Doctoral Research Education in Canada: Full-time and Part-time Students' Access to Research Assistantships

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Abstract
Graduate students' development as researchers is a key objective in higher education internationally. Research assistantships (RAships) nurture graduate students as novice researchers as they develop theoretical and methodological knowledge. However, few studies have investigated the ways institutional regulations, informal practices, and students' academic status may influence graduate students' access to RAships. Based on a larger case study exploring RAship experiences of full-time and part-time doctoral Education students at an Ontario university in Canada, this paper reports key arguments and conclusions specific to students' unequal access to RAships. Although the study is context specific and cannot be generalized, described practices and recommendations can inform other institutions and programs nationwide.

Keywords: Research education, doctoral studies, research assistantships, research assistants, research supervisors, case study

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Governments and international funding agencies recognize that university researchers create knowledge that drives the innovation necessary to deal with complex social and economic challenges (Organisation for Economic Co-operation and Development, 2015). Universities play an essential role in developing creative solutions and the critical thinking skills that fuel nations' knowledge economy whose success is predicated on global perspectives. The Canadian federal government's investment in researchers is vital for the nation's universities since the latter are responsible for more than one-third of Canada's annual research activities (Lambert-Chan, 2008). Thus, governmental support for quality research, including training the next generation of skilled researchers, is needed to meet the growing societal demand for new ideas and innovation.

Canada's three main funding agencies—the Social Sciences and Humanities Research Council of Canada (SSHRC), the Natural Sciences and Engineering Research Council of Canada (NSERC), and the Canadian Institutes of Health Research (CIHR)—make significant investments in research and emphasize that research and innovation highly influence Canada's economic prosperity and quality of life (Association of Universities and Colleges of Canada, 2012). In the changing world of research, Canadian funding agencies' primary objective is to invest in the development of talented and innovative leaders and outstanding scholars who can make strong contributions nationally and globally.

The federal and the provincial governments' commitment to enhancing research and development create expectations in regards to graduate education (Ministry of Research & Innovation, 2008; Rae, 2005), which is expected to prepare highly skilled researchers who are able to engage in the diversified global research environment. According to McWey, Henderson, & Piercy (2006), research development in graduate programs encompasses more than mere research methods courses and completion of a thesis; it also involves graduate students' participation in educational opportunities that connect and apply theoretical course content to research practice. Such educational opportunities may arise in research assistantships (RAships), during which time students may become involved in diverse components of research.

Research partners—scholars, students, institutions, and funding agencies alike—recognize the potential for and importance of mutually beneficial outcomes when graduate students work as (RAs) research assistants (Grundy, 2004; McGinn, Niemczyk, & Saudelli, 2013; Moore Scarduzio, Plump, & Geist-Martin, 2013; Pollon, Herbert, Chahine, & Falenchuk, 2013). RAs labour alongside research supervisors on the latter's research projects and may participate in diverse assistantship tasks (from designing a study and applying for research clearance to writing reports and presenting at conferences). The development of skill sets though these activities facilitates the acquisition of knowledge that in turn supports the RAs' graduate studies. Mentoring relationships may develop between RAs and research supervisors engaged in RAships, which can benefit both parties.

Graduate students' development as researchers is a key objective in higher education, yet few studies have investigated such academic and professional development (McGinn, 2006). RAships provide opportunities for graduate students to acquire, practice, and enhance their research knowledge and skills (Grundy & McGinn, 2009; McBurnie, 2011; McWey et al. 2006); however, the majority of the extant literature concentrates on the venues of graduate research coursework (Winn, 1995) and thesis supervision (Amundsen & McAlpine, 2009; Bartlett & Mercer, 2001; Grant, 2005; Wisker, 2005) through which research is taught and learned. Much less is understood about RAships and their potential for educating future generations of researchers. Indeed, few studies have investigated graduate students' experiences with RAships and the ways that institutional regulations, practices, and social relations influence such experiences (Edwards,

2009; Hutchinson & Moran, 2005; Molony & Hammett, 2007; Turner 2010). In addition, because full- and part-time doctoral students typically follow different regulations, it seems appropriate to investigate their access to RAships separately. Stemming from a larger case study of RAships, this paper explores full- and part-time doctoral students' access to RAship experiences in a particular program and field of study at one Ontario institution.

