian LIS programs per capita and suggested a national approach for LIS education in Australia.

As mentioned earlier, vulnerability to closures or mergers increases with small school sizes. In addition, there are other issues and challenges accompanying small-staffed LIS programs. Even in LIS programs with over ten academics, there are difficulties in establishing research clusters within LIS programs, as research interests tend to be fragmented and academics largely work alone or with colleagues from other academic units or from other universities.³ A small staff and schools with few professors, generally means little or no research mentoring can be offered to new staff, some difficulty is experienced in preparing time-consuming grant proposals, and there is scarce opportunity to build subject expertise. In teaching, academics often need to adopt eclectic approaches to cover wide areas of the LIS landscape which generally leads to difficulties in establishing and melding expertise in teaching and research interests. Therefore the ideal that research can inform teaching and teaching can enrich research is rarely achieved.

The intended focus on teaching and practice within the CAEs, the small size of LIS schools/programs and the correspondingly small numbers of academic staff, led to a concentration of numbers of teaching staff at the lecturer level and a small number of professorial staff.⁴ Throughout the 50-year period over one-half (364) of the positions were occupied by Lecturers, followed next by Senior Lecturers (105). This position has changed over time. Figure 4 highlights the declining trend in the lower positions (Lecturers) since the mid-1970s accompanied by rising trends in the other positions (Senior Lecturers and the combined positions of Professors and Associate Professors) which may coincide with the numbers of PhDs held by staff, length of service, and an increasing engagement in research in addition to teaching as well as a decline in recruitment.

Of the 693 academic staff, the gender of 661 could be determined: 416 (63%) women and 245 (37%) men.⁵ The 416 women account for 58% of the total staff-years (2718 of 4666) while the men, 42% staff-years (1948 of 4666). Although fewer in numbers, male academic staff on average remained in academia longer than females: nearly 8 years for males and 6.5 years for females. Of the total of 465

3 Although this cross-disciplinarity or inter-disciplinarity approach to research has great appeal, especially in the current ICT environment, pressures of managing the other two arms of academia (teaching and service) with few staff remain problematic.

4 Australian academic ranks approximately equivalent to those in the U.S. and other countries are: Professor and Associate Professor ≈ Professor; Senior Lecturer ≈ Associate Professor; Lecturer ≈ Assistant Professor; and Associate Lecturer/Lecturer Level A ≈ Lecturer/Teaching Assistants (see for example, <http://www.hr.unsw.edu.au/employee/acad/criteria.html>, retrieved December 5, 2010).

5 The remaining 32 academic staff contributed 45 (of 4711) staff-years and on average were in academia only for 1.4 years (45/32).
Preprint of: Wilson, Concepción S; Kennan, Mary Anne, Boell, Sebastian K.; Willard, Patricia (2012). From Practice to Academia : 50 Years of LIS Education in Australia. In Amanda Spink & Diljit Singh, (eds.) Library and Information Science Trends and Research: Asia-Oceania. Bingley: Emerald Group Publishing Limited, pp. 15-45.

staff-years in the top positions of Professor and Associate Professor, women accounted for 239 (51%), somewhat lower than the overall female service percentage of 58% staff-years. Therefore there is a continuing gap between the percentage of female LIS academics and the percentage in senior positions.

