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ARTICLE

Who are Australia's information educators?[1]

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In recent years, there has been considerable discussion of the challenges facing the future of information education in Australia. This paper reports a study that explored the characteristics and experiences of Australia's information educators. The study was undertaken as part of a larger project, which was designed to establish a consolidated and holistic picture of the Australian information profession and identify how its future education could be mediated in a cohesive and sustainable manner. Sixty-nine of Australia's information educators completed an online questionnaire that gathered data on aspects such as age, gender, rank, qualifications, work activities and job satisfaction. The key findings from this study confirm that a number of pressing issues are confronting information educators in Australia. For example, Australia's information educators are considerably older than that of the total Australian academic workforce; over half the information educators who participated in the study are looking to retire in the next 10 years; and Australia's information educators spend more time on service activities than members of other disciplines within Australia's education system and place a stronger importance on teaching over research. Left unaddressed, these issues will have significant implications for the future of information education as well as the broader information profession. Many of the key observations drawn from this study may also have relevance to other disciplines in the Australian educational context.

Keywords: library and information science; tertiary education; information profession; professional education; information education

Implications for best practice

- With over half of Australia's information educators looking to retire in the next 10 years, the information profession (practitioners, employers, educators, professional associations) must actively carry out succession planning for future information educators.
- The connection between Australia's information industry and education is strong and should be encouraged and maintained so that educators are well informed to produce information graduates for the rapidly changing digital landscape.
- The Australian information sector must continue to build its research profile nationally and internationally by establishing strategies that will encourage both individual and collaborative research endeavours within and across industry and the academy.

Introduction

Whilst research exploring the nature, characteristics, issues and challenges of information professionals abounds, both in Australia and elsewhere, very little is known about the

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people who are responsible for information education. Indeed, many in the profession have suggested that information professionals and information educators inhabit two different worlds and that very rarely do these worlds collide. Moran (2001, 54) notes that 'many librarians have little firsthand experience with library education after they graduate'. Similarly, Feather (2003, 40) contends that the vast majority of information practitioners 'have not stepped foot into an LIS [library and information science] department since the day [they] left'. Given that the future of Australia's information industry hinges in large measure on the quality of new graduates entering the profession, and that information educators are the key people responsible for educating and training these graduates, it is time to bring these two worlds closer together.

This paper develops our understanding of the nation's information educators by presenting key findings from a recent study that explored the characteristics and experiences of information educators in Australia. The study reported in this paper was undertaken as part of a national research project funded by the Australian Learning and Teaching Council, *Reconceptualising and Repositioning Australian Library and Information Science Education for the Twenty-first Century*. This project was undertaken with a team of 12 university and vocational information educators from 11 institutions around Australia between November 2009 and December 2010. The purpose of the project was to establish a consolidated and holistic picture of Australian information profession and to identify how the profession's future education and training could be mediated in a cohesive and sustainable manner (Partridge and Yates 2012; Partridge et al. 2011). Recognising three major stakeholders in the education process, the project was framed around three areas of consideration: students, industry and educators. This paper reports on one of the three areas considered – the educators. The data for the study was collected in 2010 so the findings reported here represent a snapshot in time. The Australian information sector and its subsequent education is not static, but is evolving and growing in response to various national and international stimuli. Nonetheless, the findings presented in the paper provide, for the first time, a unique insight into the characteristics and experiences of Australia's information educators. The paper begins with a brief review of relevant literature before providing an overview of the research design and outlining key findings from the study. It concludes by discussing the key implications of the study and identifying areas of further research.

Literature review

The Australian Library and Information Association (ALIA) gathers information on the education programmes in Australia recognised by the association at both university and vocational education and training (VET) institutions. ALIA also gathers data on those individuals involved in teaching within those programmes in its Annual Course Return. This data has been collected annually since 1996 and is one of the few formal data collection mechanisms available, but is not publicly available. Hallam (2007) provides a brief analysis of the data gathered by ALIA in 2006 and concludes that there were too many information programmes, staffed by too few academics, competing for too few students. Other professional associations within the information sector, such as the Records and Information Management Professionals Australasia and the Australian Society of Archivists, do not have a formal process for gathering data on the education programmes they accredit. At the time that this study was conducted there was only anecdotal information available about the educators of these programmes. It should be noted, however, that many of the programmes accredited by these associations are also

taught alongside the programmes accredited by ALIA; consequently, they are also taught by many of the same educators.