Theoretical Framework

The theoretical framework guiding the study was informed by a social practice perspective on learning posited by Lave and Wenger (1991), who argued that learning is a process of participation in communities of practice. They portrayed legitimate peripheral participation as a particular way of engagement whereby a learner participates in the actual practice of an expert, though only to a limited degree initially and with limited responsibility for the final result.

Legitimate peripheral participation refers to the process by which newcomers become part of a community of practice and eventually become full participants. Recognizing legitimate peripheral participation in this study thus encompasses RAships as potential educational venues for developing future researchers. Doctoral RAs working alongside experienced research supervisors may have opportunities to become part of a research community. Through collaborative engagement in research and the shared construction of knowledge, students can learn research skills, generate intellectual capital, and most importantly, begin the transformation toward becoming independent researchers.

As Lave and Wenger (1991) stated, "The key to legitimate peripherality is access by newcomers to the community of practice and all that membership entails" (p. 100). RAships may provide access "to a wide range of ongoing activity, old-timers, and other members of the community; and to information, resources, and opportunities for participation" (Lave and Wenger 1991, p. 101). Yet, as this article will illustrate, access to and distribution of RAships that are delimited by institutional regulations and practices may promote, restrict, or prevent students' legitimate peripheral participation.

Research Methods

This case study examined RAships in a doctoral Education program at an Ontario institution during specific period of time. As Creswell (2011) explained, a case study is an in-depth exploration of a bounded system based on extensive data collection of multiple sources, where "bounded means that the case is separated out for research in terms of time, place, or some physical boundaries" (p. 465). The multiple data sources in this study included interviews with doctoral students, research supervisors, and administrators as well as analysis of documents relevant to RAships. It is important to note that research supervisors' and administrators' responses were meant to complement doctoral students' voices to build a comprehensive understanding of RAships.

Participants were recruited through maximal variation sampling, which allowed for the building of complexity into research when sampling participants or sites. This purposeful sampling was used to develop many perspectives and a detailed understanding of the access to RAships through recruitment of doctoral students that differ in terms of study status, research supervisors who work with doctoral RAs, and administrators directly involved in the organization and distribution of RAships.

The recruitment steps resulted in semi-structured interviews with three groups of participants— 13 doctoral students, five research supervisors, and two administrators. One personal interview

was conducted with each participant. The doctoral student group comprised eight full-time and five part-time students; six had worked as RAs, while the other seven had not considered or had decided not to engage in RAships. Consistent with typical demographics in Education programs, women were overrepresented in the three participant groups: students (10 women, three men); research supervisors (three women, two men); and administrators (two women). Data saturation—a point in data collection when interviews no longer provide new or relevant information—was used in order to decide when a satisfactory number of interviews had been completed (Saumure & Given, 2008).

Participants granted the researcher permission to audio record all interviews, which then were transcribed verbatim. Transcribed interviews were forwarded to each participant who then had the opportunity to verify transcription accuracy, volunteer additional information, or withdraw from the study. All but one participants responded to the member check.

Interview data were complemented by documents that reflected the sample university's regulations and practices pertaining to RAships. The documents were located through searches of departmental and institutional websites and included four university documents, three Faculty documents, one program document, and three external documents. These data augmented and corroborated evidence from the interview data sources (Yin 2012). For confidentiality purposes, the institution's name is not disclosed in order to protect participants' identities, and institutional documents are not cited or identified by name; the documents are categorized as university documents, Faculty documents, and program documents.