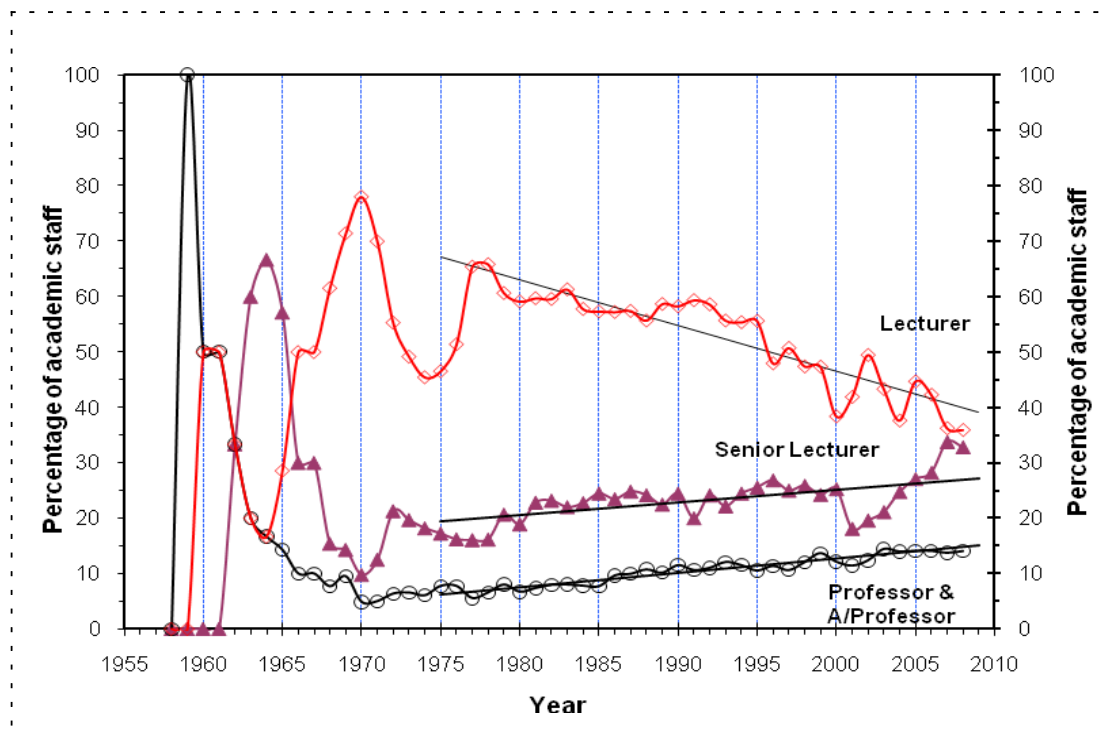


Figure 4. Percentage of LIS academic staff positions per year 1959-2008 and trend lines for 1977-2009. (NB: Before 1969 there were fewer than 15 LIS academics spread over all Australian LIS Schools)

The relationship between position or rank and attainment of PhDs is evident. By 2004, all LIS Professors had PhDs, as did most (71%) of the Associate Professors and over half (57%) of the Senior Lecturers. By 2008 the percentage of LIS educators having PhDs had risen from 45% in 2004 to 63%. Over 30 years ago, Whyte (Whyte, 1978) (1978) wrote that increasingly PhDs will be necessary for academic appointments in universities and furthermore, academics asked to supervise and examine doctoral dissertations must themselves possess PhDs. Finally, the increase of higher degrees (masters and doctorate) obtained in Australia as opposed to overseas, especially from the UK or the US is occurring as the number of Australian LIS academics holding PhDs rises. As more LIS educators enter academia through the more conventional academic channel, and as more professional librarians, especially those who teach information literacy in higher education institutions, heed Macauley's (Macauley, 2004) challenge to match the doctoral degree qualifications of academics, then Australian LIS may finally be an 'academic discipline' (Whyte, 1984). While PhDs are an important part of research development and training of academics, so is publication and dissemination of that research a demand of the academic workplace.

Research Publications

Publications by LIS academics with at least two years in Australian LIS schools were downloaded from eight databases in order to provide additional information about Australian LIS academic staff. This data enabled the tracking of the journal publication of the academics found in

those databases over a period of five different decades from the 1960s to the 2000s. The data gathered revealed the total number of publications over time and permitted the tracking of the average productivity of academics, the identification of journals in which the Australians were most frequently published, and changing authoring patterns such as an increase in joint authorship.

