

## **Assisting Women Assisting Research: The Professional and Career Development Needs of Education Faculty Research Assistants**

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### **Abstract**

Research Assistants (RAs) are a crucial yet often under-recognised and under-supported group in the social sciences. These predominantly female staff members are involved in every facet of scholarly research, and undertake research functions ranging from basic tasks to highly skilled analysis, writing and project management functions. In the context of escalating Government pressure for Universities to improve efficiency, productivity and accountability in all areas, skilled RAs are increasingly essential to the achievement of research performance indicators. However, there is some evidence to suggest that through university casualisation and under-resourcing, RAs may often not be acknowledged or receive adequate professional development. This paper profiles Queensland University of Technology Faculty of Education RAs in terms of their skill sets, employment circumstances and educational backgrounds. While nearly all RAs in the study were female and employed on a casual basis, they were otherwise a heterogeneous group, including some undergraduates with minimal research experience, and some highly experienced and well-qualified RAs with specialised research capabilities. This study identifies key opportunities for skills enhancement, research community involvement, and career advancement (including research-focussed academic pathways), and makes recommendations regarding RA development initiatives.

### **Key Words inserted here using title case and commas to separate, with no more than 6**

Research Assistants, Research Policy, Higher Education Policy, Women Workers, General Staff, Casual Staff

### **INTRODUCTION**

Research capacity is central not just to the reputation of Australian universities and to inform teaching (Coaldrake & Stedman, 1999) but to the long-term capacity of the nation in a global knowledge economy (Group of Eight, 2001). In the context of the present ‘success model’ of university funding (Wood & Meek, 2002), time-poor academic staff members are under strong pressure to take time to compete for research grants and conduct time-intensive research. If a research grant or other funding is forthcoming, the academic can breathe a sigh of relief – they can hire a research assistant (RA) to take on some of the load of actual research, thus allowing them time to apply for further research funding, whilst also continuing to perform in teaching, managerial and community service spheres.

Although no formal data collection regarding the prevalence of RAs and how much they contribute to research has been conducted thus far, the inclusion of questions relating to the role of RAs in the Australian Research Council’s grant reporting indicates that they are probably ubiquitous and essential. In one Australian university in 2003 (Hobson, Jones, & Deane, 2005), 63% of internal research funding was allocated to RA employment. In the Education Faculty at the Queensland University of Technology (QUT) in 2005, 49% of internal research funding was devoted to RA salaries.

The vital role that women RAs play throughout universities also needs to be underscored. Given the general underrepresentation of women at senior research levels, it makes sense to gain a better understanding of RAs since this is an area in which predominantly women are found. Only by better comprehending their needs can we hope to improve their career development as potential researchers.

This paper discusses the role of the RA in the context of the evolving higher education sector in Australia, and examines as an example the working lives of RAs in a large Education Faculty at an Australian university, Queensland University of Technology. Although no national survey of RAs has been undertaken to date, evidence discussed below suggests that the findings are generalisable to other Faculties and universities. Recommendations for strategic ways in which these crucial workers can be professionally supported and developed, thereby increasing research productivity, are made.

### **THE ROLE OF THE RESEARCH ASSISTANT**

The term “assistant” is defined as one who gives support or aids in some undertaking or effort (*Macquarie Concise Dictionary*, 1998). However, a well-established and accepted definition of ‘research assistant’ is hard to find. The Australian Standard Classification of Occupations (Australian Bureau Of Statistics, 1997) does not provide any guidance on the matter, and the Australian Research Council only provides definitions and salary scales for Fellowships, APA-I Scholarships, and teaching relief (Australian Research Council, 2005). It may be appropriate to suggest that RAs, as the ‘hired hands’ on a research project, are called upon to perform any duties needed to conduct the project successfully, although usually the project will not be one of the RA’s devising.

RAs can be employed in a wide variety of contexts and perform a number of roles within and across each context. RAs often work in project teams also comprising research investigators, research students, and post-doctoral fellows, and their role may be to perform a single function, such as data collection, or may straddle several functions and involve interactions with individuals both within and outside the team.