After member checks, the interview transcripts were imported into NVivo software along with the documents to facilitate systematic data analysis. Miller and Salkind (2002) explained that qualitative data analysis software enables researchers "to systematically analyze text or image files, categorize and code information, build descriptions and themes, sort and locate important data segments, and provide visual display of codes and categories" (p. 164). The analysis was treated as an ongoing process (Miles & Huberman, 1994). A general sense of the data was acquired by transcribing the interviews and reading the documents, which together served as a preliminary exploratory analysis (Creswell, 2011). Then an inductive approach to establish general codes and themes derived from the detailed data (i.e., transcribed interviews and documents) was adopted. After coding all interviews, unique codes were identified and comparable codes were grouped to achieve a more manageable set of themes. As a result of this process, 12 final themes were developed, which then informed exploration of full- and part-time doctoral students' access to RAships.

Context

In order to situate the case, this section explains the doctoral program and organizational characteristics of RAships at the institution under investigation. A thorough description is provided so that international readers may use this information to judge the extent to which the findings may also inform other programs or institutions where RAships could be considered research learning venues.

The Program

The program under investigation is one of a few in Ontario that offer flexible learning environments in terms of possibilities to study on a full- or part-time basis (Saliba, 2012). The program involves face-to-face seminars in condensed blocks during two time periods plus online

delivery for other courses, which allows students easy access regardless of their geographic area. The program encompasses three fields of study that focus on educational policy, educational psychology, and critical theory. To support students' research education and the consequent development of their identities as researchers, the program offers research methods courses that expose students to qualitative and quantitative research methods in Education, a comprehensive examination through which students are required to demonstrate their research skills and knowledge, and dissertation research whereby each student undertakes an independent study investigating a relevant issue in Education under the supervision of a doctoral committee. In addition, students may engage in RAships to assist research supervisors with their research.

Structure

All first-year students begin the program in July and must complete two compulsory face-to-face courses during their first and second summers. In the fall term of their first year, students normally take one or two specialization courses in their respective fields of study; such courses are delivered through distance technology (one online and one usually independent). Although the program structure, including the timing of the first compulsory course and residency requirements, is somewhat fixed, the other courses and the independent work allow space for students to design plans of study that meet their personal and professional objectives.

After completion of all coursework, students are expected to complete a comprehensive examination that requires students to demonstrate profound knowledge of their respective fields of study, along with the research skills necessary to undertake dissertation research. The comprehensive examination provides examiners with evidence that students are prepared to move to the next stage of the doctoral program and undertake original research.

The next stage requires students to finalize and defend their dissertation proposals. Drafting the proposal may originate early in the program, especially for candidates seeking external funding, or during the final research course, which allows students to examine theory and research in relation to their dissertation topic. The dissertation proposal is approved when examiners are satisfied with its quality and convinced that the candidate is ready to proceed with the proposed research.

Full-time students are deemed to be in residence throughout the course of the program and are expected to complete their degrees within 4 years. Part-time students are allowed to complete the requirements of the program over an extended period of time and fulfil residency requirements during the two doctoral seminars (two condensed blocks during the two time periods) and two other consecutive terms.

Enrolment

The program consistently receives far more applications than it can accommodate. Admission to the program is limited, and the selection process is highly competitive. All applicants to the doctoral program are required to select a field of study, submit a description of the proposed area of research, and outline whether their studies will proceed on a full- or part-time basis.

The program accommodates students on a full- or part-time basis. At the time of data collection (fall 2013), 25 students (56%) were registered full time and 20 students (44%) were registered part time. The program includes a diverse group of students in terms of age, gender, race, cultural background, and economic status. Domestic students come from across Canada and there are very few international students. Since the program began, there has been much higher representation of females (around 75%) than males; this is very common in the field of Education, which is

overrepresented by females (Government of Canada, 2012; Turcotte, 2013).

Funding for Doctoral Students

Financial support is available for all full-time students during the first 4 years of study. The support offers fellowship funding, guaranteed paid employment through graduate assistantships, and additional institutional incentive awards. The main funding package for full-time students includes a graduate fellowship that requires no employment duties and a graduate assistantship that requires students to work as RAs, teaching assistants, language assistants, or instructors if they wish to receive that funding component. For the past 2 years, the graduate fellowship was approximately $12,000 and graduate assistantship was $7,200 per year for each student.