Over the years, a number of studies have investigated information educators both in Australia and around the world. Since 1980, the Association for Library and Information Education (ALISE) has provided an annual report that seeks to understand the 'activities of the academic programs that provide the underpinnings for education for the library and information professions' (Wallace and Naidoo 2010, xxvii). The report provides valuable insight into the changing nature of education within the schools of library and information science in the United States and Canada. The ALISE annual report provides a basic level of description of the North American information educators but does not explore areas such as workload, research productivity, teaching activities and job satisfaction. A 2005 project funded by the European Association for Library and Information Education and Research and the SOCRATES Accompanying Measures Scheme provides insight into European information education. Two hundred information schools were invited to participate in an online questionnaire exploring school size, programmes offered, entrance requirements and nature of the curricula (Borup Larsen 2005). Fifty schools completed the questionnaire. The majority of European information schools are relatively small in size with less than 200 students enrolled. Nearly two-thirds of the schools have fewer than 20 academic staff and just over a quarter of the schools operate with ten or less full time staff members. The Borup Larsen study focused on describing the European information schools and departments and provides only a limited understanding of the European information educators themselves. It does not explore qualifications, experience, age, gender and workload.

In Australia, Smith (2006) explored the educational qualifications and professional development activities of members of the Information Studies Educators' Forum. More recently, Wilson et al. (2010) provide a historical insight into the nature of Australian information academics by analysing data obtained from sources such as institutional academic handbooks, information programme brochures and news items in information journals. These studies focussed on the university context. Information education in Australia occurs at two levels, the professional via university programmes at the undergraduate and postgraduate level and the paraprofessional via VET programmes at the diploma and advanced diploma level. Consequently, any study seeking to establish greater understanding of Australia's information educators must include both educational domains.

Very little is currently known about the information educators within the VET sector. In 2009 ALIA, as part of its programme recognition process, conducted site visits to all 17 institutions offering the Diploma/Advanced Diploma of Library/Information Services. ALIA produced a 'state of the nation' report providing an overview of these site visits and key issues impacting on library technician programmes in Australia, including curriculum design and content, resourcing, infrastructure and staffing (ALIA 2010). In terms of staffing, concerns were noted about workload, succession planning and the difficulties in attracting new staff. The report does not provide any specific details on the library technician educators (i.e., age, gender, number, qualifications). As with Smith (2006) and Wilson et al. (2010), it must be noted that the report does not include institutions offering degrees within the information field not recognised by ALIA (e.g., records management, archival studies).

The information profession is not alone in its interest in establishing greater understanding of its educators. Studies profiling Australian academics have also been conducted in the fields of science (Edwards and Smith 2010), health (KPMG 2009), engineering (Engineers Australia 2008) and education (Cumming 2010). Many of these

studies have emerged in response to Hugo's argument (Hugo 2005, 2008; Hugo and Morriss 2010) that demographic issues facing Australian universities in the 2010s and 2020s will result in the need for regeneration within the academic workforce as the baby boomer generation reaches retirement age. The growing importance in developing a better understanding of the current academic workforce is also evidenced by the Changing Academic Profession (CAP) Project (Research Institute for Higher Education, Hiroshima University 2008). Twenty-two countries conducted a survey of their nation's academic workforce. By using the same online questionnaire, the project was able to establish individual national profiles as well as provide international comparisons, and a number of similarities and differences were noted between nations. A vast majority of the participating countries reported a growing number of academic staff with higher degrees, especially doctorates, higher job satisfaction, increased pressure on faculty in the research arena and a feminisation of the workforce (Huang 2008).

From the small, but growing, body of knowledge exploring information educators within Australia, two observations can be made. First, studies to date have focussed on library educators and not information educators (educators involved in education in all aspects of the information profession including library, records management, archives, teacher librarianship, information management). Second, no studies have explored information educators at both the university and VET sector. The current study will fill these gaps and its results will contribute to the workforce planning of Australia's information educators.

Research design

The study reported in this paper is one part of a larger project funded by the Australian Learning and Teaching Council: *Reconceptualising and Repositioning Library and Information Science Education for the Twenty-first Century*. Eleven institutions representing university and vocational information education in Australia undertook the 12-month project, which was designed to establish a consolidated and holistic picture of the Australian information profession and identify how its future education could be mediated in a cohesive and sustainable manner. The project was framed around three areas: information students, the information workforce and information educators. This paper reports key findings from the information educators area, which sought to establish greater understanding of the key nature and characteristics of Australian information educators. The key findings of all three considerations areas are available in the project's final report (Partridge et al. 2011).