The role of RA encompasses an enormously broad spectrum of competencies, and is highly discipline specific; for instance, RAs in the sciences may conduct laboratory experiments or develop cultures, in the social sciences may develop questionnaires and code data, and in the humanities may conduct literature reviews. The present survey asked RAs about 43 categories of social science-relevant competencies generated by the research team, ranging from data entry to qualitative research skills to literature reviewing to project management, and the survey respondents then suggested a number of further relevant skills and competencies.

### **THE WORKING LIVES OF RAS**

Little is documented about the working lives of RAs in Australian Universities. Perhaps in part because of the definitional difficulties outlined above, ‘research assistant’ is not seen as a separate employment category for employment reporting and statistical purposes. In some universities the RAs are categorised as either academic or casual staff (University of Queensland, 2005), in others (Queensland University of Technology, 2005b) they are general or ‘professional’ staff. In university employment reports, RAs may be included with administrative staff, tutors, or other types of research-only staff. In some cases (Central Queensland University, 2005a; Central Queensland University, 2005b; Edith Cowan

University, 2005), RAs are classified as general staff, and research associates/research fellows are classified as academic staff. Definitions of what constitutes ‘research associate’, ‘research fellow’, and ‘research assistant’ also vary by university.

Some authors have described administrative and casual teaching staff as being invisible, with much less literature devoted to these staff members than to academic staff, and some evidence of a lack of career path, skills/professional development, and largely unexplored gender issues, particularly in the lower echelons (Dobson, 2000; Szekeres, 2004), despite “the reality that, were it not for the two groups ... our universities simply could not function” (Coaldrake & Stedman, 1998 p.155). RAs, as a less well-defined grouping than either of these other two groups may be more invisible, whilst being equally essential to the functioning of universities.

We hypothesise that many of the employment issues experienced by administrative and casual teaching staff, such as a lack of professional development, career path and professional community, are also experienced by RAs. Further, we theorize that RAs are often a highly gendered, casualised and poorly remunerated group, with little correspondence between the complexity of tasks, technical expertise required, experience and skills as an RA, and recognition received. Although beyond the scope of the present research, we also suggest that because of their place in the research hierarchy, some RAs may be vulnerable to intellectual exploitation (see also Hobson et al., 2005).

### **The Working Lives of RAs at QUT**

QUT is Australia’s sixth largest university, with approximately 40 000 students and a 2003 external research income of \$24 million (Queensland University of Technology, 2005a). The Faculty of Education is the largest education faculty in Australia, with a full-time staff in excess of 160. Research undertaken in the University and in the Faculty of Education constitutes projects that are funded under the auspices of the National Competitive Grant Program, public sector and industry based research, and international projects representing \$1.4 million in 2003.

There is at present one Research Centre in the Faculty of Education: the Centre for Learning Innovation (CLI). The Centre currently has over 100 active researchers, approximately 200 higher degree students, and 90 RAs (some of whom are employed under the titles of “senior research assistant’, ‘research associate’, and/or ‘project officer’).

At QUT, RAs are usually classified as research-only general staff. According to classification criteria from the Human Resources section (Queensland University of Technology, 2005b), RAs at the lower levels (HEW 3-5; \$10.50-\$29.90/hour casual) perform duties which require knowledge or training equivalent to the completion of a degree or an Associate Diploma (with relevant work experience). They may receive general supervision in tasks involving limited creative, planning or design functions and applying skills to a range of allocated research tasks. Senior Research Assistants (SRAs), at HEW 6 (approximately \$33.00/hour casual), require knowledge or training equivalent to an Honours or postgraduate degree with some relevant work experience or a degree and significant relevant experience. This level of RA may work under broad direction and they may have supervisory responsibility. It is expected that an SRA will have depth or breadth of expertise gained through extensive relevant experience and application.

In addition, there are a small number of ‘research project officers’ and ‘research associates’ emerging, who are employed at HEW 7-8 (\$34.00-\$43.00/hour casual) and perform project-managerial functions. There are no published research-only position descriptors for these individuals.

Table 1 shows indicative staffing proportions provided by DEST and QUT, comparing QUT, Queensland universities and all Australian universities on key relevant staffing groups. While RA-specific data is not available, it shows that although QUT is slightly more casualised than other universities, it appears that this tendency is mainly in terms of teaching staff rather than research staff. Also, in the Faculty of Education there would appear to be a significantly higher proportion of female casual (and particularly research-only) staff than in other Faculties and Universities. It should be noted, however, that the full-and fractional full-time Faculty profile is also female dominant; 68% of non-casual academic staff and 59% of non-casual general staff are female (Queensland University of Technology, 2003). In other respects, the University staffing profiles are quite similar.