In addition to the main funding package, full-time students are eligible to receive twice during their studies the Faculty of Education Research Fellowship. Each year, there are either six $5,000 fellowships or five $6,000 fellowships available. Students compete for these fellowships; however, no employment is required for successful applicants.

University-related employment for positions such as RAships provides financial support for graduate students and work experience that is designed to supplement their formal academic programs, and contribute to skills development relevant to their future careers. However, as per province-wide standards, full-time graduate students are expected to devote time to their studies and should not exceed 10 hours per week on any employment (Council of Ontario Universities, 2013). Part-time students are eligible to work more than 10 hours but not more than 44 hours based on provincial employment standards (Ontario Ministry of Labour, 2013).

Funding for Research Assistants (RAs)

The Faculty of Education supports faculty research through two main funds: the Graduate Research Assistant Development (GRAD) Fund (approximately $31,000 annually) and the Research and Development (R&D) Fund (approximately $10,000 annually). The GRAD Fund is the most directly relevant source of support for graduate students and explicitly introduces them to the research process. Every faculty member is eligible to apply once each year for a 60-hour contract on the condition they provide training to the hired students during the contractual time frame. Each student is eligible to apply and accept one contract per term. Full-time students have priority but part-time students can be hired if full-time students are not available.

Providing research training to students is part of the GRAD Fund criteria but it is not a component of the R&D Fund criteria. As one of the administrators explained, the department encourages professors to use the R&D Fund to support graduate students' research education; however, there is no requirement or obligation to do so. In fact, the funding can be used for other activities related to the professors' research agendas.

Other internal grants from the university serve as seed grants meant to support research projects leading to external grant applications. There are also special purpose grants for manuscript preparation (up to $1,500), organizing a workshop (up to $5,000), or other scholarly activities. Some of the latter sources could be used to hire a graduate student as an RA. In addition, some faculty members have external grants from sources such as SSHRC.

Recruitment of RAs

The Faculty of Education has a mechanism in place whereby students interested in working as RAs can submit a Student Application Form, their current curriculum vitae (CV), and a brief outline of their research interests to the Faculty's research office. The form and the student's CV

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are then placed in a binder and made available to researchers interested in hiring RAs. The intention is to assign RAships to full-time students and to provide as fair a distribution as possible. The application process allows researchers to determine which students are interested in RA positions, the pool of existing skills, and the training students would like to receive.

This recruitment process helps students and researchers alike; it enables students to engage in research projects that offer them opportunities to develop new skills and also helps researchers to find suitable RAs. However, it is important to note that not all hiring is undertaken through the auspices of the research office; students may become informed about RAship opportunities from course instructors or through conversations with their colleagues.

Findings

In order to clearly and concisely illustrate doctoral students' access to RAships, this section is organized in three parts that address the distribution and organization of RAships as well as the student status (i.e., full- or part-time).

Distribution of Research Assistantships (RAships)

The majority of full- and part-time students reported securing their multiple RAships informally as opposed to doing so through the existing formal process. In most cases, full-time students were contacted directly by researchers familiar with their work ethics or through referrals from other professors. Meanwhile, part-time students attributed their success in securing RAships to being proactive, connecting with professors, and letting them know about their availability to work as RAs.

Doctoral students' responses correspond to information reported by the research supervisors who indicated they found RAs mainly through personal contacts (e.g., supervising students' doctoral work, being on students' committees, or having students in their courses) and recommendations rather than any formal recruitment process. As one research supervisor explained, she would prefer knowing the quality of students' work prior to hiring them as RAs.

When students were asked specifically about factors that influenced their access to RAships, the full-time students with RAships indicated that students get hired as RAs based on the skills they bring to the project; they emphasized that students with requisite skills have greater chances of securing positions than those who need research training. These perspectives reflect administrators' voices indicating that some researchers prefer hiring students who require little training.

