

Journal of Research Practice
Volume 9, Issue 2, Article M6, 2013



Main Article:

From Research Assistant to Professional Research Assistance: Research Consulting as a Form of Research Practice

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Abstract

Research assistantships have long been viewed as an extension of the formal education process, a form of apprenticeship, and a pathway into the professional practice of research in institutional settings. However, there are other contexts in which researchers practice research. This self-study documents the formative role research assistantships played in the authors' development as professional research consultants. Four professional research consultants who held research assistant positions during their master's and doctoral studies describe the contributions of their research assistantship experiences to the advancement of their knowledge, skills, and passion for research and subsequently to their career decisions. Professional research consulting is identified as a

natural extension of research assistant roles and a potential career path. The article enhances current understandings about the ways research assistantships contribute to the development of researchers, and specifically to the development of professional research consultants. The analysis will be of interest to students contemplating entering into research assistantships, current research assistants, current research assistant supervisors, academic staff looking to improve their research productivity, and department chairs.

Index Terms: research context; research training; research and consulting; research assistantship; professional development; researcher development; research practice

Suggested Citation: Pollon, D. E., Herbert, M., Chahine, S., & Falenchuk, O. (2013). From research assistant to professional research assistance: Research consulting as a form of research practice. *Journal of Research Practice*, 9(2), Article M6. Retrieved from <http://jrp.icaap.org/index.php/jrp/article/view/348/313>

1. Introduction

Researchers have discussed the importance of learning in situated social contexts (Lave & Wenger, 1991), including learning of research through the practice of doing research (Roaden & Worthen, 1976). In the natural and social sciences, and less formally in the humanities (Gumport, 1993), research assistantships (RAships) have been viewed as one of the earliest forms of research apprenticeship. The nature of these apprenticeships may serve two purposes. When a student enters into a formal RAship with a professor, the student participates in a process that involves a combination of training and self-directed learning that will further the research program of the supervising professor and may foster the development of the student's own research agenda (Edwards, 2009; Queen's University, 2013; Ratković, Niemczyk, Trudeau, & McGinn, 2013). Through the research assistant (RA) role, students engage in activities that may foster their learning of research skills (Ethington & Pisani, 1993; Godkin, 1993; Landrum & Nelsen, 2002; Ratković et al., 2013). RAs may engage in a range of research activities, such as preparing literature reviews, designing research studies, writing ethics applications, recruiting participants, conducting interviews, entering data, performing qualitative or quantitative analysis, writing research reports or manuscripts, and presenting findings at conferences (Bridgstock & Wilss, 2005; Edwards, 2009; McGinn & Lovering, 2009; Niemczyk, 2010; Ratković et al., 2013; VonDras, 2007). These experiences may lead RAs to cultivate an understanding of the interconnectedness of discrete research steps and develop a broad sense of the entire research process (Niemczyk, 2010).

In addition to being an opportunity for professional development, RAships provide opportunities for personal development (Niemczyk, 2010; Ratković et al., 2013). The process of learning RA skills and enacting RA duties requires RAs to be self-directed and autonomous, and simultaneously to be collaborative team players (McGinn & Lovering, 2009). As a result, RAs must develop the ability to be self-disciplined (Niemczyk, 2010), while developing advanced communication, negotiation, and conflict resolution skills

(Ratković et al., 2013). As RAs learn research skills, the apprenticeships are also opportunities to form relationships with mentors (Edwards, 2009; Girves & Wemmerus, 1988; Kendler, 2002; Niemczyk, 2010; Shapiro, Coggan, Rubel, Morohasi, Fitzpatrick, & Danque, 1994; Ratković et al., 2013). Further, RAships and the act of engaging in research activities may contribute to the development of students' identities as researchers (Grundy, 2004; McGinn & Lovering, 2009; Ratković et al., 2013). Although students may find that RAships can pose challenges at nearly every step, RAships are unique adventures in that students may find opportunities for professional and personal growth embedded in most challenges (Ratković et al., 2013).

