

Starting a university gerontology research laboratory: experiences from researchers in public health and psychology

Brittney M. Howell & Jennifer Peterson

To cite this article: Brittney M. Howell & Jennifer Peterson (2022): Starting a university gerontology research laboratory: experiences from researchers in public health and psychology, Gerontology & Geriatrics Education, DOI: [10.1080/02701960.2022.2163245](https://doi.org/10.1080/02701960.2022.2163245)

To link to this article: <https://doi.org/10.1080/02701960.2022.2163245>



Published online: 27 Dec 2022.



Submit your article to this journal [↗](#)



Article views: 6



View related articles [↗](#)



View Crossmark data [↗](#)



Starting a university gerontology research laboratory: experiences from researchers in public health and psychology

Brittney M. Howell ^a and Jennifer Peterson^b

^aDivision of Population Health Sciences, University of Alaska Anchorage, Anchorage, Alaska, United States;

^bPsychology, University of Alaska Fairbanks, Fairbanks, Alaska, United States

ABSTRACT

Although founding and directing an independent research laboratory is often expected of faculty at American universities, there are several barriers to successful completion of this important task. There is little guidance in the literature regarding exactly how to go about starting a research laboratory. The guidance that exists for faculty often focuses on running research labs in the “hard sciences,” such as biomedical science and engineering, leaving social and behavioral scientists out of such considerations. Additionally, smaller or teaching-focused universities often have little infrastructure or support for starting a research lab, so faculty at these institutions may not know where to begin. These barriers are significant concerns for junior faculty, who are often unprepared for the realities and challenges of starting a successful research lab while obtaining other milestones required for promotion and tenure. We present two examples of recently-formed gerontology research laboratories begun by junior faculty, one in the psychology department of a research university and one in public health at a teaching-focused university. Our case studies present the reader with specific examples, lessons learned, and guidance for starting their own gerontology research laboratory in higher education, whether as a physical or virtual space, as well as recommendations on maintaining its functioning during a global pandemic.

KEYWORDS

Research laboratory; social sciences; behavioral sciences; junior faculty; mentoring; student research assistants

Introduction

This paper describes the creation and ongoing maintenance of two gerontology research labs at two very different universities that both began as virtual communities, then graduated to physical lab spaces. By providing these case studies, we hope our experiences, lessons learned, and recommendations may assist other faculty in launching their own laboratories and introducing students to aging-related research, even if their university environment is not rich in resources. We argue that there are many (and often systemic) barriers to getting gerontology labs started, especially when housed within social science departments. By describing how we overcame such barriers, we suggest practices and provide recommendations that may assist other researchers in this important work that is invaluable to undergraduate and graduate gerontology education.

Although founding and managing an independent research laboratory is often expected of faculty at American universities, there are several barriers to successful completion of this

important task. Directing a lab is a complicated activity that involves decision-making regarding two very different sets of tasks: the scientific research (i.e. goals, research design, implementation, publications) and the human and financial project management (i.e. hiring, work assignments, grant-writing, budget management). Often (but not always), graduate students have received instruction, guidance, and real-world experience regarding the design and management of scientific experiments but are sorely lacking in the management of personnel and resources (Liston & Lesage, 2021). Experienced research faculty have reported that their graduate and post-graduate training did not prepare them to adequately deal with the many interpersonal, financial, and ethical issues that come with the successful and efficient management of a research laboratory (Resnik, Lee, Jirles, Smith, & Barker, 2021) Likewise, mentorship provided in graduate school may not have adequately prepared faculty for negotiating research lab space and/or startup funds during the hiring process for their faculty position, possibly making this daunting task even more difficult.

Part of the reason for these skill gaps is the lack of guidance in the literature regarding exactly how to go about starting and building a research laboratory. The guidance that does exist for faculty often focuses on running research labs in the physical and life sciences, such as engineering, astrophysics, or biological sciences which have very different space and equipment requirements than a gerontology lab (Nicholas, Trejo, & Termini, 2022; Rosenthal, Soignier, Barr, & Soper, 2019). This is largely due to the fact that many U.S. universities poured huge amounts of funding into the creation of such physical and life sciences in the second half of the 20th century, resulting in large labs full of equipment that need to be maintained (Videka, Blackburn, & Moran, 2008). The small body of published lab guidance in the “hard sciences” may be of limited practical use for gerontology labs, which are often located in departments for the social and behavioral sciences without such infrastructure. Other published literature in this vein focuses on postgraduate supervision tasks (see, for example, Ahern & Manathunga, 2004), which can be useful *after* a research lab has been started and has been maintained long enough to attract graduate students with their own research agendas and goals. However, there remains a gap in guidance regarding how to embark on the daunting task of founding a gerontology research lab.