One of the full-time students without RAship experiences recalled receiving an email about an RAship opportunity to which she did not respond because she did not have the prerequisite skills noted in the posting. The student confirmed her willingness to learn new skills but deduced from the description of duties that she would need to have the required skills to qualify for the position. Another full-time student with RAships explained, "[research supervisors] are always fishing for experience because they themselves are so busy that they don't have time to dedicate to teaching students." The idea of research supervisors having insufficient time to train RAs was also broached by another full-time student with RAships: "So idealistically, yes it is fair to engage new students [as research assistants] but realistically I think that professors would rather take someone with more experience." Statements touching on research supervisors' busy lives align with literature that reports faculty workload pressures and competing demands for time due to heavy teaching loads, pressure to conduct research and publish, and substantial administrative and service

responsibilities (Austin, 2003; Deem & Brehony, 2000). One administrator indicated that researchers face deadlines and must progress with their respective projects in a timely manner. In addition, having limited internal funding, they sometimes prefer to hire people who can assist with a project for perhaps only a few hours to complete specific tasks to help move the project forward.

It is important to note that some students relied more heavily than others on funding to support both their studies as well as their families. It was evident in responses from two full-time students that RAships provided much-needed financial support in addition to any educational benefits; thus, not knowing when RA positions would become available or not having necessary skills to qualify for assistantships put some full-time students at a disadvantage. As Hinchey and Kimmel (2000) succinctly stated, "The more a student needs money, the less choice he or she has about work conditions" (p. 67).

Several full-time students questioned the actual purpose of RAships given that some research supervisors prefer hiring students with existing research skills. For example, a full-time student with RAships asked, "So what is research assistantship? Is it an opportunity to learn or opportunity to practice the skills you already have?" Another full-time student with RAships questioned why students should be expected to have a particular skill set in order to work as RAs: "If we would have all the skills already, then why would we even bother with RAships?" Such contemplations reflect Hinchey and Kimmel's (2000) views about the ambiguity associated with the research and teaching services that graduate students provide to universities; although institutions may claim that research and teaching assistantships serve as ways for graduate students to learn the skills they will need as professionals, such students often perform tasks that are normally reserved for experienced researchers.

Administrators indicated that full-time students have priority to access RAships; however, as one administrator noted, "part-time students can be also hired if full-time students are not available. The idea is to support the full-time students who are not working and getting some additional income to support their studies and life." Because part-time students tend to have full-time employment, they are not considered as a first choice for financial support through assistantships. Although the priority in hiring RAs was given to full-time students, the majority of research supervisors in this study indicated they did not consider students' status when appointing RAs. In addition, administrators reported limited input into professors' selection of assistants.

The main criteria researchers considered when hiring RAs were students' general research skills, their ability to quickly engage in a research project, their availability during a specific time frame, and their interest in the research topic; some of the latter elements were more important than others for each research supervisor based upon individual preferences. However, it is important to note that such preferences corresponded to researchers' criteria for hiring doctoral RAs; the research supervisors clarified that they would have different expectations in terms of competencies and research training for master's students.

Part-time students advocated for equal distribution of RAships regardless of student status. As one student articulated, everyone should have the opportunity to work as an RA during doctoral studies. Although administrators explained that efforts were made to hire students who did not have RAships, the process is not systematic for two reasons: (a) there is no database in place to show who had RAships and who did not, and (b) researchers hire students informally. The majority of participants recognized the need for a database that would record the names of those hired as RAs, their research supervisors, the point within their studies when they were hired, and the length of their contracts.

Organization of RAships

The majority of full- and part-time students emphasized that RAships are not well advertised and that it is difficult to foresee when such positions may become available. Students were unsure about how to obtain information on available RA opportunities or who was interested in hiring RAs, and a majority of students voiced the need for transparent and fair distribution of RAships. Students believed distribution should be a transparent process, especially since the funding for many projects came from internal or external grants with expectations that researchers provide research training for students. Therefore, they argued that every student should have equal access to research training.