Thus, RAships constitute situated learning in the practice of research as RAs participate in the behaviours, skills, and relationships of researchers. Because RAships mirror the roles of researchers, a research assistant's participation in an RAship is often viewed as a gateway into the community of academic research practice (Lave & Wenger, 1991; Niemczyk, 2010; Ratković et al., 2013). The supervised practice of research vis-à-vis RAships serves multiple functions in the development of a researcher. An RAship serves as an extension of the formal education process and as a facilitator of a student's scholarly productivity and professional development (Edwards, 2009; Ethington & Pisani, 1993; Ratković et al., 2013; Roaden & Worthen, 1976; Tang & Choi, 2005). Additionally an RAship plays a developmental role as the student engages in the greater academic community through participatory entry via relationship networks (Ding, 2008; Haggard, Dougherty, Turban, & Wilbanks, 2011; Lave & Wenger, 1991). The research assistant experience is often accompanied by the expectation that some graduate students who participate in and are educated via RAships will be productive members who contribute to the scholarly community by moving into roles that extend their training—bench scientists into their own labs, doctors into clinical settings, and social scientists on to supervise their own students and continue their programs of research (Gumpert, 1993). However, there are additional research paths that may be pursued. This article explores the notion that RAships may be formative in contributing to the development of individuals who go on to specialize as professional research consultants, a role that can be seen as a natural extension of the RA role.

The pressures on practising researchers have always been demanding, even more so in today's academy. Academic researchers have always been expected to be subject experts, develop their programs of research, maintain teaching loads, supervise students, and contribute to the institution through service work. Today, the "publish or perish" expectations for researchers have been extended to include being mission oriented, working collaboratively on multi-disciplinary teams, contributing to institutional solvency through grant procurement, being technologically, theoretically, and ethically innovative, working with community stakeholders and funding partners, and participating in knowledge exchange networks by mobilizing knowledge to stakeholders, community agents, and funding partners (Druckman, 2000a). These expectations are all subsumed under the research umbrella. Researchers' responsibilities are further compounded by developments in quantitative, qualitative, and mixed-methods research methodologies and data analysis software that are becoming more specialized and abundant. Hence the execution of study design, data collection, and data analysis are increasingly complex

undertakings that, at times, benefit from, or even require the knowledge, expertise, and experience of an individual who focuses on applied research: the professional research consultant.

Professional research consultants are specialists who shape research practice as they offer their research skills and knowledge in collaboration with academic, private, or governmental researchers or clients (Druckman, 2000b). Professional research consultants fill numerous and simultaneous roles with their clients. Generally, the professional research consultant role has been one wherein the consultant acts in the role of research advisor (Druckman, 2000b). A review of private research consultant contracts reveals that research advising includes a variety of specific research-related roles, including offering clients advice on methodological challenges and project design, providing qualitative, quantitative, or mixed methods technical skills, conducting program evaluations, teaching or training clients, managing projects, acting as one who sustains the research process, and building and maintaining long-term relationships with clients and stakeholders in the research context (Druckman, 2000a, 2000b; Spector, 2000; Ulvila, 2000). These duties enacted by professional research consultants demonstrate ostensible parallels with RA roles.

Thus, professional research consultants are individuals who hold research expertise. However, scholars define expertise in a number of ways. Some scholars define expertise as possessing characteristics, knowledge, and skills to a degree that differentiates one from those less experienced (Ericsson, 2006). Other scholars have found that expertise is related to one's depth of knowledge in a given field, depth and years of experience in a given field, and proficiency gained through training and education (Ramachandran, 2009), while other scholars have found that expertise in a given domain is acquired through on-the-job experience (Okapala, Hopson, Chapman, & Fort, 2011). Scholars who have studied post-secondary contexts posit that expertise is developed in these contexts when specialization has been promoted early in students' careers, thus enabling them to pursue the specialization for a longer period of time (Tagg, 2007). Given that RAships are a type of "on-the-job" apprenticeship that, when held over time, may contribute to the development of domain specific skills and knowledge, it is possible that there may be a linkage between the formative influence of an RAship on the development of research expertise and the practice of professional research consulting. As such, this article examines our prior RAship experiences and their influence on our development as professional research consultants.

2. Method

We are four professional research consultants who hold doctoral degrees in social science disciplines. For the purpose of this article, we have defined professional research consulting as a role that requires the consultant to engage in research design or methodological advising, provide technical skills to clients, train or teach clients, manage research projects, or build and sustain client and stakeholder relationships. As professional research consulting is a seemingly close extension of the RA role, our self-

study examines the impact RAships had on our development as professional research consultants.