The questionnaire used in the CAP Project (Research Institute for Higher Education, Hiroshima University 2008) informed the design of the questionnaire for this study. Drawing upon the CAP Project's instrument allowed for easier comparison with national and international data on the world's academic workforce. Although the CAP instrument informed the study, questions were modified and added to accommodate the VET context and the specific needs and interests of the information sector in Australia. The questionnaire was pilot tested using a subset of the target population with the aim of testing clarity of wording, interpretation and acceptance of the questions, and completing the online instrument using a range of Web browsers. The questionnaire used for final data collection consisted of 53 questions that provided both quantitative and qualitative data. The instrument was divided into five sections: demographics, teaching and learning; publications, projects and research; service; perceived issues and challenges; and the future of education for the information professions.

The population for the current study was information educators based in tertiary educational institutions – universities, Technical and Further Education (TAFE) and VET. Information was defined broadly to include areas such as library studies, archive studies, records management, information and knowledge management and teacher librarianship. The questionnaire was available online in August and September 2010. A purposive sampling approach was used. Participants were recruited via educator elists, emails to heads of schools and departments and emails to course, programme or degree coordinators. Descriptive analysis was undertaken using Microsoft Excel. Prior to analysis, the data was examined for accuracy of data entry. Whilst 110 responses were obtained, after data cleaning, 69 valid responses were identified and used for analysis. The other responses were excluded from analysis for their lack of completeness. Of the valid responses obtained, 45 respondents (65%) considered themselves to be educators within the university sector, and 24 (35%) in the TAFE/VET sector.

Findings

This section outlines the key findings in five areas: age, gender and rank, qualifications, work activities and job satisfaction.

Age

The ages of respondents ranged from 27 to 64 years with an average age of 50 (Figure 1). Just over 63% of the participants were aged 50 years or older.

For almost a decade, the Australian demographer Graeme Hugo has been warning about the 'lost generation' of academics (2005, 340). According to Hugo (cited in Cervini 2010), 'generation X are pretty thin in universities compared to baby boomers, who are strongly represented'. The findings in this study provide strong support for Hugo's observations. Of the university academics who participated in the study, almost 56% were 50 years or older (baby boomers) and less than 5% ($n = 2$) were 30 years of age or younger. Removing casual or sessional academics (e.g., the tutors and markers) from consideration and focussing only on the full-time and part-time ongoing or contract staff, over 61% of the study's participants were aged 50 years and older and just over 3% ($n = 1$) were 30 years of age or younger. These results suggest that the information academic workforce is considerably older than the total Australian academic workface, where only 40.3% are aged 50 + (Hugo and Morriss 2010). Whilst studies profiling the Australian VET sector are relatively new, a recent study indicates that the ageing VET workforce is a pressing issue, with 48% of the TAFE workforce (the largest subset of the VET sector)

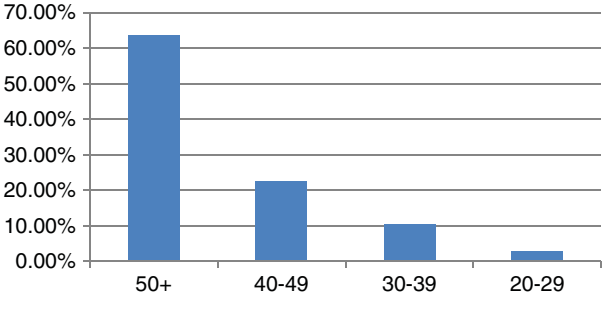

Figure 1. Age of respondents.

aged over 50 years in 2008 (Guthrie 2010). The findings of this study are therefore very striking: almost 79% of the VET educators who participated in the study were aged 50 + and only one VET educator was younger than 40 years of age. It is therefore not surprising that the study revealed that over half of the participants, regardless of institutional context, were looking to retire within the next 10 years.

With over two-thirds of information educators approaching retirement age in the next 10–15 years, and over half indicating that they are indeed looking to retire in the next 10 years, the succession planning of Australian information educators is an important issue to be addressed. Hallam (2007) points to challenges in the recruitment of educators in the university context: currently, the PhD is an essential selection criterion for academic appointments, yet a PhD remains a relatively scarce commodity in the Australian information profession (Macauley, Evans, and Pearson 2010). A 2009 study by Macauley, Evans, and Pearson which analysed Australian PhD records between 1987 and 2006 revealed that the research fields, courses and discipline (RFCD) of Librarianship (one of 139 disciplines in the RFCD schema) remained static for the number of its PhD completions between the 5-year brackets 1987–1991 and 2002–2006. In contrast Nursing, which had similar PhD completions to LIS for the 1987–1991 period, had the second highest growth rate (behind Tourism) in 2002–2006. As a further comparison, during the 1987–1991 and 2002–2006 periods, the total number of PhD graduations in Australia trebled. Only Veterinary Sciences had a lower growth rate than LIS from the 139 disciplines nationwide. Consequently, while opportunities exist to recruit information educators from overseas, there is also a pressing need to entice Australian information practitioners into doctoral studies.