Students' responses aligned with those of research supervisors who confirmed that it was challenging for students to know what projects were available. Most research supervisors attributed the gap between available RA positions and potential candidates' awareness of these opportunities to a lack of electronic accessibility to such information. Access (or lack thereof) to information regarding RAship opportunities affects doctoral students' entry into research communities of practice.

The majority of full- and part-time students without RAships lacked general information about RAships. Three full-time students without RAships reported that they were unable to find RA positions despite attending a workshop on the topic and being part of the research community through their frequent presence on campus. The main issue seemed to be the timeliness of when RAships were offered.

Some full-time students indicated that they often took on available assistantships (e.g., teaching assistantships) rather than wait for a position (such as a RAship) that could be more beneficial for their professional development because they did not want to lose the paid fellowship portion of their doctoral funding package. One full-time student without RA experience did not receive any information about available RAships and for two consecutive years undertook employment outside of his area of interest to avoid losing any of the doctoral funding. As explained in the Context section, full-time students took on employment out of institutional obligation because they were required to work for the university to maximize their doctoral funding. Again, working while studying was a necessity for many full-time students in order to generate sufficient income to support their studies as well as their families.

Some students who quickly secured the first-available assistantship position were disappointed they were unable to accept more suitable positions that arose later because of the 10-hour per week limit and other personal commitments. As one full-time student without RAships said, "I got some emails sent to everybody about research assistantship opportunities but at that time I had a TA position and I knew that we can't exceed more than 10 hours per week."

Student Status

All doctoral students were asked if and how their status influenced their experiences with RAships. Full-time students with RAships referred mainly to the advantages of full-time status, whereas part-time RAs voiced concerns and disadvantages associated with their student status.

Full-time students indicated that their status allowed them to fully immerse themselves in doctoral work, to be regularly on campus, to build relationships within a scholarly community, and to access RAships. All full-time students with RAships agreed that being on campus made them visible and increased their educational opportunities. Students indicated that relationships with researchers and reputation within the Faculty influenced their access to RAships. Both factors relate to regular visits on campus. Being around and networking offered full-time students unique

opportunities to learn about professors' research interests and current projects, and to find out when potential RA opportunities might become available. Research supervisors and administrators also recognized that regular visits on campus increased students' chances of getting involved in educational assistantships. One administrator likewise emphasized the importance of being visible and building a good reputation within the department.

A majority of part-time students commented on the problem of isolation from the university, disconnection from the program, and limited access to RAships. As indicated by part-time students, most activities pertaining to RAships took place during weekdays when they could not attend and when remote conferencing and presenting were not available. All part-time students called for RAship opportunities for students located far away from the university.

This study also sought to identify factors that affected doctoral students' decisions not to undertake RAships or the reasons for their lack of RAship opportunities. Responses from the four full-time students without RAships were divided between (a) those who reported they were not interested in RAships because of the demanding full-time studies workload and preference to engage in teaching, and (b) those who looked for RAship opportunities but were not able to secure them due to ineffective advertisement of RA positions. The majority of part-time students without RAships reported feeling isolated from the program and research community and lacking practical research experiences. Part-time students without RAships called for regulations that would make RAships more accessible for part-time students located far away from the campus. Considering existing technology and conferencing tools currently available, there is no apparent reason to limit students' access to information and research learning opportunities. More effective use of technology has the potential to increase students' connections to a research community and decrease their feelings of isolation.

In addition, full-time students reported family financial situations as a factor contributing to the level of urgency in accessing RAships; some students had stable financial situations whereas others relied on on-campus employment to support their families. Part-time students identified their full-time employment and distant locations as factors limiting their presence on campus. Full- and part-time students alike indicated that family obligations—specifically parenting duties corresponding to young children—reduced the time they had available to engage in RAships.