After the removal of non-journal articles, there were 2,235 unique journal articles authored or co-authored by at least one Australian LIS academic during the period from 1967 to 2008 (Table 3). Although LIS education in Australian higher education institutions was established in 1959, journal articles of LIS academics appeared in the eight selected databases only from 1967 onwards, with modest growth in the 1970s. The 1980s saw remarkable growth followed by further small increases in the 1990s and 2000s. Partial explanations of the 'quiet' and low-productive period before the 1980s are posited: some of the databases had limited or non-existent coverage in the early decades of Australian publications; and there were few LIS academics in the early years (1960s; c.f. Figure 3) and most were engaged in establishing LIS programs, thus devoting their time and resources to course and subject development rather than to research. Although the 1970s saw a growth in the number of LIS academics in Australian higher education institutions, as mentioned earlier most came as practitioners and therefore lacked research training and exposure to a 'research culture' (Whyte, 1984).

With regard to coverage, analysing the results from all eight databases, revealed that no one database, not even *LISA* with the highest overall number of journal articles (1,088 see Table 3), can provide access to even one-half of the research output for Australian LIS academics. It is impossible to estimate how many more publications there might be which are not indexed by any of the eight databases. Arguably the lack of visibility of such publications may mean that the research effort which is accumulated in these publications is virtually lost to the wider community of LIS researchers and practitioners.

Although the two Australian databases (*ALISA* and *AEI+*) have good coverage of national journals, they were disappointing for their non-coverage of the international journals in which Australian academics published. Further, only 19 journal articles were retrieved from *ALISA* for the period 2000-2008, as it ceased indexing in early 2005. Since then there has been no active database devoted to indexing Australian LIS publications.

Table 3 shows that the most productive database for Australian LIS publications is *LISA*. *LISA* indexed most of the journal articles by Australian authors in the 1970s. In the 1980s the two Australian databases (*AEI+* and *ALISA*) led in the indexing of journal articles (437 and 383); however, *LISA* was not far behind with 305 journal articles. During the 1990s *LISA* took over the lead again with 386 journal articles and for the period from 2000 to 2008, it was a close second with 261 to *LISTA*'s 297 journal articles.

The distribution of the 2,235 unique articles over all years is displayed in Figure 5 on the left axis, plotted against the number of Australian LIS academics with more than two years' tenure in LIS programs from 1959 to 2008 on the right axis. Both distributions display similar trends. A time lag between appointment to an academic position and the year of publication of journal articles is evident from about 1970 until the mid-1990s, with the time lag much greater in earlier years. The spike in publishing activity in 1999 is probably due to the end of a period of relatively strong staffing numbers, and in 2005-2006, due to the various implementations of national research evaluation programs by the Australian government: for example, the initial encouragement to publish by the Research Quality Framework (RQF) in 2005, later replaced in 2007 by the Excellence in Research for Australia (Australian Research Council 2009).

Table 3: Number of journal articles coauthored by Australian LIS academics in different databases

Years	1967-1969	1970-1979	1980-1989	1990-1999	2000-2008	Total all years
ALISA	0	0	383	293	19	695
LISA	8	128	305	386	261	1088
LISTA	3	27	96	213	297	636
AEI+	0	22	437	271	178	908
SSCI	0	10	57	94	84	245
SCI	0	1	6	30	50	87
AHCI	0	0	7	10	4	21
LLIS	0	0	106	275	223	604
Total unique publications in all databases	11	169	680	816	559	2235

The steady rise of the number of journal articles from 1975 to 1985 may be due, in part to the introduction and development of the different literature databases and to the increasing assimilation of LIS academics into the research and publishing culture of universities. The period with the most journal articles by Australian LIS academics were in the 1990s when annual publication outputs fluctuated between 71 and 97 (Figure 5). The decrease between 2000 and 2004 can be explained to a certain extent by a fall in staff numbers and possibly the demise of *ALISA*. From 1982 to 1996 *ALISA* averaged 43 journal articles per year (ranging from 32 to 62); however, from 1997 to 2004 the number of journal articles dropped dramatically to about six per year (ranging from 0 to 21), and none from 2005 onwards. While *ALISA*'s contribution was declining from 1997 onward, *LISTA* was expanding its coverage of journal articles by Australian LIS academics for an average of 32 per year (ranging from 19 to 50).