**Table 1. Selected Staffing Statistics: QUT, Queensland Universities and Australian Universities**

	<i>QUT Faculty of Education</i>	<i>QUT</i>	<i>Queensland Universities</i>	<i>Australian Universities</i>
Casual Research Only Staff % of Casual Staff	15.8%	21.0%	33.4%	31.2%
All Research Only Staff % of all staff	13.0%	7.0%	12.0%	12.9%
All Casual Staff % of All Staff	23.2%	19.9%	15.2%	15.0%
Female Casual Staff % of Casual Staff	76.8%	55.7%	59.8%	55.4%
Female Casual Research-Only Staff % of Casual Research Only Staff	92.0%	60.1%	63.8%	58.3%

*Source: QUT Division of Finance and Resource Planning Historical 2003 Staff Report (Queensland University of Technology, 2004), DEST Selected Higher Education Statistics Series: Staff 2003 (Department of Education Science and Training, 2004).*

## THE PRESENT STUDY: METHOD

Research Assistants were approached at a Faculty-organised social event at which there were 30 RAs (also including SRAs, Project Officers and Research Associates) attending, and they were asked to complete an anonymous survey which included questions regarding their current and anticipated future employment situations, educational backgrounds, and research skills. Open-ended questions asked about their career paths, professional community, and what the University, Faculty and Centre might do to facilitate their roles as RAs. The survey was also made available to approximately 30 more RAs who were not at the social event via an emailing list. Twenty-five surveys were returned - a response rate of 42%.

Quantitative data were analysed using descriptive and non-parametric inferential tests through SPSS 12.0.1 for Windows, and responses to the open questions on the survey were analysed using an interpretive-descriptive approach using the constant comparative method (Maykut & Moorehouse, 1994). According to Strauss and Corbin (1998) interpretive-descriptive research is exploratory and reliant on people's words and meanings. This was an iterative process in which transcripts were read and reread to determine recurring issues. The research team then negotiated meanings until agreement was reached. Through this process, categories of the RAs' experiences according to the qualitative research questions became apparent.

## **THE PRESENT STUDY: RESULTS**

Ninety-two percent of the RA respondents were female, a finding which is congruent with the data provided by QUT's Finance and Resource Planning Division (Queensland University of Technology, 2004). All RAs apart from one respondent (96%) were employed on a casual, short-term (<6 month) contract basis. All of the respondents were classified by the University as general staff.

### **Current Employment Circumstances**

On average, RAs undertook 15.9 hours work per week in the Faculty (median 16, range 3-37 hours), across 1.6 concurrent contracts (median 2, range 1-3 contracts). Seventeen RAs (68%) were available for further research work; RAs surveyed indicated that an average of 10 further hours work per week was desirable.

RAs surveyed were employed at between HEW 4.1 and 6.4 (\$12.21 – \$33.33/hour), with one HEW 8 (\$38.21/hour) responding. The median HEW level was 5.5 (\$29.93/hour). Nearly one-quarter (24%, 6 RAs) were concurrently employed at different HEW levels on different projects.

There appeared to be some confusion amongst the RAs regarding appropriate pay levels. As one RA commented in the open-ended section of the survey: "...there's a huge range of pays possible - perhaps we need clarification because I'm not sure how academics decide which scale to allocate and not sure on what basis I might negotiate (have never tried)".

Eighty percent of RAs surveyed (20 RAs) were uncertain what their employment circumstances would be at the end of their current casual RA contract/s.