Discussion and Recommendations

The analysis of participants' responses led to a deeper understanding of access to RAships but also raised questions related to inclusiveness in a community of research practice. Participants recognized several shortcomings in terms of organization and distribution of RAships that contributed to unequal access to RAship opportunities. As discussed previously, some full- and part-time students did not engage in RAships because of limitations such as a lack of information about RAships, poor advertisement of RA positions, and scarce assistantship opportunities for students located far from campus.

The findings from the study showed that the majority of full- and part-time students secured their multiple RAships informally as opposed to following any established formal process. Full-time students reported being contacted in most cases directly by professors, whereas part-time students attributed securing RAship opportunities to being proactive, connecting with professors, and letting them know about their availability to work as RAs. Considering that full-time students are more often on campus and thus more visible to the faculty and staff than part-time students, it is understandable that they are approached more frequently with assistantship offers than part-time students. It is important to note, however, that the informal hiring practices excluded many students

(full- and part-time alike) from opportunities to participate in RAships. Ultimately, access to RAship opportunities translates into access to legitimate peripheral participation in a research community.

The majority of participants suggested that advertisement of RA positions was inadequate and indicated a need to enhance accessibility to information about RAships. Creating an electronic platform for RAs and research supervisors would allow graduate students to find out about researchers' projects and potential RAships, while simultaneously allowing researchers to identify students looking for RAship opportunities.

The stories of several part-time students illustrated structural limitations that imposed barriers to accessing RAships. The accounts from part-time students revealed their feelings of isolation and exclusion from access to information about RAships due to their full-time employment, family obligations, and often distant locations. Students' stories aligned with the literature reporting that part-time doctoral students are often disengaged from the learning community, sitting on the periphery and in isolation (Neumann & Rodwell, 2009; Sanders, 2012). To ameliorate feelings of isolation, they called for flexible hours for workshops and information sessions as well as more effective use of technology.

Another practice that prevented many students from legitimate peripheral participation through RAships relates to hiring students with existing research skills over those with less research experience. Many full-time students and administrators recognized that students were hired as RAs based on the skills they brought to the project. Some research supervisors also admitted to this practice. Students emphasized that those with skills had a higher chance of getting positions over those who needed research training. There is no question that research supervisors work with strict deadlines and often have limited funding, which may result in their favouring students with existing research skills to assist with their projects. Still, although research tasks must be completed in a timely fashion, which is more feasible if an appointed RA already has the requisite skills, it is important to recognize that such practices exclude a significant number of students from educational opportunities.

As noted earlier, the theoretical framework of legitimate peripheral participation (Lave and Wenger, 1991) used in this study indicates that newcomers to the community of practice require "access to a wide range of ongoing activity, old-timers, and other members of the community; and to information, resources, and opportunities for participation" (p. 101) in order to become full members. Doctoral students, who are the research leaders of tomorrow, develop their identities as researchers by engaging in research communities and doing research. Therefore, they need opportunities to acquire a sense of belonging to scholarly communities (Pyhältö, Stubb, & Lonka, 2009). Affording doctoral students with legitimate peripheral participation implies granting them access to RAships as research learning spaces; conversely, limiting access to those who already possess skills to engage in RAships marginalizes students eager to acquire research skills and to become part of the community.

It is also important to consider if existing skills should or could be used as criteria for recruiting students as RAs as well as the implications of doing so. Does the program's accepted practice of prioritizing students with existing research skills for RA appointments assume that all students enrolled in the doctoral program have such skills? Does the program consider and assess such research skills during the admissions process? These questions need answers in order to evaluate the appropriateness of existing hiring practices. If the program enrolls doctoral candidates with diverse levels of research skills, then program planners should (re)evaluate admission criteria. In other words, is the program designed exclusively (or favourably) for students with existing

research skills, or does it intend to include the acquisition of research knowledge and skills as an outcome that students are expected to achieve through proper research training? If the goal is the latter, then it is essential for the program to assist students in terms of resources and educational opportunities to assure their development as researchers.