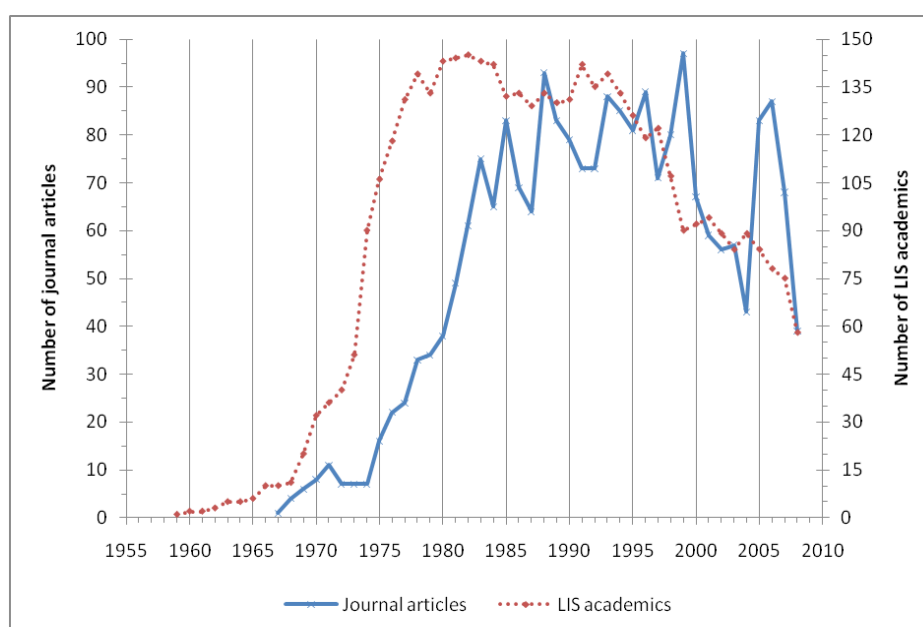


Figure 5: Number of unique journal articles (1967-2008) by Australian LIS academics in eight selected databases and the number of LIS academics (1959-2008).

The number of journal articles from *ALISA* also follows the rise and decline from 1982 to 2008 of Australian LIS programs from 16 to 10 and LIS academics (with more than two years' tenure in LIS programs) from 145 to 58. In the 1980s and 1990s the number of journal articles indexed by *ALISA* was the second highest of all databases with a total of 383 and 293 respectively. A similar decline in the other Australian database *AEI+* was evident, though not as precipitous (Table 3). Fortunately for Australian LIS, the three international LIS databases (*LISA*, *LISTA* and *LLIS*) appear to have continued indexing the major Australian LIS journals from 2000 to 2008, thus providing adequate coverage of Australian LIS research publications.

The average number of journal articles per academic from 1967 to 2008 is shown in Figure 6. Although the distribution is highly skewed with 118 (31%) of the 382 LIS academics having no journal papers indexed in any of the eight databases, there is still an upward trend. In analyzing this statistic, it needs to be noted that for many academics in the CAEs, research and publication were not a required duty. Even within some universities today (those which were formally CAEs) there are still some academic positions which do not have a research requirement. Figure 6 has two peaks (1999 and 2006) where the average number of journal articles per academic is at least one, corresponding to the peaks in Figure 5, discussed above.