Gender and rank

The majority of the study's respondents (79%) were female. The high proportion of females mirrors the preponderance of women in the information professions, at least in terms of the narrower library definition. Whilst the female dominance within information education may not at first glance appear to be a significant issue, a number of interesting points are worth noting. Recent studies, both in Australia and overseas, have shown that male academics are more likely to occupy the higher academic ranks (Level D Associate Professor and Level E Professor) than female academics (Coates et al. 2008a). The current study supports this observation. Just over two-thirds of the participants held junior-level positions (Level B Lecturer and below). Of the information academics who participated in the study, there were no Level E appointments and only five Level D appointments, of which only one was female. In 2010, nearly 20% of the 46,969 Australian university teaching and research staff were Level D and E (DEEWR 2010). Figure 2 compares the university academic rankings of the respondents of the current study with the Australian academic workforce (DEEWR 2010). The information profession has roughly the same number of junior academic staff (Associate Lecturer and Lecturer) but fewer senior staff (Associate Professor and Professor) than the general Australian academic population. Just over 15% of the study's participants responded 'other'. The issue of academic rank is important; it is the senior academics who are best placed to influence university and higher education policy and who ensure that the discipline, even one as small as the information field, is positively regarded (Smith 2006).

Studies have also suggested that females tend to hold more casual, contract or part-time positions both in the university and VET context. Employment in this capacity makes obtaining tenure a difficult task for females. Almost 38% of the participants were

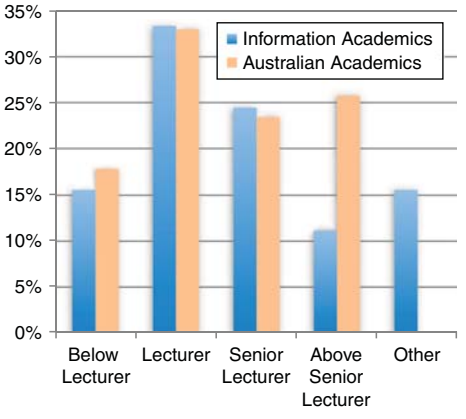

Figure 2. Academic ranking of respondents compared with all Australian academics.

employed in a casual, contract or part-time capacity, and of this, total 97% were female. This is slightly higher than the academic workforce in general where 27.7% of the full time equivalent are employed on a fractional or casual basis (DEEWR 2010). Coates et al. (2009) note that the move to greater casualisation in academia is indicative of the broader trend in the Australian workforce. They also note that casualisation may not be problematic and that very little is known about casual staff.

Qualifications

All but one of the 45 university academics in the current study had a postgraduate qualification, over half had a PhD, and 15% were currently completing their doctoral studies. This is similar to the findings by Smith (2006) who surveyed members of the Information Studies Educators' Forum and noted that 52% of information academics had a PhD with another 26% completing one. The figures in both studies contrast significantly with the Australian academic workforce where almost 67% have a doctorate (DEEWR 2010). They are also in contrast to the US context where 90% of information faculty during the 1990s had a PhD (Durrance 2003).

Three-quarters of the VET educators in the current study had a postgraduate qualification, with only one educator possessing a PhD. This is striking when considered against the 2008 figures that showed only one-quarter of teachers within the TAFE workforce had a postgraduate qualification (Guthrie 2010). Australia's information educators in the VET sector are more qualified than their teaching peers. As the VET educators in the current study are considerably older than the overall VET workforce, it may be that they have had more time to acquire their postgraduate qualifications. One-third of the VET educators indicated that they were currently studying, at a variety of levels including Diploma, coursework Masters, research Masters and PhD.

The range of fields in which respondents, both university and VET, studied for their highest academic qualification was quite diverse, although library studies and education accounted for over 45% of the qualifications. Other areas of study included information and knowledge management, information systems, business, archival studies, history, politics and internet studies. A variety of reasons were given by respondents for choosing to engage with ongoing studies: only a minority were doing a programme because they 'had' to, many were 'life-long learners', some were looking to change careers and others

were studying primarily out of interest. What this study reveals is that Australia's information educators have embraced the importance of being 'learning professionals' (Darling-Hammond and Sykes 1999).

Work activities

The respondents were asked to estimate the percentage of their work time spent on various types of activity, both in and out of teaching sessions. Activities included research (e.g., writing grants, conducting research, writing publications), teaching (e.g., preparing class materials, teaching, consulting with students) and service (e.g., 'internal' service including committee work and undertaking leadership roles within the work institution, and 'external' service including membership of and participation in professional and industry bodies). Figure 3 provides details of participants' work activities when classes were in session and out of session.