Additionally, despite current aging trends, many universities do not adequately value gerontological scholarship when making financial decisions about institutional priorities. Increasing financial and other institutional struggles in higher education often result in reducing resources in areas that do not appear to attract the most students with their tuition dollars (Bass, 2013), where gerontology programs and their associated research labs may face budget cuts. Because many traditional college-aged students (18–23 years of age) are *not* considering careers in aging (Haron, Levy, Albagli, Rotstein, & Riba, 2013; Meiboom, de Vries, Hertogh, & Scheele, 2015; Ní Chróinín et al., 2013), the task of recruiting students to a gerontology lab may be more challenging than it is for other social science research pursuits.

Such a lack of institutional infrastructure, support, and guidance are significant concerns for junior faculty, who are often underprepared for the realities and challenges of starting a successful research lab while obtaining other milestones required of promotion and tenure (Howell, Harvey, & Aguiniga, 2023). These barriers pose a problem not just for faculty advancement but also for the students we serve, since a research lab can constitute a foundational component of a robust education. Studies show that when undergraduate

students obtain consistent, faculty-mentored research experiences early in their college careers, they are more likely to express interest in related professions and obtaining graduate degrees (Hernandez, Woodcock, Estrada, & Schultz, 2018; Russell, Hancock, & McCullough, 2007). Therefore, the development and maintenance of gerontology research labs may be one crucial way to increase the gerontological workforce by introducing aging careers and inciting enthusiasm among undergraduates.

To help address some of these barriers to the creation and ongoing maintenance of a gerontology research lab, we provide two case studies of aging-focused research labs at very different universities. Our experiences, lessons learned, and recommendations may assist other faculty in launching their own laboratories and introducing students to gerontology research.

Case studies

We present two examples of recently-formulated gerontology research laboratories begun by junior faculty, one in public health at an undergraduate-focused university and one in the psychology department of a research university. These laboratories began as virtual communities without physical spaces, as described below, but through increased visibility and funding have now become physical spaces at both universities.

The healthy aging lab at an undergraduate-focused university

The Healthy Aging Research Laboratory is located in an undergraduate-focused teaching university that receives Carnegie Community-Engagement Classification. The lead author (BH) received her PhD in 2017 and began this lab upon her arrival at the university in 2018. The lab's focus is to investigate the barriers and facilitators to healthy aging in the urban Circumpolar North. During her first semester, she located a small amount of funding available through her university's Center for Community Engagement and Learning to support one community-engaged student assistant (CESA). This university program awards small tuition scholarships to students who will engage in independent or faculty-led projects that involve a local community partnership. The first student research assistant (RA) worked on a community needs assessment through the local Aging and Disability Resource Center (ADRC) that established a meaningful university-community partnership that endures to this day. This first project received no other funding but produced actionable results for the future direction of research in this community. The RA presented her results to the ADRC, the local senior center, and at the university student research showcase. These efforts increased the visibility of BH's work, which led to more student interest and more funding opportunities. Utilizing the CESA program again the following semester, BH built a small cadre of dedicated undergraduate students and one graduate student with university mini-grants working on several small projects.

In addition to the CESA awards, BH was able to attract students by requiring work in her research lab as part of a new gerontology course she developed and began teaching in her second year at the university. Her new "public health for an aging society" course partnered public health students with advanced undergraduates in kinesiology to team-teach a health promotion program in a local senior living complex. This 10-week inter-professional, student-led program included weekly sessions with healthy aging curriculum

taught by the public health students followed by light physical activity taught by the kinesiology students and has been reported elsewhere (Howell, Redmond, & Wanner, 2021). As part of their course requirements, students completed ethics training modules (Braunschweiger & Hansen, 2010), were listed as key personnel on the IRB protocols, received training on the program, delivered the curriculum in the community, and helped parse through the resulting data. Students reported greatly appreciating the opportunity to participate in research so early in their college careers; several of them presented their work at local conferences and one undergraduate student coauthored the journal article describing this service-learning class research project. Integrating research into the classroom was a crucial factor for establishing the research lab and increasing its visibility throughout the university.