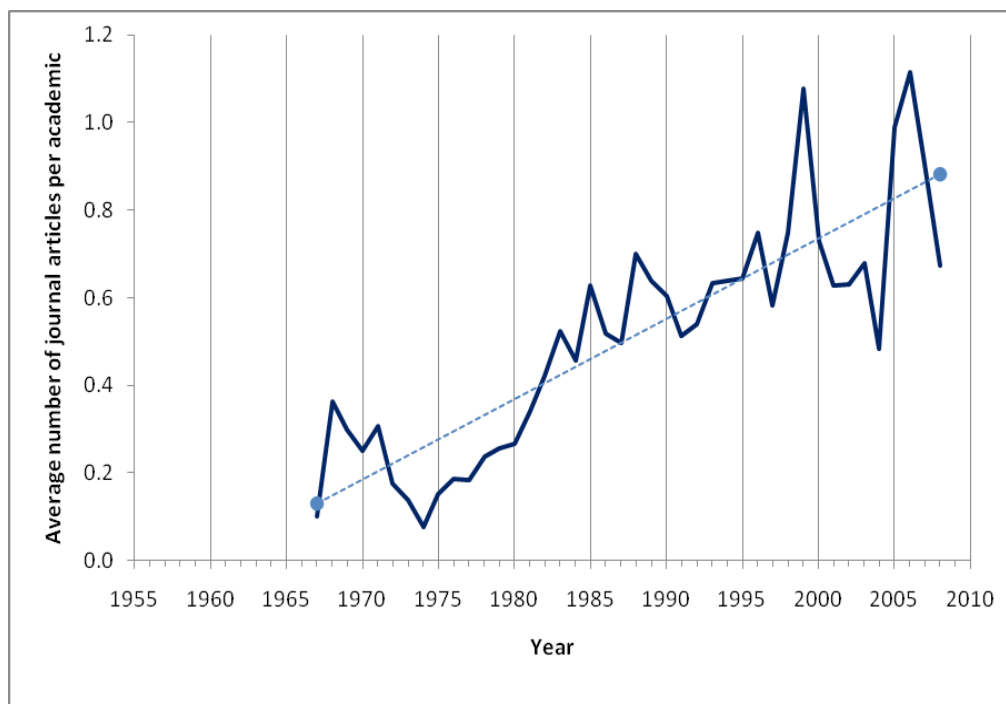


Figure 6: Average number of journal articles per academic and trend line: 1967-2008.

The 2,235 articles were published in 469 different journals with the distribution of articles over journals greatly skewed: 588 (or 26%) of the journal articles were published in five (or 1%) of the journals, while 233 (or 10%) of the journal articles were published in 233 (or nearly 50%) different journals. In other words, Australian LIS academics published in nearly one-half of all journals only once and over one-quarter of their journal articles were published in only five different journals (Figure 7).

The 37 journals with more than 10 articles by Australian LIS academics published from 1967 to 2008 are ranked (Figure 7). As expected the two journals where most Australian LIS academics publish are Australia's national LIS journals published by the Australian Library and Information Association

(www.alia.org.au), and are still 'active'. A further 15 are also national journals, nine of which have ceased publication. The list reflects, for the most part, the actual names of the journals although two are name changes (or 'continued by') as in the journals ranked 6th and 8th (*Education for Library and Information Services, Australia* and *Education for Librarianship, Australia*). These 37 listed journals including two 'continued by' journals accounted for over one-half (1,250 or 56%) of all journal articles published by Australian LIS academics from 1967 to 2008. The 18 national journals are asterisked and represent 44% (974) of the 2,235 journal articles.