Self-study is a meaning making research methodology that focuses on the self and the other engaged in enacting a practice (LaBoskey & Hamilton, 2010; Pinnegar, 2009). Self-study is a means to gain access to one's thoughts and feelings regarding a specific experience or context (Bruner, 1991; Holloway & Wheeler, 2004; Labov, 1972; Polkinghorne, 1995; Sandelowski, 1991). In this, reflections are useful as they allow participants to link events that occurred over time (Polkinghorne, 1995) while providing the individual with a vehicle to discuss autobiographical events and make sense of an experience, and to gain insight into the ways some experience contributed to the development of identity and personal and professional growth (Habermas & Bluck, 2000; LaBoskey & Hamilton, 2010; Riley-Doucet & Wilson, 1997; Sparkes, 1994). Thus, self-study can be considered a part of reflective practice. Reflective practice is an active, dialectical process that strives to develop insight that may create opportunities for scholarly and professional learning through the critical examination of one's own behaviours, thoughts, and experiences (Bracken & Bryan, 2010; Osterman, 1990; Schön, 1983, 1987, 1996). Scholars note that reflective practice may lead to greater personal awareness, new knowledge and understandings about professional practice and professional growth, understandings about the professional environment, and insight related to organizational change (Osterman, 1990).

In this study, we have examined ourselves; we are a purposive, information-rich sample (Creswell, 2002; Patton, 1990) of four participants who are employed as professional research consultants (a research/data analyst, a senior research officer, a self-employed consultant, and an academic who serves as a consultant for third-party university clients). While we attended different schools for our masters' programs, we completed doctoral studies at one Canadian institution where we were members of two separate labs situated beside each other. We became friendly as doctoral students when we began a process of conferring with one another when research dilemmas arose. After graduating and moving into our professional roles, our "debriefing" conversations continued. As a result, this self-study is a natural extension of our ongoing self-reflective professional conversations regarding the nature of our practice as professional research consultants. So in some sense, we could say that we started this self-study years ago as we engaged in conversations about our graduate school experiences, including our roles as research assistants and researchers. The main focus, however, in this self-study is a set of four individual self-reports that we prepared specifically for this article.

We formulated individual responses to the prompt: "During your research assistantships, did you have any learning opportunities or experiences (writing grant applications, designing studies, data collection and analysis, outcome dissemination, conferences) that informed the foundation of your practice as a professional research consultant? If so, how?" We each wrote densely constructed self-reports where we documented our master's and doctoral RA experiences and pulled these reflections forward to describe their connections to our current professional work.

The first author (Dawn) collected and imported the self-reports into *NVivo 9* to organize and analyze the data. She conducted a first coding pass using open, iterative, line-by-line analysis (Charmaz, 1983; Glaser & Strauss, 1967; Hsieh & Shannon, 2005; Padgett, 1998; Seidel, 1998; Strauss & Corbin, 1990). The purpose of this coding pass was to develop phenomenological insight into the data by identifying and understanding key categories, codes, and interactions of themes (LeCompte & Preissle, 1992; Ray, 1994; Van Manen, 1991). She sorted the identified codes into categories (Creswell, 2002; Seidel, 1998). She then reviewed the categories to examine the fidelity of the coding process. Following the review, she conducted a second coding pass and sorted data into further codes, which resulted in a revised set of codes and categories.

After the second coding pass, Dawn conducted a data transformation and transformed the qualitative data into quantitative data (Caracelli & Greene, 1993; Greene & Caracelli, 2003; Jang, 2008). She compiled the frequency of sources and references for each code and aggregated them in *NVivo 9*. She then transferred the data into an *Excel* spreadsheet and tabulated them to identify the order of emergent codes. Next, the second author (Monique) conducted a critical review of the emergent codes. Table 1 reflects the emergent categories, the number of self-reports (sources) that included codes within the category, and the number of times the self-reports referred to codes (references) within the category. Dawn aggregated the findings of the codes to form categories, and then summarized the findings and compiled them in report form using quotes from the self-reports to illustrate the codes and categories that represent our experiences. Following this step, Dawn and Monique reviewed the findings and worked collaboratively to develop the ideas and interpretations represented in this article. Each iteration of the article was circulated to all authors for critical review.