During the first two years BH formalized the group of student RAs and (mostly unfunded) research projects into the Healthy Aging Research Lab by creating a website that showcased the RAs, their interests, and the lab's current and past research projects, and by holding regular lab meetings. The RAs had all been working on different projects, so bringing them together for lab meetings was an enjoyable experience that gave the RAs a sense of identity as researchers and the lab a feeling of cohesion. In the beginning, the lab meetings focused on project work assignments and task prioritization. By year three, as the research funding and project teams got larger, these lab meetings also began to include teaching general research skills, like holding workshops on qualitative research methods and coding interviews, along with career planning and discussions about graduate school. Select undergraduate and graduate RAs were also provided several opportunities to coauthor journal articles (Howell, Redmond, & Wanner, 2021; Howell, Seater, Davis, & McLinden, 2020; Howell, Seater, & McLinden, 2021; Verbruggen, Howell, & Simmons, 2020).

When the COVID-19 pandemic halted in-person opportunities on campus, the lab was able to shift to virtual meetings via Zoom. Virtual meetings ended up unexpectedly *increasing* participation for RAs to call in when they were otherwise unable to leave home and/or during work breaks, avoiding scheduling conflicts that would have caused them to miss the in-person meetings altogether. Shifting the lab meetings to virtual sessions also increased the accessibility of the lab's research opportunities to involve RAs who did not live in the immediate campus vicinity (i.e. distance education students) or meeting during Alaska's many unpredictable weather events. Even after the immediate threat of COVID-19 waned, the lab members elected to hold all of their meetings with a virtual Zoom option for those who could not make it in to campus.

In year four, once several projects were in progress and some had been completed, BH applied for funding to formalize the physical lab space. Previously, the RAs had been working on borrowed computers in the department or at home, and having lab meetings in empty classrooms or conference room spaces. Focus groups and other research activities had all occurred off-campus and in the community. Since the university received a National Institutes of Health (NIH) Institutional Development Award (IDeA, a program to expand the geographic distribution of NIH funding for biomedical and behavioral research in rural and medically underserved communities), BH received funding in 2022 to set aside a cubicle space in the office and purchase a new computer, books, software, and equipment for the lab. The Healthy Aging Lab equipment includes stadiometers, scales, and tape measures for anthropometric measurements as well as a variety of items for administering

fitness tests, such as light hand weights, traffic cones, folding chairs, stopwatches, rulers, and timers. BH has since received National Institute on Aging funding for an R15 healthy aging project to expand the research opportunities for undergraduate students at this university through her lab.

BH was able to build a research laboratory by starting with small research projects, incentivizing students in her courses to get involved in the lab, and locating small pots of money spread throughout the university to establish a research program that built into larger, funded projects that required a physical lab space. Key components of the success of the Healthy Aging Research Lab were embedding research into the classroom to grow the pool of RAs working in the lab and creating a sense of identity among students as members of a cohesive lab. These activities helped to increase the profile of the lab throughout the university.

The cognitive flexibility lab at a research university

In contrast, the CogFlex Laboratory is located in the same state but in a Carnegie R2-classified university that grants doctoral degrees and has high research productivity. The second author (JP) began recruiting student research assistants in Fall 2017 as a junior faculty member. This was the second lab JP started since joining the faculty in the spring of 2016 (the first being a co-led lab with a focus on nature and psychological well-being with a senior faculty member). JP implemented many of the same strategies used in the Nature Lab (Jennifer & Sheppard, n.d) but with an emphasis on cognitive and healthy aging. JP used an early immersion model, where RAs were brought into the lab during the idea-stage because this had been successful in Nature Lab. Three unfunded undergraduate RAs were recruited from an upper division psychology course to work on a project to define healthy aging and well-being among residents of the local community. This started with a general discussion on aging between the faculty member and RAs, a narrowing of topic ideas, and an initial project idea. Students read and discussed research articles before assisting in the design of the lab's pilot study from its inception. JP provided scaffolded learning opportunities to all RAs to assist in the literature review and proposal preparation process (see, for example, Fisher & Justwan, 2018). Scaffolding is a way for faculty to break down complicated concepts into smaller, more manageable tasks that progressively build upon previous learning over time so that students' progress toward greater understanding and independence in task completion.