### **Educational Backgrounds**

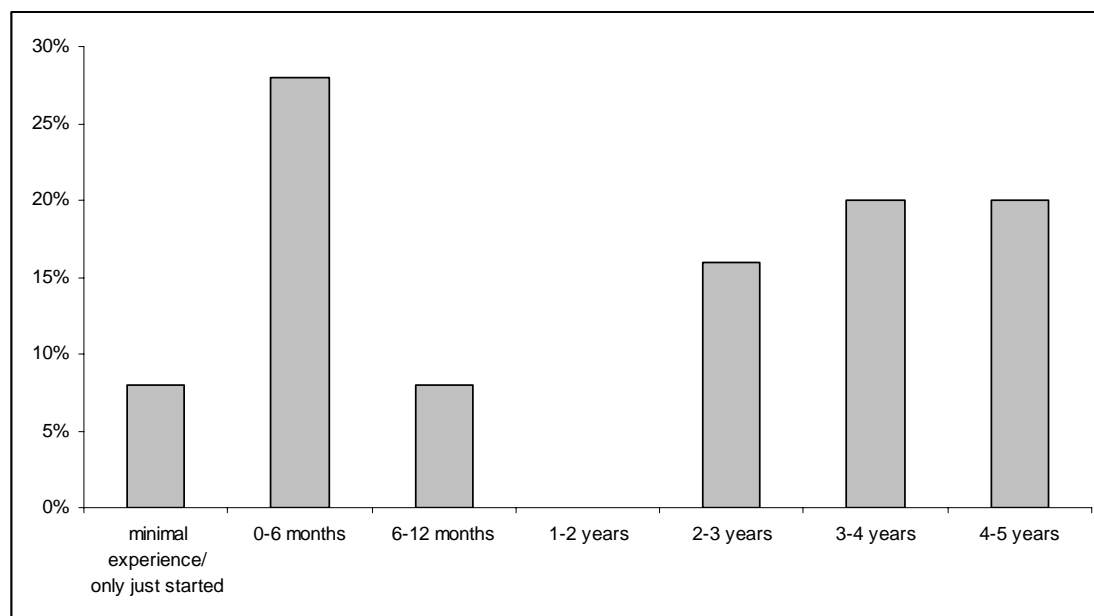
Three quarters of RAs surveyed (19 RAs) had finished an undergraduate degree or postgraduate Honours; 4% (1 RA) had completed a Masters degree, and 16% (4 RAs) had completed a professional doctorate or PhD. Four were currently studying at undergraduate level, and another 5 were currently studying a higher research degree. The remaining 16 (64%) were not currently studying.

Of the 19 respondents who answered a question about their educational backgrounds, 57% (8 RAs) had undergraduate or postgraduate coursework degrees in education, 43% (6 RAs) had undergraduate degrees in psychology, 14% (2 RAs) had undergraduate degrees in other social sciences, 1 had an undergraduate degree in English, 1 had an undergraduate degree in humanities, and 1 in business.

## Experience as an RA

Respondents were asked how long they had worked as RAs. Although the most common response was ‘between 0 and 6 months’ (28%), the responses formed a bivariate distribution, with a total of 46% having less than 12 months experience, and 56% having more than 2 years’ experience (Figure 1). It became apparent that these two groups of RAs were also quite different in terms of the skills they possessed and professional development required, and level of desire for a professional community/career advancement.

**Figure 1: Years Experience as an RA**



*Faculty of Education RAs, n=25*

When asked how experienced they thought they were as researchers, RAs assigned themselves an average experience rating of 2 (‘not very experienced’) where 1 was minimal experience and 5 was highly experienced (median 2, mean 2.5, range 1-5). As expected, RAs with more than 2 years experience assigned themselves significantly higher experience ratings than RAs with less than 12 months experience (Mann-Whitney  $U[25]=22.5, p<.02$ , median>2yrs 3.00 mean 3.2, median<2yrs 2.00 mean 1.6).

Interestingly, there was no correlation between rated RA experience and HEW level (Spearman’s  $\rho(25)=.27, n.s.$ ), and also no pay difference between the two groups based on years experience as an RA (Mann-Whitney  $U[25]=31.0, n.s.$ )

## RA Skills

The research team generated a list of 43 categories of skills/competencies that RAs in the Faculty of Education might commonly need during their work, and asked RAs to rate their confidence in their abilities on a 1-5 scale for each category (a complete list is provided in Appendix 1).

Seventy percent of RAs (16 respondents) included literature searching and reviewing as their strongest research skills. These skills are possibly the most commonly used by QUT Faculty of Education RAs.