Table 1. *Findings of Codes Within the Individual Self-Reports*

Categories	Sources (# self-reports)	References (# times referred to)
RAship experiences during master's studies	4	22
RAship experiences during doctoral studies	4	24
Distinctive characteristics of RAs	4	16
Distinctive characteristics of RA supervisors	4	7
Experiences and skills gained	4	39

Although frequency tables were compiled, it is important to note that emergence of codes was not the only factor we considered; we report the findings in a chronological manner that reflects the sequence of our experiences. We start with RAship opportunities and experiences obtained during our master's studies and proceed through to RAship opportunities and experiences during our doctoral studies. Further, we considered "outlier" codes as they contributed dimension and insight into our understandings about our perspectives and experiences as revealed in the self-reports. In order to focus the readers' attention on the data and the analysis presented under Section 3, we have anonymized ourselves as four "participants" (labelled Participant 1 to Participant 4, not

aligned with the order of co-authorship of this article). To make this anonymizing scheme work, we have used the plural form (e.g., *their*) where a gendered pronoun was necessary (e.g., *his* or *her*).

A final note relates to our efforts to minimize bias in our self-study. Qualitative methodologists have identified that credibility in qualitative research refers to how closely the findings align with reality (Merriam, 1998). Others have noted that establishing credibility is one of the most important acts qualitative researchers can do to establish the trustworthiness of their work (Lincoln & Guba, 1985). Given that our self-study is a peer collaboration, we utilized peer scrutiny (Shenton, 2004) to establish credibility or trustworthiness. Once Dawn completed the first coding pass, Monique reviewed the emergent codes. Dawn and Monique worked together to develop ideas and interpretations of the data. As the article was developed, the entire team provided critical feedback.

3. Findings

Analysis of the individual self-reports revealed that all four of us strongly identified that having RAships provided us with diverse and expansive research experiences, and that these experiences had an overwhelmingly positive effect on our development as professional research consultants. Specifically, the qualitative analysis revealed five emergent and interrelated categories related to the relationship between having RAships in graduate school and developing professional research consultant practices. The top five emergent categorical themes (as outlined in Table 1) were: (a) RAship experiences during our master's studies, (b) RAship experiences during our doctoral studies, (c) distinctive characteristics of RAs, (d) distinctive characteristics of our RA supervisors, and (e) the experiences and skills gained from our RAships and their impact on our development as professional research consultants.

3.1. Research Assistantship Experiences During Master's Studies

All four of us reported holding multiple RAships during our master's and doctoral studies. However, from the data, it became evident that it was the opportunity to hold RAships during our master's studies that was a critical factor in our being able to develop our interests in applied research. Recollecting the time as a new master's student with little research experience, one of us noted the surprisingly high level of trust placed on them by the supervisor. The realization that project outcomes depended on their performance inspired them to put in their best efforts.

I was astounded at the level of trust and responsibility this individual gave to me considering I had no experience. . . . I would be driving my car home from a day of data collection, both thrilled and panicked with the realization that the success of the study relied on the quality of the data we collected. It was at this point I became exceptionally concerned about how to make a deep and meaningful contact with an interview participant so that I could get the most out of the interview. (Participant 3)

Two of us noted that although we may not have had all of our skills fully developed, holding an RAship and having the opportunity to develop our research skills was crucial in our long-term development and understanding of the applied research context.

I was invited to join a team of researchers, both professors and graduate students, on a large-scale assessment project. Prior to this invitation I had completed about 80% of my course work, which aligned quite nicely with the skills I was expected to apply and enhance for this project. . . . This is not to say that I was “great” at all of these things but it gave me an awareness of the complexities that are a part of working in this context. (Participant 1)

We also identified that the research experience we gained during our RAships was relatively deep and extensive compared to the experiences of our peers and that our research experience during our master’s studies were pivotal in setting the stage for the work we would do during our doctoral studies.

I came to my PhD with a vast amount of field experience. . . . Very few of my peers had this level of research experience. (Participant 3)

As such, our self-reports revealed that holding RAships during our master’s studies was a critical beginning to developing our interests in research. Although some of us acknowledged that as master’s students we did not come to RAships with fully developed research skills, we identified that our supervisors placed great trust in our ability to learn the necessary skills. Further, there was recognition that not all of our peers had opportunities to hold RAships and develop their research skills during their master’s studies.