As expected, more time is spent on teaching when classes are in session, although even then it accounts for less than half of respondents' estimated work hours. A significant amount of time, about a quarter, is spent on administration. Even when classes are not in session, less than a third of time is spent on research or project work. The information educators are quite active within their own institutions and within the information profession. Although the figures presented here relate to both VET and higher education educators, it is interesting to compare the data to findings from the recent national survey of Australian academics (similar data is not available for the VET sector). Information educators are undertaking the same relative amount of teaching, research and administration as their national peers; however, they appear to be engaging in more service activities, almost 17% when classes are in session and over 21% when classes are out of session (Coates et al. 2008b). In contrast, Australia's academics generally engage in less than 5% of service activities regardless of teaching commitments. This draws attention to information educators' strong involvement in their industry and their broader institutional context. When asked to identify the top three challenges faced in undertaking teaching, research and service activities, lack of time was overwhelmingly viewed as the major obstacle in all three areas. In teaching the quality of students, the administrative load and the breadth of the curriculum are other leading challenges. In research another major issue is the lack of funding. For service activities lack of recognition or appreciation was noted as a barrier.

Teaching was the most valued activity amongst respondents, with over 94% rating it as very important or important. Figure 4 reveals activities rating as very important or

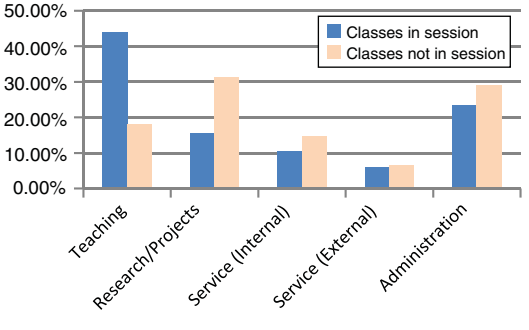

Figure 3. Respondents' work activities (classes in session vs. classes not in session).

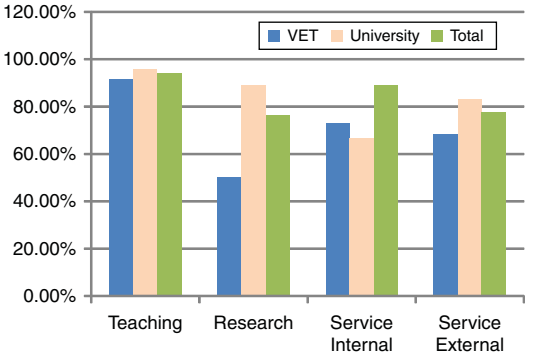

Figure 4. Activities rating as very important or important according to sector.

important according to sector. Both sectors rated teaching, research, internal service and external service as very important or important with no rating below 66%. Research was rated as being more important by the university sector than VET, not unexpected given that Australian VET institutions are not required to be research active. The university educators appear to value internal service (66%) less and external service (82%) more than their VET colleagues.

Sixty-two of the 69 respondents indicated that they were teaching in 2010. In addition to coursework teaching, one-third of respondents (including one VET educator) are involved in supervising a total of 117 higher degree research students (Honours, research Masters, PhD). Almost half of these are international students. This equates to approximately five students per educator, which is equivalent to national averages for supervision (Coates et al. 2008b). Just over 71% of the educators who participated in the study indicated that they had engaged in research or project work in the last 3 years. Whilst it might be tempting to assume that the educators not involved in research or project work were from the VET context, where this kind of activity is not considered as high a priority, the data provided here suggests otherwise: 35% of those not engaged in research or project work ($n = 20$) were located in universities. This is a significant observation, especially when further scrutiny of the data reveals that two-thirds of the 35% ($n = 8$) of those were not engaged in research-held positions where research would be expected (e.g., full time ongoing permanent positions employed as Lecturer Level B and C). Given the Australian government's focus on research performance within the nation's universities, information academics should be actively and proactively engaged in research.

Much of the research or project work being undertaken by Australia's information educators is described as being primarily individual (53%), applied (85%), multi-disciplinary (69%) and non-commercial (80%). Whilst the respondents tended to be operating more within the international arena (40%) they were equally as engaged in activities at the national (31%) and local (27%) levels. It is interesting to note that when examined at the sector level the VET educators' research and project work tended to be less collaborative in nature, less multidisciplinary and more commercial and local in scope than their university peers. Figure 5 provides a breakdown of participants' research and project work according to sector. Once again the information educators mimic their national peers (and again it is important to note that the national data is related to university academics only) who also indicated a focus on individual, applied, multidisciplinary and international research, but unlike information their work is geared towards commercial outcomes (Coates et al. 2008b).