**Table 1: Strongest RA Research Skills**

<i>Category of Research Skill</i>	<i>Mean 1-5 rating</i>	<i>Median 1-5 rating</i>
Microsoft Word	4.2	4
APA style	4.1	4
Literature searching	3.9	4
Literature reviewing	3.7	4
Data entry – numeric	3.5	3

*Faculty of Education RAs, n=25*

The 5 lowest rated categories of skill were often very specific in nature and not needed very often by the majority of RAs. For each of these categories, one or two individuals within the RA group with more than 2 years experience assigned themselves the highest confidence rating of ‘5’.

**Table 2: Weakest RA Research Skills**

<i>Category of Research Skill</i>	<i>Mean 1-5 rating</i>	<i>Median 1-5 rating</i>
Research Master DEST publication collection software	1.3	1
Phenomenography	1.3	1
Dreamweaver	1.7	1
Grant progress reports	1.8	1
ARC grant writing	1.9	1

*Faculty of Education RAs, n=25*

Of the 43 categories of skills provided, RAs most commonly wanted to learn more about the following:

- SPSS (44%, 11 respondents)
- Univariate statistics (40%, 10 respondents)
- Multivariate statistics (40%, 10 respondents)
- Dreamweaver (36%, 9 respondents)
- Academic article writing (32%, 8 respondents)
- Phenomenography (32%, 8 respondents)
- NVIVO/Nudist (32%, 8 respondents)
- Questionnaire design (32%, 8 respondents)

When RAs were asked to comment on the skills in which they would like the most development, 72% (18 respondents) mentioned statistical analysis and SPSS. Thirteen RAs (52%) mentioned qualitative research methods.

Open-ended responses reflected a *lack of training* and professional development, and the use of skills acquired during higher research degrees. Indicative responses about skill development are provided below.

- Have managed to accomplish tasks 'adequately' but always felt inadequate! Particularly re *keeping up with new sources*. Given that we are a kind of 'frontline' in producing research

it's amazing that QUT is only just realising how important our skills are! So these initiatives are very welcome.

- I have learnt some of these skills as a postgraduate student, but there are still some *gaps in my knowledge*.
- The availability of AIRS<sup>(1)</sup> and the EdD coursework has been very useful as training for sources as well as info.

### **RA Professional Development**

RAs were asked to indicate on a 1-5 scale (1 very dissatisfied to 5 very satisfied) how satisfied they were with the professional development opportunities they had been offered by QUT so far (to March 2005). The mean response was 2.7, with a median of 3, ('neutral').

This ambivalence was also evident in the open-ended responses. Some RAs (particularly in the group with less than 12 months experience) reported that they had experienced *no professional development*, others had experienced *very little* while some had developed their own opportunities to learn skills or attend professional development sessions. *Suggestions* by RAs indicate that they were keen to participate in professional development if it was made available. Indicative comments about professional development are provided below.

#### *No Professional Development*

- Have not had any problems thus far however, I am fairly new, so that could be a mitigating factor.
- I haven't been offered any PD opportunities as an RA.

#### *Very Little Opportunity*

- Almost none from 1990-2005. Always up to individual RAs to find out. Quite an appalling attitude and probably gender-based
- I've been expected to pick things up on my own at a rapid rate. Some support would be nice.
- I have been very fortunate my supervisors have always made opportunities available to me. Other RAs have not been so lucky.

### **Career Advancement**

When RAs were asked to indicate on a 1-5 scale how satisfied they were with the opportunities they had received for career advancement at QUT, the mean response was 2.9 with a median of 3 ('neutral'); RAs (particularly in the group with more than 2 years experience – mean 2.3, median 2) were less than satisfied with opportunities afforded to them to advance their careers. Qualitative responses showed that for some there have been *no opportunities to develop a career path* or that if they wanted to pursue a career as an RA they had to *develop their own career path*. RAs with less than 12 months experience tended to indicate that they were *not looking for more work* and were generally less interested in career advancement. A new development in the Faculty facilitating an RA network was also recognised as being beneficial for RAs. Indicative responses about career advancement are provided below.

#### *No Career Path*

- There is *no career path* at QUT for RAs, this needs to be addressed. I have been lucky enough to have a supervisor who has been proactive/an advocate on my behalf, however there needs to be more opportunities for higher level research only positions within the university

- There is no 'career path'. The whole RA situation has been ad hoc up until now, including skills development as well as employment opportunities. Database idea is ace, as is opportunities for training that are projected.
- There has been no career path but its easy to see how there could be one. The title needs changing for a start! One does a lot (including writing) which can hardly be called 'assisting'.