3.2. Research Assistantship Experiences During Doctoral Studies

Analysis of the codes and categories revealed that RAships during doctoral study were pivotal for us in developing research skills. Three of us identified that we held RAships during our doctoral studies that required our involvement in research projects from inception of the project to delivery of final reports.

One of the most valuable RAships for me was when I was involved at all stages of the research, from proposal writing to data analysis and reporting. This research project was perhaps also the most challenging, because although I had the necessary skills needed from a methodological/research design standpoint, it was not my area of research. Therefore, I needed to quickly learn the research context and develop a research proposal back to the funders that aligned with their research objectives. As I learned the hard way this was not an easy task but it was a wake-up call. You see prior to this experience I was only involved as an RA after this process had already been negotiated and the project design/deliverables agreed upon with the funder/client. (Participant 1)

We noted that it was during these “not an easy task” experiences where our learning of the research process and practice of our research skills started to expand and consolidate, and that the consolidation of our learning allowed us to be flexible enough to transition into new research responsibilities.

I led an [evaluation] project. The study was extensive; it was mixed methods and involved interviews, focus groups, surveys, and analysis and a desk review of pre-existing documents and data. . . . These were excellent learning opportunities for me, because I’m a quantitative person at heart, but it got me out of my comfort zone and I learned how to organize a project from start to finish with milestones and writing a report that was of course confidential. (Participant 2)

Our self-reports could be interpreted as indicators that we, as research assistants, were developing research proficiency and expertise.

It is my PhD experience that was invaluable in building my skill set as a research consultant. (Participant 4)

We all reported that holding RAship positions during our doctoral studies was critical to the development of our understandings of research practices and skills, and that the skills we learned in our RAships directly transferred to our practice as professional research consultants.

During my RAship I was involved in research projects that varied vastly in their scope, purpose, stakes, design, timeline, and resources involved. . . . That allowed me to experience a variety of situations that I further had to deal with as a research consultant, like being part of a large research team or being solely responsible for the design and implementation of a research project, presenting and communicating ideas and study results in a variety of ways accessible to different audiences, but most importantly, learning professional communication and other soft skills. (Participant 4)

Throughout our self-reports, all four of us identified that holding RAships during our doctoral studies presented even greater challenges and opportunities than we had previously experienced. We reported being involved in research projects that spanned the entire research process—from study inception to deliverable reports and manuscripts. Additionally, we identified that in addition to an expansion of our research skills, we felt our research knowledge started to consolidate, and this allowed us the sense that we were developing research proficiency and expertise. Finally, all four of us recognized that there was a direct transfer of the knowledge and skills that we developed during our RAships to the knowledge and skills we utilize as professional research consultants.

3.3. Distinctive Characteristics of Research Assistants

Although it was generally evident from the self-reports that currently, all four of us like being involved in research, three of us explicitly stated that it was through our RA experiences that we discovered a passion for the research process because it opened new avenues and perspectives for us.

For me these [RAship positions] were some of the most valuable learning experiences as they allowed me to see first-hand how to transfer the knowledge gained in my coursework to real research situations. This was especially important to me as my entire schooling before entering a graduate program was deeply theoretical and abstract, therefore having the opportunity to apply my knowledge to research both in the academic and non-academic world was very refreshing and exciting! (Participant 1)

These new avenues included surpassing the theoretical and the abstract and moving our passion for ideas and applications into the “real” world.

I didn't come to my master's with any research experience, but I came home thrilled each night having travelled to different locations, having talked with so many different people about the conditions in their lives, this was something that surpassed anything that could go on in a classroom for me—and one day after a grueling 14 hour day of travelling, data collection, and coming home enthralled—I knew that I wanted to be in applied research forever! (Participant 3)

Another finding in the data related to our awareness that our RAship supervisors played fundamental roles in shaping our RAship experiences.

I don't think I would have so many research opportunities with a different supervisor. (Participant 4)

We expressed feelings of gratitude towards our supervisors for the research opportunities they provided us; we believed that we were fortunate as we observed that not every graduate student had similar opportunities.

I will say that I do think that I was one of the lucky few to have the kinds of experiences I did in graduate school. (Participant 1)

Analysis of our individual self-reports revealed that we possessed distinctive characteristics. As RAs we developed a genuine passion for the research process. From interviewing participants during data collection to moving from the world of abstracts into the applied domain, excitement for research sustained us through the challenges we faced. We also demonstrated awareness that our RA supervisors were responsible for affecting our RA experiences and all four of us reported gratitude towards our RA supervisors for providing us with these rich and diverse RA experiences.