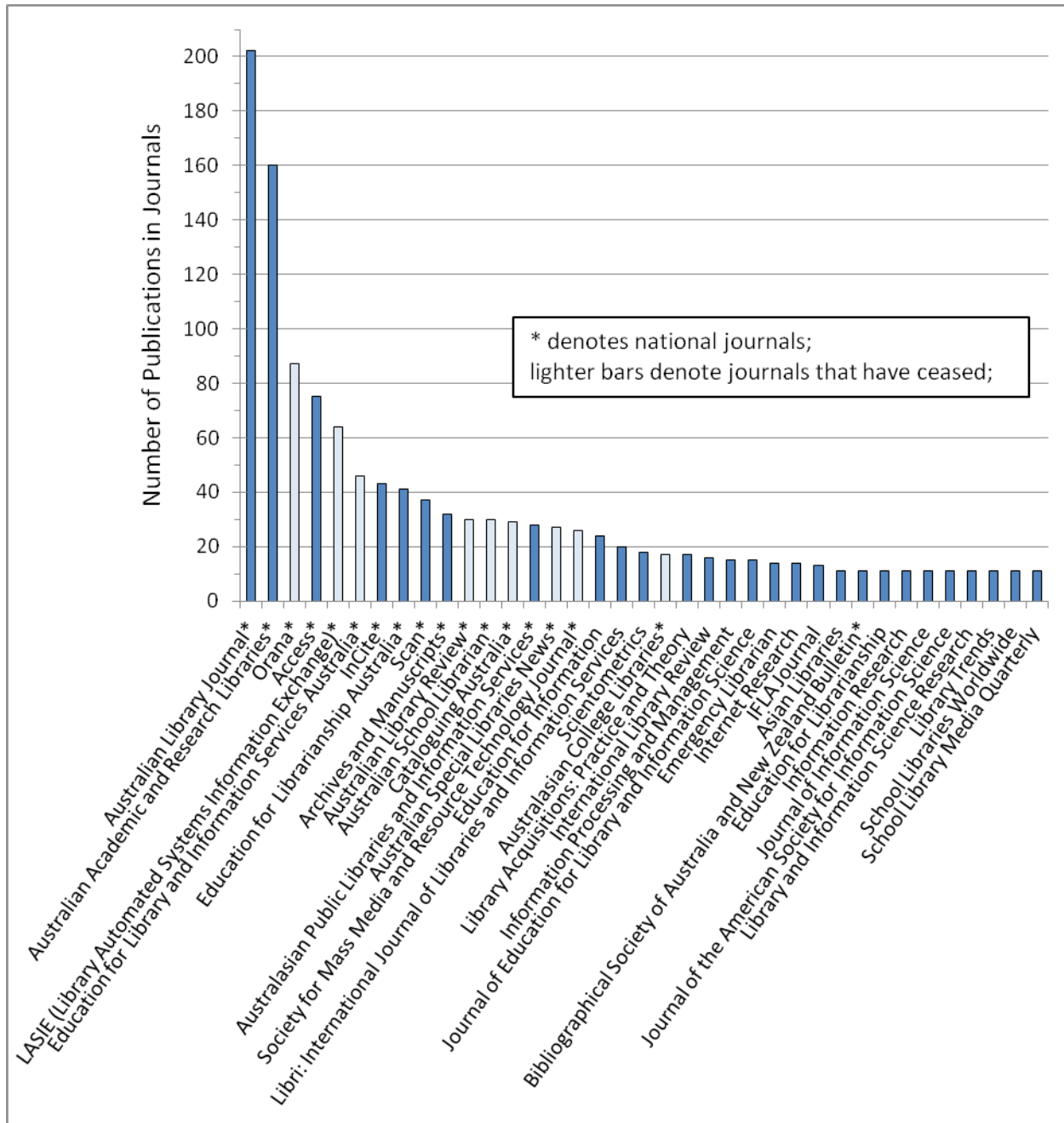


Figure 7: Journals with >10 articles by Australian LIS academics retrieved from eight databases and published from 1967-2008.

Some of the publishing patterns of Australian LIS academics for the last four decades are highlighted in the research output findings. First, nine of the 18 national journals have ceased publication for reasons about which only speculation is possible; for example, economic constraint coupled with the decline of submissions from, *inter alia*, national information professionals and LIS academics whose numbers declined sharply from the mid-1990s (Figure 5) and whose publication inclination might have shifted internationally. Second, four of the most frequently occurring journals in Figure 7 target school or teacher librarianship (*Orana, Access, Scan* and *Australian School Librarian*) suggesting a substantial contribution to the education of this sector in Australian LIS programs and therefore, to research issues in school librarianship. In addition, two other international school library journals (titles) appear at the tail end of the distribution (Figure 7), each with 11 articles by Australian LIS academics. Third, the majority of the journal titles are ‘library science’ oriented rather than ‘information science’ oriented suggesting more library oriented subject areas in which Australian LIS research has focused from 1967-2008. Fourth, the preponderance of journal articles in national journals may suggest that Australian LIS academics were somewhat hesitant to engage in the international LIS publishing arena, at least in the earlier decades of this study’s time frame, or that there are issues which required a local audience. The low numbers of journal articles retrieved from the three Thomson Reuters citation databases (*SSCI, SCI* and *AHCI*) would support these suggestions (see Table 3).