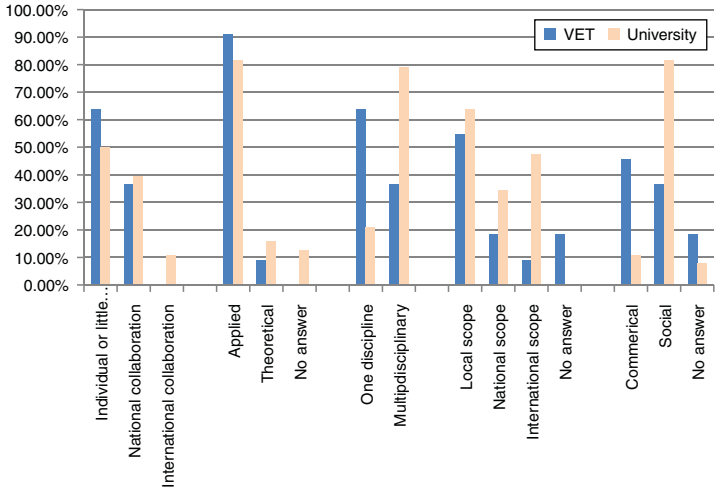

Figure 5. Research or project work according to sector (VET, $n = 11$; University, $n = 38$).

The findings also suggest that respondents made considerable efforts to disseminate their project work widely, reporting outputs such as books, journal articles, conferences and professional publication outlets. However, like their national peers, information educators mainly write academic articles, with newspaper and magazine publications featuring less but still appearing as part of their academic writing portfolio. Respondents were keen conference presenters, averaging more than one a year. They also conducted a large number of seminars and workshops, again over one and a half a year. The information educators who participated in the study had a strong attachment to their profession, with 77% rating their professional affiliation as very important. The participants rated affiliation to the profession as more important than affiliations to their faculty (46%), school (49%) and institution (52%). Participants also indicated that they perceived their work as being valued most by the information profession (32%) and valued least by the institution (13%).

Engagement with industry

Hallam (2007, 323) suggests that information educators can 'be totally out of touch with current industry practice'. The findings of this study clearly reveal that Australia's information educators actively seek to connect with the industry they support. Less than 3% have never worked within the information profession and over 30% of information educators are, in addition to their work as an educator, also currently employed within the information sector. It should also be noted that over 45% have not been actively employed within the profession for more than 5 years, and 25% had not been so for more than 10 years (see Figure 6).

The respondents' engagement with the information profession is also borne out by the number of professional memberships, an average of one and a half subscriptions per respondent. Almost three-quarters of respondents were members of ALIA, by far the most strongly supported professional body. Respondents were members of 28 associations including the Records and Information Management Professionals Australasia (15%), the Australian School Library Association (10%) and the Australian Computer Society (7%). Respondents also participated in a wide range of service activities in the past 3 years. Over

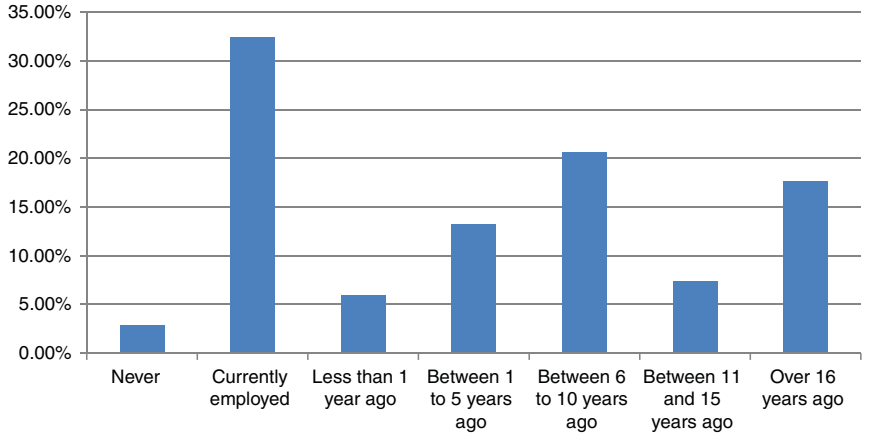

Figure 6. Respondents' work in the information industry.

half the respondents had been a member of a committee or other group connected to an external organization, and almost half had served as a peer reviewer. Over 40% had delivered professional development courses to industry, and over a quarter had undertaken paid consultancies. The important connection that information educators have with their profession can also be seen in the reasons why they embarked on a career as an information educator to begin with. Many respondents chose to become educators within the information profession because of a strong desire to teach and because of the attractiveness of the perceived autonomy and flexibility the role offered, but they also had a strong wish to contribute to the profession through their role as educators. Whilst not rated highly by all, being able to engage in research was also indicated as a reason for becoming an educator. It is not surprising, therefore, that when asked to comment on their strongest affiliations, information educators indicated that they valued their links to the professions more than their institutional ties. Respondents' attachment to their profession is also suggested by the value they perceive their profession places on their work overall (32%) as compared to students (28%), their colleagues (26%) and their institution (12%). Figure 7 provides a breakdown of the educators' perceptions on how their contributions are valued by colleagues, institutions, profession and students.