3.4. Distinctive Characteristics of Research Assistant Supervisors

In our self-reports, it emerged that our RA supervisors held the distinctive characteristic of being superior mentors. Our supervisors were excellent role models who consistently modelled professional behaviours and attitudes.

I will be forever grateful to my graduate supervisor who was, is, and always will be my professional role model. I think that I would not be who I am professionally without her. (Participant 4)

In addition, we identified that our supervisors shared another distinctive characteristic in that they exhibited absolute trust in our abilities. As our supervisors provided research opportunities that were unparalleled, we recognized that our RA experiences had a profound impact on our development into professional research consultants.

In both my master's and PhD I had supervisors that gave me RAship opportunities of a lifetime; my PhD supervisor was a new faculty member and very focused on being student centered, and without her trust and belief in my ability I would not be the professional analyst I am today. I looked around and not many other students had the opportunities I had—I was very fortunate to become aligned with the people I did. (Participant 3)

Our self-reports revealed that our RA supervisors were student-focused and informed mentors who served as outstanding professional role models. Our RA supervisors placed unqualified trust in our abilities to learn and fulfil our RA roles. Further, our RA supervisors provided us with RA experiences that proved to be important in our development.

3.5. Developing as Professional Research Consultants

By far, the largest emergent category of codes identified in our data related to the skills we learned through our RAships. All four of us noted that we learned numerous skills and these distilled down into two dominant sub-codes: *hard skills* and *soft skills*.

We reported that during our RAships we developed a multitude of diverse hard skills. In our self-reports, we identified hard skills related to collating and editing a book going to press, developing cost expectancies and delivering estimates to bid on projects, writing proposals, developing research ethics applications, designing research studies, collecting and analyzing data, evaluating programs, analyzing policies, writing reports, and facilitating workshops. Additionally, three of us noted that our learning was consolidated most effectively when our RAships involved participating in a research project from start to finish.

We also reported learning soft skills while holding our RAships. These skills included collaborating with other people, working as part of a team, negotiating project designs and deliverables, managing expectations, learning best practices for presenting

information, and communicating findings effectively to stakeholders. Additionally, we noted that classroom study of research methods did not prepare us for learning that social dynamics and political agendas are an additional project variable—a lesson we learned in the practical setting of our RAships.

You can learn all the research methods and models in school [but] until you are applying them in a practical setting where there are various political agendas and social dynamics at play, that's when the real learning happens. (Participant 2)

We identified that the research experiences and skills we gained during our RAships were skills that could translate into a number of research roles. We have each chosen to extend these skills into professional research consulting practices.

[My] experience was invaluable in building my skill-set as a research consultant. (Participant 4)

Analysis of the self-reports revealed that because we held and actively participated in multiple RAships, our RA experiences provided research exposure that involved breadth and depth, and supported us in transferring knowledge from theoretical into applied research experiences.

Over the course of my graduate career I obtained several RAship positions; for me these were some of the most valuable learning experiences as they allowed me to see first-hand how to transfer the knowledge gained in my coursework to applied research situations. (Participant 1)

Further, we identified that RAships involving research projects that varied in scope and stakes, and offered opportunities to develop a multitude of research skills had a profound impact on our development of research expertise and our professional practice as research consultants.

During my RAship I was involved in research projects that varied vastly in their scope, purpose, stakes, design, timeline, and resources involved. That allowed me to experience a variety of situations that I further had to deal with as a research consultant, like being part of a large research team or being solely responsible for the design and implementation of a research project, presenting and communicating ideas and study results in a variety of ways accessible to different audiences, but most importantly, learning professional communication and other soft skills. (Participant 4)

Analysis revealed that as graduate students who held multiple, diverse, and demanding RAships, these roles facilitated and fostered our opportunities for further research practice. All four of us identified that the cumulative experience of holding diverse RAships, during a developmentally formative time, had an influential impact on our identities as researchers and our practice as professional research consultants.