There is a rising trend in collaborative research and publication among Australian LIS academics (Table 4). However; over all years, most (72%) of the journal articles are by one author, another 25% by two or three authors, and only about 3% had more than three co-authors. Over the entire period, there was an average of 1.4 authors with a range from one to 16 authors. During the last ten years (1999-2008) when the number of LIS academics was declining (Figure 5), collaboration increased with only 57% of the journal articles by one author. A similar rising trend for collaboration among LIS academics has been noted by Yan and Ding (2009).

Table 4: Number of Authors over time

Number of authors per article	Number of Publications				
	1967-1978	1979-1988	1989-1998	1999-2008	All years
1	129	527	577	377	1,610
2	11	79	182	163	435
3	4	16	31	74	125
4		4	7	27	38
5		2	2	9	13
6	1	2		4	7
7	1		1		2
9			2	1	3
10		1			1
16				1	1
Total	146	631	802	656	2,235
Average number of authors	1.21	1.24	1.37	1.72	1.42

As stated above, 118 (31%) academics had not published any journal articles in journals indexed by the eight selected databases while in Australian LIS programs, and they served on average

seven years as Australian LIS academics (Table 5). Another 135 (35%) published from one to five journal articles only. The remaining 129 (34%) LIS academics contributed the bulk of journal articles for the years from 1967 to 2008. There was only a weak relationship between the years spent in LIS programs in Australia and for the number of journal articles published during that time span for the 382 academics with more than two years in academia. With regard to the 118 academics with no publications, it must be noted that for some, particularly those from former colleges or those employed as tutors, senior tutors or assistant lecturers (see Wilson et al., 2010), research and publishing may not have been a requirement of the positions held.

Table 5: Productivity of authors (1967-2008) and years (> 2) in Australian LIS programs (1959-2008).

Number of publications	Number of authors	Average number of years working in the field
0	118	7
1 to 5	135	11
6 to 10	54	13
11 to 20	45	17
> 20	30	17
	382	11

While this section provides a short overview of journal publications by Australian LIS academics, the findings from this section are part of a bigger picture. This involves qualifications and background of academics, and the development of Australian LIS institutions over the last fifty years discussed earlier in this chapter.

In conclusion

This chapter pulls together the results from investigations of three strands of Australian LIS education over 50 years (1959-2008): institutions, academic staffing and research publication. Its purpose is to provide an understanding of the past and present and to offer insights that will help inform planning for the future, both for Australian LIS education and in the wider context of the field. The introduction and subsequent rapid growth of LIS education in tertiary institutions presented LIS with an opportunity to formalize education which strengthened the LIS claim as a profession (Abbott, 1988; Kennan, Cole, Willard, Wilson, & Marion, 2006) and provided an opportunity to develop a new career path within and related to the profession (that of the LIS academic). However, the rapid growth also brought with it issues which have had an effect on LIS education up until the present time.

The Martin Report (1964-1965) which recommended establishing the CAE sector played a major role in shaping the development of LIS education in Australian tertiary institutions. The report presented the view that LIS education was more suited to CAEs than universities. A consequence of the rapid establishment of CAEs was the start-up of more LIS schools, most of which were small, and it seems smaller than was viable in the long term (Nimon, 2004). Another, later, review abolished the CAE sector (Dawkins, 1988). Dawkins wanted economies of scale and as most LIS schools were quite small they were obvious candidates for scrutiny and for closures or amalgamations. The outcome from the Dawkins review process produced some closures and amalgamations but it did not lead to what the LIS profession might have needed, namely a smaller number of larger, stronger schools. Instead it led

to shrinkages in LIS academic staff numbers in existing schools and a loss of visibility of LIS within its institution and the wider community.