The continued practice of hiring students with existing skills over those who need research training has profound implications. First, it contradicts the institutional claims that RAships serve graduate students to learn research knowledge and skills. In this regard, Hinchey and Kimmel (2000) urge institutions to reveal if "graduate students are novices who need assistantships to learn professional skills, or … skilled scholars contributing immeasurably to the work of university" (p. 7). To that end, doctoral students in this study already question the purpose of RAships—more specifically whether RAships are spaces to learn research or practice existing research skills, and why someone with research skills would even consider becoming an RA. Second, limiting RAships to students with existing research skills means supporting the circulation of research knowledge and skills within the same privileged group of students; doing otherwise would require researchers to ensure equity in the appointment of RAs. Researchers should consider students' competence as potential RAs with adequate research training as opposed to students' existing research competence (McGinn et al. 2013). Moreover, consideration should be given to the benefits RAships can provide to students rather than the extra time and challenges involved in training RAs (Strike et al. 2002).

With respect to fair distribution of RAships, the findings indicated that the absence of a database storing information regarding assistantships further exacerbates the problem. Creating an electronic record could identify students without assistantships and grant them hiring priority when RA opportunities become available. In practice, such a searchable database can only serve its purpose if researchers respect fair distribution practices. Otherwise, even with such a database in place, researchers might hire students with existing skills rather than provide opportunities to those with less experience.

Overall, the findings demonstrated several practices and regulations that prevented or limited students' legitimate peripheral participation through RAships. It is clear that greater attention needs to be paid to institutional structural issues that mediate organizational processes and relationships between RAs and research supervisors. RA recruitment processes need to be fair, transparent, and compliant with institutional regulations. Explicit regulations need to inform research supervisors how to reach potential RAs, what procedures to follow to recruit them, and what criteria to consider when selecting candidates. Although students with existing research skills may contribute to project completion with minimal guidance, students without RAship experience may benefit the most in terms of acquiring research skills and identifying themselves as members of a research community. In addition, lack of accessibility to information regarding RAships limits doctoral students' access to RAships. Therefore, enhancing existing structures of access and upgrading to provide virtual access to information may ameliorate some of the current limitations to students' engagement in RAships.

The findings also indicate a need for more inclusive regulations for part-time students who, like full-time students, wish to participate in research practice and gradually become full participants in a research community. Although the commitment to make the program inclusive for part-time students is visible, it is unclear how could RAships become more available to part-time students. One option to consider would be to give part-time students priority to work as RAs during their residency periods (full-time students are given such priority during every term due to their status; therefore, part-time students could be granted priority over full-time students during their

residency periods). Another option, which aligns with some students' suggestions to make RAships a mandatory part of the program, would be to grant a specific number of mandatory RA hours for all full- and part-time students alike. The set number of hours would need to be reasonable for part-time students to complete during their residency periods, while full-time students would have a longer period of time in which to cover the same number of hours. This approach would allow all students to have at least one RAship experience within the program. As explained earlier, the main funding package for full-time students includes an optional graduate assistantship that requires students to take on employment assignments. This graduate assistantship (or part of it) could be allocated to doctoral candidates at the outset of the program for full-time students and the start of the residency period for part-time students, with the condition that students find research supervisors. It is reasonable to assume that most faculty members would welcome the assistance of doctoral students with their research projects, especially if they do not need to worry about securing additional funds.

Conclusion

Considering that the culture of the academy has embraced research as its highest value and that comprehensive universities have adopted missions to discover, produce, and share knowledge, it is somewhat surprising that RAships seem to be in the process of development in terms of organization and distribution at this institution.

The multiple data sources considered in this study, especially the interviews with doctoral students, research supervisors, and administrators, highlighted how inaccessible RAships can be to some students, especially part-time students from distant locations. The results have also shown that institutional regulations and recruitment practices can hinder doctoral students' participation in RAships. This study's findings offer quality recommendations to improve full- and part-time students' access to RAships within and beyond the program under investigation. The findings may help students understand access to RAships, assist academics in hiring research assistants, and inform administrators and academic program committees about possible organizational changes to be made.

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