Job satisfaction

Figure 8 shows the breakdown of job satisfaction. Australia's information educators appear to be rather satisfied with their educator's life, over 80% indicating they were satisfied or very satisfied with their job and less than 20% indicating that they were not satisfied or very unsatisfied. Educators in the VET sector are more likely to be very satisfied (60.87%) when compared to those in the university context (27.27%). When compared to the findings from the CAP project, it is suggested that the Australian information academic is more satisfied (77.27%) than Australian academics generally (55%) (Coates et al. 2008b). A recent study suggests the information VET educators are not as satisfied as their vocational teaching peers (69%) (Simons et al. 2009).

The vast majority of respondents indicated that teaching and/or working with students was the most satisfying aspect of their job, whilst the least satisfying aspect related to workload and having to deal with too much administration (it was noted earlier that

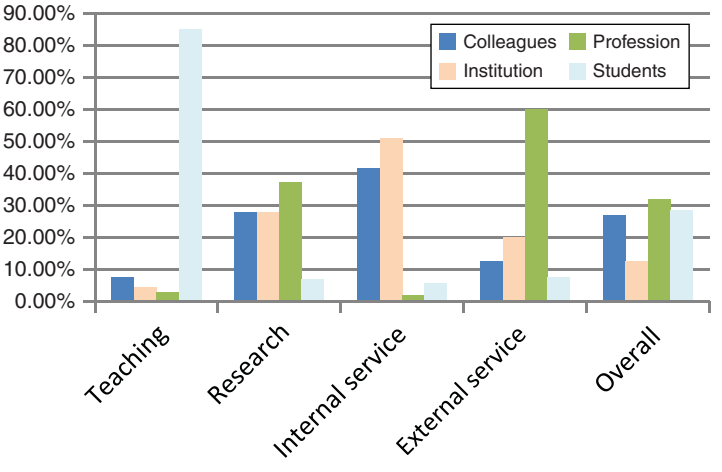

Figure 7. Educators' perceptions of how their contributions are valued.

information educators spend almost a quarter of their time on administration). Further support for a high degree of job satisfaction is evidenced by the fact that most respondents were not looking for another job, as Figure 9 shows, though about 10% were looking for a similar position at another institution, and another 10% were looking for a job outside of information studies education.

Discussion and conclusions

This study presents key findings on the characteristics and experiences of information educators in Australia. It has shown that the ageing of Australia's information educators is an issue of profound importance for the profession. With over two-thirds of information educators approaching retirement age in the next 10–15 years, and over half indicating that they are intending to retire in the next 10 years, the Australian information sector (practitioners, employers, professional associations and academics) must start to actively manage succession planning for future information educators. Strategies to address this should include alternative recruitment options (e.g., appointments from overseas), developing clearer pathways from practice to academe and making doctoral study a more attractive option for Australia's information practitioners. Australia's information educators invest considerable time into all three aspects of their work: teaching, research

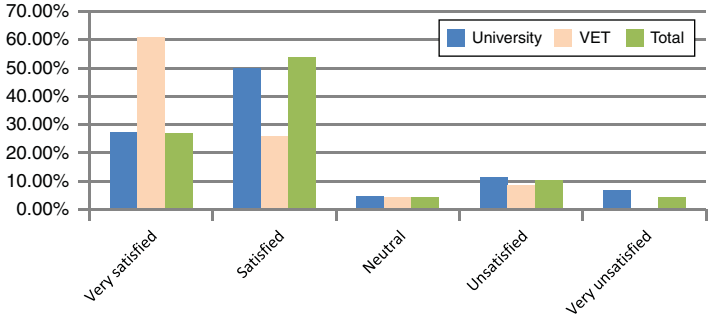

Figure 8. Respondents' job satisfaction.