#### *Created My Own Career Path*

- I've had to create my own opportunities. They are there if you look, but you need to be very proactive.

#### *Not Looking for Career Path as RA*

- I am not willing to take on more than 8 hours work as an RA each week at present, so am not looking to advance my career very seriously.

#### *Suggestion*

- The networking initiative is fantastic and will really enhance career development.

### **Professional Community**

RAs were asked how satisfied they were with the professional network/community they had developed at QUT. This question elicited a mean satisfaction rating of 3.4, with a median of 3 ('neutral'). Qualitative responses reinforce the concept that the opportunity to link with other RAs had *rarely or never happened*, but this was starting to change because of a new Faculty initiative. Recent developments in networking were regarded as favourable with one RA stating they were 'impressed' while some were grateful for the professional manner in which people helped her in undertaking a new role. Developing closer working relationships between academics and RAs was also suggested. Indicative responses about professional community are provided below.

#### *Rarely Happened*

- Linking with other RAs happened rarely. Academics have been supportive but also arrogant - in many cases - aware of you when they needed you! Everything very ad hoc and little acknowledgement.
- I didn't know what specific expertise people have and how much they are able to assist.

#### *Positive*

- I have met other RAs and academics, which is positive.
- It's improved since the beginning of the RA program. The email list is a good idea.

#### *Suggestions*

- I have developed my own network which is OK, however activities such as the RA training sessions/morning teas etc will facilitate better networking opportunities. There is also a divide between RAs and academic staff and so maybe some sessions with academic staff and RAs might be useful.

### **Support from the University**

An open-ended question pertaining to what the Centre, Faculty and university might do to facilitate their role as a RA yielded three main areas of concern. These were the supply of

*resources* to undertake work and for more *training*. It was also evident that RAs valued the opportunity to regularly *meet* and share information with other RAs and simply to socialise.

#### *Resources*

- Equipment!!! Stationery!!! We need easy access to these items in order to do our jobs well. I can't do stats by the deadline if there is no paper in the resource room and no way of easily getting any.
- Availability of resources, materials, equipment. Consultation regarding changes in staff placement. Allocation in overall CLI budget to cover upgrading/purchase of equipment necessary for conduct of research.

#### *Training*

- Provide training in some of the areas outlined in the survey. I am just a novice RA!
- Investment in training the 'hidden army' - the faculty/centre will benefit.
- Skills training is priority no 1. Networking, sharing skills and social occasions are next and hence these efforts by CLI have my wholehearted support.

#### *Induction/Regular Meetings/Information*

- An induction program/package for oldies and newbies.
- Regular informal RA meetings.
- Online discussion forums.
- More linkage with other organisations/universities.

### **DISCUSSION AND FUTURE PATHWAYS FOR THE RA**

The *Education and Training Sector Action Plan for the Information Economy* commissioned by the Australasian Ministerial Council on Education, Employment, Training and Youth Affairs (Education Network Australia, 1999) contains a strategic priorities section devoted to professional development programs in the higher education sector. It states that Universities must, "...provide professional development for lecturers, administrative staff, technical assistants, researchers and other staff to allow them to be change agents in achieving the goals of the information economy" (p.6). Unfortunately, the results of this study indicate that there is a lack of RA professional development, and that essential precursors to a situation where professional development is possible may also be missing. First, professional development programs do not bring strong benefits to organisations where staff turnover is high. In the results just documented, one-third of the respondents had worked at the university for less than 6 months. While casual contracts can be of benefit to both the academic with a short-term research project and the RA who may have school-age children or study commitments, the uncertainty of short-term casual employment is not conducive to the creation of a solid research skill-base and research productivity.

The creation of career paths for RAs may well assist with employee retention. The research-only academic pathway appears to be slowly gaining momentum in some quarters, with 13% of all full- and part-time University staff designated as research-only in 2004, up 5% from 1997 (Department of Education Science and Training, 2004). At present, it is unclear why RAs in this study and others (Burton, 1998) are apparently not moving on to more senior research positions, and it is also unclear why a proportion of post-doctoral researchers appear to be working as RAs, although some authors have suggested that this phenomenon is now becoming more prevalent, and is possibly associated with the increasingly competitive

funding models and fewer postdoctoral research and academic positions (Thompson, Pearson, Akerlind, Hooper, & Mazur, 2001).