I reviewed my CV and saw that I held five different RAships during my master's and one RAship and seven consultancy positions during my PhD; this really brought home my understanding that I had had numerous research experiences at a very formative time in my life. (Participant 3)

So, yes, definitely, my RA learning opportunities and experiences are the foundation of my professional identity and my practice as a research consultant. (Participant 4)

However, we noted multiple times throughout our self-reports that we believed we were experiencing relatively unique research opportunities in comparison to our peers. One of us questioned if the current utilization of RAships within the academy was realizing the full potential of these RA positions.

I'm just starting [in the academy] and I would love for one day to be able to support other grad students in this capacity. This would mean that universities have to start rethinking [the RA] role and how they can contribute as a knowledgeable base to the communities they serve. (Participant 2)

All four of us identified that indeed, our RAships offered us learning opportunities and research experiences that had a direct and positive influence on our development and our practice as professional research consultants.

So to answer the question whether or not the learning opportunities or experiences in my RAships helped to inform my practice as a research consultant, the answer is absolutely! (Participant 1)

Throughout our self-reports we identified that the experiences and skills we gained during our RAships had an impact on our development as professional research consultants. We identified that we developed both hard and soft skills through our RAships. Our RAships allowed us to engage in the transfer of knowledge as we applied theoretical knowledge in applied research scenarios. Further, a variety of diverse and demanding RA research experiences required us to develop a range of skills. Skills developed ranged from being self-directed and having sole responsibility for a project to productively collaborating with team members, and embracing opportunities embedded in challenges. Additionally, our RA experiences occurred during developmentally formative times. However, we recognized that our experiences were atypical of the graduate school experience, which led one of us to question whether the academy was realizing the full potential of RA positions. Finally, in reflecting back on our RAship experiences and pulling our understandings forward to our current-day practice, we concluded that the knowledge and skills utilized in our professional research consultant practices are direct extensions of our RAship experiences.

4. Discussion

The purpose of this self-study was to explore if there was a relationship between holding RAships and becoming professional research consultants. Through this self-study, we have reflected back on our experiences as RAs and pulled our understandings of these experiences forward to the present day where we practise as professional research consultants. Analysis of our self-reports revealed five emergent categories that contributed to our current understandings of the ways our RAships influenced our development as researchers and later as professional research consultants. The first category related to RAship experiences during our master's studies. The second category related to RAship experiences during our doctoral studies. The third and fourth categories related to our individual characteristics as RAs and individual characteristics of our RA supervisors. The fifth and final emergent category related to the experiences and skills we gained from having RAships and the ways these experiences affected us as we developed our research practice into professional research consultancy. Through this self-study, we see that our RAships provided a bona fide vector for each of us to develop research expertise. However, analysis of our self-reports reveals that not all graduate student RAship experiences are equal. We identified that we may have had atypical RAship experiences in that we all held multiple RAships during both our master's and doctoral studies.

Some of us reported that we faced challenges as we entered into our master's RAships holding either no or undeveloped research skills (Niemczyk, 2010), and that these RAships often required us to develop research skills or translate nominally existing skills into applied settings at rates that tested our existing capabilities. We acknowledged that this pressure was accompanied by an immense sense of responsibility. However, as novice RAs we proved to be individuals who embraced the challenges and the responsibilities placed on us as we strove to meet our supervisors' expectations. Thus, all four of us identified that the quality and scope of our master's RAship experiences were unique in the need to develop research skills, and the extensive expectations, trust, and great responsibility placed on us by our supervisors.

We stated that holding RAships during our doctoral studies was formative for our skills, development of our research expertise, and the transfer of our research practice to professional research consultancy. Some of us described our doctoral RAships as very demanding and "not an easy task." Three of us described this period of RAships as a time where we were involved in research projects from inception to deliverables and through these experiences we learned about the entire research process. It was during this time that we consolidated our learning and began to develop our research expertise (which corroborates the findings of Ding [2008] and Niemczyk [2010]). Further, after multiple research opportunities, experiences, and responsibilities, we identified through our self-reports that we could see our research skills grow and our identities transform from our initial roles as assistants to later roles as competent individuals who could be trusted to independently run entire research programs or be brought in as specialists to guide other research teams; we experienced transformative shifts from assistants to research practitioners to expert consultants.