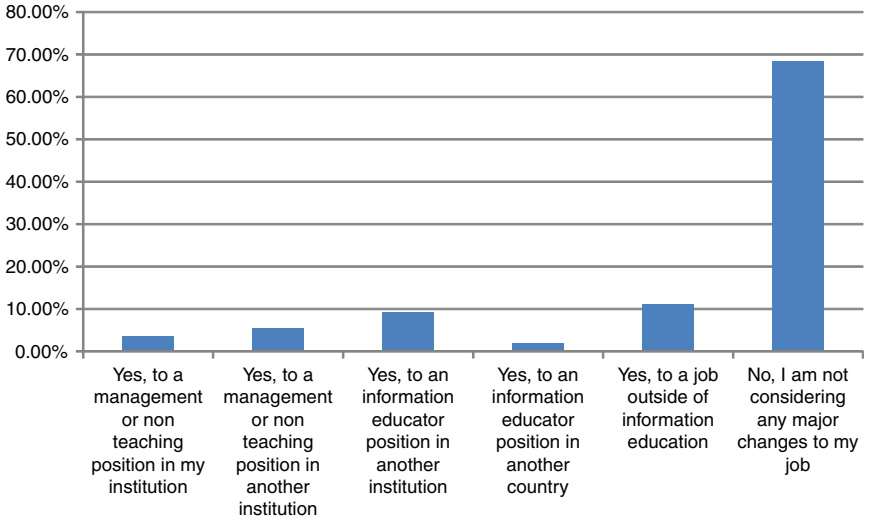

Figure 9. Respondents' job seeking activities.

and service. Notably, they spend more time on service than other disciplines within Australia's education system, indicating that they have a strong focus towards engaging with and supporting the industry they serve with educational programmes. Information educators indicated that they placed strong importance on teaching over research. For the university educator, this is a significant observation. With the federal government's growing interest in research performance and in establishing the nation's universities as leaders within the research arena internationally, information educators need to become more active and proactive in building a stronger research profile.

The Australian government believes that universities and research are crucial to the nation's future. Based on this belief, Australia's first national research assessment was conducted in 2010 (the same year this study's data collection took place) for research outputs in the period 2003–2008. Undertaken by the Australian Research Council (ARC), the Excellence in Research for Australia (ERA) scheme seeks to assess the quality of research in Australia in an international context. Research quality is determined via a number of mechanisms including citation analysis, peer review, ranking of publications and research income. Of the 11 universities involved in information education, only two were able to provide enough evidence of research output to be included within the assessment scheme: Queensland University of Technology ('above world standard') and Charles Sturt University ('below world standard'). Interestingly, the University of New South Wales (UNSW) also received a ranking ('above world standard'). Although UNSW stopped offering programmes in the information discipline in 2006, it still continues to engage in active research within the field. The second assessment exercise in 2012, for research outputs in the period 2005–2010, saw three more universities added to the mix providing a total of six universities with Monash, University of Tasmania and RMIT also receiving rankings. No university received a ranking higher than 'at world standard'.

ERA will have significant implications for niche or boutique disciplines such as information (Svantesson and White 2009). The 2008 Consultation paper issued by the ARC states that 'ERA will provide a framework that gives government, industry, business and the wide community, assurance of the quality of research in Australia's higher education

institutions and guide future investment in that research effort' (Australian Research Council 2008, 5). When ranking determines the level of funding a university receives, it is inevitable that institutions will adjust their actions to obtain the best ranking possible (Svantesson and White 2009). Using strategies such as promotion criteria, universities will steer the activities of their academic staff in the direction emphasised in the ranking process (Svantesson and White 2009; Yates 2010). One of the aims of ERA is to define 'areas of strength' (Arup 2008, 32) and universities might therefore feel the need to invest their limited resources in supporting the discipline in which they are strongest, thus allowing them to continue to excel and rate highly under ERA and thereby attract government research funding. Academics working outside the scope of these disciplines may be encouraged to abandon their discipline areas in favour of the dominant disciplines. It is also quite possible that disciplines that are not perceived by the university to be of high priority (e.g., not allowing the institution to be competitive within the ERA programme) may be abandoned entirely (Svantesson and White 2009). Disciplines that have limited research output as well as small student numbers within their coursework programmes may be at risk of disappearing. The data available suggests that whilst information educators are genuinely interested in research and are starting to have some success in obtaining research funding, they still have some way to go. Genoni (2005, 18) notes 'if LIS [library and information science] departments are to survive – and hopefully thrive – in these circumstances they are under immediate pressure to be as research active as possible'.

The results of this study contribute to our understanding of Australian information educators and provide new perspectives into information education. This study will help to develop strategies to respond to the unique needs of Australia's information educators. The current study, however, presents a snap shot in time (data was collected in 2010), and the information sector and its subsequent education is not static, but is evolving and growing in response to various national and international stimuli. Consequently, longitudinal data would provide a richer picture and help to identify trends relevant to Australia's information educators and to information education.

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