RA skill development programs need to accommodate the wide variety of competencies required, the array of RA experience levels, and educational backgrounds. Beginning RAs may benefit from access to information retrieval or academic writing coursework designed for higher degree students. More experienced RAs with specialist skills may require access to academic skill development programs, equivalent to programs routinely offered to part-time and casual teaching staff (Whelan, Smeal, & Grealy, 2002).

Because of the specialised nature of much RA work and the skills required, there are some arguments for RAs to be defined as academic rather than general staff: RAs will then have access to academic-oriented skills development programs, and important benefits such as conference leave. However, some RAs (such as those employed solely to do data entry or filing, arguably administrative functions) may not require these benefits, and may more appropriately be classified as general staff. The splitting of RAs across categories is not desirable, unless there is a clear demarcation in terms of RA function and necessary skills, as was suggested in this study. Further investigation into the classification of research-only staff in universities is certainly required. This may also clarify RA remuneration and recognition policies.

In terms of remuneration of RAs, writers (Hobson et al., 2005) have commented that it is common in the case of research funded by national competitive grants for the amount of funding awarded to be substantially different to amount sought. Typically in these cases the RA's HEW level or the length of time they are employed is reduced. This might in part account for our finding that there was no correlation between experience as an RA and HEW level and that RAs were employed on concurrent contracts at different HEW levels. Our survey did not expressly address the issue of whether RAs were employed at appropriate HEW levels for their research roles; it is clear that this issue requires more exploration and further research.

The development of a professional community is a key way in which RAs and their skill-sets can be not only retained by universities, but also developed, often in informal ways. The fostering of an RA community of practice will allow information such as best research practices, research tips, organisational-specific knowledge and feedback to move across research team boundaries, and may perpetuate a sense of identity amongst community members (Wenger, 1999). While geographical co-location is an option, RAs often need to be geographically located with their research teams, may often conduct fieldwork off-campus, may keep irregular hours, and may even work from home (University of New South Wales, 2005). A supplement to physical community interaction can be the creation of an electronic community, or ‘network of practice’ (Brown & Duguid, 2000), through the use of emailing lists, and RA-specific web sites.

At present very little is known about the working lives of RAs, although RAs play an important role in higher education sector research and Australia's future success as a knowledge economy. This study has highlighted some of the key areas in which RAs might be supported and developed as knowledge workers in order to optimise university research productivity and responsiveness. A nation-wide survey of RAs' employment conditions, skill-sets and professional development would further clarify many of the issues raised in this paper. A complementary survey of academic staff members' research assistance needs and

experiences in employing RAs would also shed light on the issues associated with working as an RA in Australia.

## FOOTNOTES

(1) QUT Library offers the unit *IFN001: Advanced Information Retrieval Skills (AIRS)* to staff and students in the QUT research community to assist them in their development of advanced information literacy skills. It is compulsory for Postgraduate Research Students to complete this unit. It is not clear from the AIRS literature whether RAs are eligible to enrol.

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## APPENDICES

### APPENDIX A: CATEGORIES OF COMMON SOCIAL SCIENCE RA RESEARCH SKILLS AND COMPETENCIES INCLUDED IN THE SURVEY

Literature searching (databases, catalogue, internet)	Participant recruitment
Use of citation indexes	1 on 1 interviews
Annotated bibliography writing	Focus groups
Article writing	Transcribing
Literature reviewing	Phenomenography
Article editing	Ethnography
APA referencing	Action research
Project management	Grounded theory
Tender writing	Content analysis
ARC Discovery/Linkage grant writing	Case study
Other grant writing	Concept mapping
Completing Ethical clearances	Mixed method research
Budgeting for grants	Endnote
Progress/final reports for grants	Microsoft Excel
Data entry – alpha	Microsoft Word
Data entry – numeric	Microsoft Access
Statistical analysis – univariate	Microsoft Powerpoint
Statistical analysis – multivariate	Nudist/NVIVO
Test construction	SPSS
Questionnaire design	Research Master (DEST publication collection software)
Discussion guide design (focus groups and interviews)	Dreamweaver

Further skills and competencies suggested by RAs in the open-ended section included: oral presentation skills, team management, and observational research.