Our findings also revealed that we, as RAs, and our RAship supervisors had some distinctive characteristics that may have shaped the outcomes of our RAship experiences. First, through the self-reports it was evident that each of us is a persistent individual who was not dissuaded by demanding learning challenges or responsibilities. Some of us felt a great sense of satisfaction when our theoretical knowledge was taken out of the classroom and applied in real-world settings (Lave & Wenger, 1991; Roaden & Worthen, 1976). For others, it was the satisfaction of moving away from reading about studies to the immediacy of being the person talking to participants in context and collecting data. Further, three out of four of us observed that our initial struggles in meeting these challenges and responsibilities ultimately transformed into a passion for the research process. Edwards (2009) reported that other RAs have described such challenges as the basis for transformational learning. We also noted that we perceived that our RAship opportunities and experiences were not shared by all our peers, and that we all felt gratitude for the opportunities provided to us by our supervisors as these experiences fostered the development of our research skills.

Analysis of the data also showed that our RAship supervisors were unique individuals who provided us with exceptional opportunities, and were also individuals who placed a great deal of trust in our abilities to learn and develop our research skills (Fan Tang & Choi, 2005). We identified that our supervisors were exceptional mentors who valued developing our talents (Ding, 2008; Edwards, 2009) and that supervisor investment in us played a fundamental role in the development of our hard and soft skills (Haggard et al., 2011). We reported gaining an extensive list of hard and soft skills through our RAships (Grundy, 2004; McGinn & Lovering, 2009; Niemczyk, 2010). Hard skills included editing, submitting bids and cost-expectancy quotes for projects, writing proposals, preparing ethics applications, designing research studies, collecting data, analyzing data, evaluating programs, analyzing policies, writing reports, and facilitating workshops; soft skills included collaborating, negotiating, managing expectations, and communicating. These hard and soft skills provide strong evidence regarding the development of our research expertise. This evidence is further compounded by our reports that the transfer of our knowledge and skills contributed to our identity formation as legitimate researchers (Grundy, 2004; McGinn & Lovering, 2009; Ratković et al., 2013), and that ultimately, we believed that the extensive and diverse RAship experiences offered us opportunities to gain research experience, develop research expertise, and extend our skills and abilities into our practice as professional research consultants. This linkage is captured when we identified that holding RAships during graduate education had a direct impact on our development as professional research consultants.

5. Limitations

One limitation of this article is the small sample size. Although there is a risk of bias in a self-study, we took steps to limit this risk. Given that our self-study is a peer collaboration, we utilized peer scrutiny (Shenton, 2004) to establish credibility and trustworthiness. Another limitation relates to our numerous and varied RA experiences. Unfortunately, the range and depth of our experience may not be reflective of typical RA experiences. A future direction for research may examine experiences of students in

different programs, institutions, and nations. Another limitation of this article is that it does not have a comparison sample of individuals who held RAships but did not enter into professional research consulting, or individuals who hold professional research consultant positions, but did not first hold RAships. Future research may inquire into the experiences of these individuals and explore the nature of the RAships for those who held them, and the research opportunities and experiences of those who did not hold formal RAships. Such research could uncover important qualitative differences in the roles, responsibilities, and experiences of these individuals. A final limitation relates to the role of supervisors. Although this article did find that our supervisors played a crucial role in our development as RAs, we did not gather data directly from supervisors. Future research may explore the differences and impact for supervisors who focus intentionally on developing students' research competencies and those who do not, or the impact on RAs when supervisors employ strategic modeling, mentoring, or scaffolding strategies to foster RAs' learning.

6. Conclusion

In reflecting back on our RAship experiences, we have all concluded that the knowledge and skills we utilize in our professional research consultant practices are a natural extension of our RAship roles. Thus, for us, the experiences and skills we gained during our RAships had a direct impact on our development as professional research consultants. Our RAships were pathways for us to develop as researchers and move on to extend our skills to our practice as professional research consultants.

Our self-study documents how, for us as graduate students, holding RAships provided rich and varied opportunities to learn and apply research skills and knowledge. None of us experienced any obstruction or delay in our thesis work due to our RAship engagements, although these engagements did not support or enhance our thesis work directly. We do acknowledge that our RAship experiences might have been unique for we observed that our research experiences were not shared by all our peers.

We have deliberated on the ways RAships can have a formative impact on the development of researchers, and specifically how RAships contribute to the development of professional research consultants. Accordingly, the RAship may be viewed as a potential context for training researchers, especially towards an alternative research career—that of the professional research consultant.

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Received 1 February 2013 | Accepted 22 August 2013 | Published 1 November 2013

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