These smaller and less viable schools experienced further change post-Dawkins as LIS schools/programs were amalgamated with other academic programs and fields. Changes of program location into varied disciplinary environments such as *Education, Information Technology, and Business* carried problems associated with maintaining identity. The difficulty of maintaining identity and associated visibility has not been helped by the variety of qualification names which accompanied the move into new academic homes. Identity may have been better retained if schools had kept the library/librarian in their school names or qualification titles. However, if this course of action had been adopted, potential students garnered by a broadening of course names, and potential synergies related to convergence in the information industries, may have been lost to both researchers and practitioners. It is noteworthy that this development is not only an Australian phenomenon but similar trends to amalgamate LIS programs into bigger units also occur elsewhere (cf Kelley 2010). A potential outcome, yet to be analysed, of amalgamations is the watering down of the acculturation for the profession.

Coupled with the growth and then shrinkage of schools in higher education was the struggle that LIS academics faced in the higher education environment. Almost all of the early Australian LIS academics were drawn from practice and entered the academic world without research training and experience. With them came an in-service training, practice-based approach to program and course development. This practice perspective was a determinant of Martin's (1964-1965) position that LIS would be more appropriately located in the teaching focused CAE sector. Furthermore many of the CAE positions were teaching focused and had no research component. With the establishment of the Unified National System of education all academics, with the exception of a few former CAE staff, were now in positions where academic research and publication was a requirement. This was followed by a period of existing staff completing PhDs and new staff being recruited with PhDs. The publication history of Australian LIS academics reflects these changes, LIS education moving into universities and the "academization" of staff. The publication rates overall increased as did the publication per academic. Increasing co-authorship and increasing publication in international journals probably also reflects this academization. The cessation of a number of Australian LIS journals may be at least partially accounted for by the desire of Australian LIS academics to seek publication in international literature, a situation which has been encouraged by the academization and the research quality assessment processes which have been introduced into the Australian higher education system in recent years.

In the last fifty years, LIS education in Australia has moved from a vocational to an academic model (Audunson, 2007). As Australia's LIS educators increasingly conform to the requirements of academia by developing research and publication skills first through the acquisition of PhDs, and thereafter through continuing scholarly pursuits, they also are dealing with a loss of visibility within institutions and the issues of working in mostly small schools. The challenge facing LIS academics and Schools in Australia over the next few years is to maintain and develop the scholarly approach required to be an academic operating within a university while at the same time as educating librarians and other information professionals who can operate in a constantly changing and converging information environment.

The issues discussed in this chapter are issues that face many in the broader LIS profession internationally: size with regard to economies of scale for teaching and the maintenance of strong and viable research groupings; the visibility of LIS programs within a university and Australian LIS

research in journals and databases; tensions among the various information fields; and the need to look towards providing a range of opportunities beyond the libraries in the broader information field,

Taking these factors into account we can envisage different futures for LIS education. With the ‘geography’ of Australia shrinking as a result of advances in information and communication technology (ICT) and increasing travel options, the federal government is more likely to push for centralization and coordination at the tertiary level with the use of ICT for distance online education (including the potential of participating in, or the initiating of, programs overseas) and the consolidation of academics into larger, more viable teaching units able to offer students a broader range of core and elective subjects and programs and researchers a supportive community of scholars (see for example, Wildavsky, 2010). One outcome of this shrinking geography might be a dispersed national LIS program run by fewer universities, a consortium of a small number of universities working cooperatively in both the delivery of courses and the practice of research, or even one university with ‘hubs’ in the major cities and regions. This proposed consolidation would give LIS the numbers of students and staff to perhaps form schools of their own, named for their own programs and subjects, and thus increasing visibility as well as providing strength in numbers. This would perhaps lay the foundations of an ‘I’ school in Australia and the beginnings of a new, stronger era of LIS professional education more in tune with the current higher education environment. This cooperative model could be an alternative option for other countries, or even regions, with similar, distributed, smaller, struggling, LIS schools.

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