Students received hands-on experience in late 2017 collecting and analyzing semi-structured interview data from older adults in the local community. After data collection, manuscript preparation began simultaneously while designing the next project utilizing student volunteers. Each semester, new RAs joined the lab and some left, but several students continued to work on projects even after departing the university. The first FlexCog lab paper published was coauthored with two of the founding RAs after their graduations in Spring 2020 (Peterson, Baumgartner, & Austin, 2020). Lab membership consists of six to twelve RAs per semester; there were no requirements for joining the lab other than an interest in understanding age-related changes in cognition and behavior. JP continues to meet with interested students to determine their interests and potential fit with the lab prior to induction. Lab members have included students from a variety of majors with diverse experiences.

FlexCog Lab met weekly as a large group to discuss plans, provide project updates, and conduct professional development sessions. Additionally, small work groups, called “production meetings” were held each week to work on particular projects. Prior to COVID-19 restrictions, these meetings were largely face-to-face with distance RAs joining via video. In year 2019, JP obtained a physical lab space, equipped with four (slightly outdated) computers and surplus equipment and furniture. This lab space is a large room with walls lined with desks, computers, file cabinets, and bookcases. There is also a large round table in the center of the room where meetings and brainstorming sessions are held. More recently, due to COVID-19, meetings have been virtual for all RAs with discussions taking place via video as well as collaboration using Google Docs for real-time edits to documents. Similarly, to BH, JP has found that moving to fully online meetings has increased participation in the lab overall and attendance at group meetings. This is largely due to the ease of recruiting distance and rural students who could not otherwise attend physically. The lab members have elected to continue meeting virtually and this is likely to continue for the foreseeable future.

JP has utilized funding provided by the university’s office of Undergraduate Research and Scholarly Activity (URSA) to fund most projects for FlexCog lab. JP received mentor awards in 2017, 2019, and 2021, each providing a small amount of funding for a different study in the lab. These funds were used for small fellowships for RAs, incentives for participants, and travel costs for presenting at a regional conference. Fellowship funds for students have specific enrollment requirements, therefore, most RAs remain unfunded and are either considered volunteers or use their time in the lab for independent research credits that can count toward their degree requirements (for Psychology majors).

Student RAs attend and present research at the Western Psychological Association Convention each year. During its first year, FlexCog Lab received the Dean’s Choice Award for the College of Liberal arts at the URSA undergraduate research day presentation and competition. FlexCog Lab regularly participates in community service with local agencies, such as Aging at Home Fairbanks. This volunteer service includes educational and interesting guided discussions on various topics relating to our research or overall healthy practices.

JP has established a sustainable, productive lab that provides opportunities for distance and local students to participate in research. These opportunities have been largely funded by small internal awards or students seeking independent research credits. The research lab continues to grow as members seek external funding.

Lessons learned & recommendations

Setting up these two gerontology labs has presented us with experiences and lessons learned that we hope can help other faculty to set up their own laboratories, whether they be virtual or physical spaces, as well as how to maintain the lab’s functioning during a global (COVID-19) pandemic (see [Figure 1](#)).

Determining the scope of the lab

It may be difficult for new faculty to narrow down their research interests into the scope of a single lab. For example, JP actually began her faculty career pursuing a different research

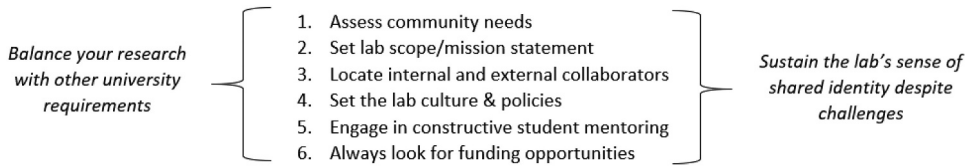


Figure 1. Summary of recommended steps for founding a gerontology research lab.

focus but quickly found the need to expand her pursuits in gerontology. This resulted in her founding and running two research labs, which we do *not* recommend for junior faculty. JP can say in hindsight that the workload required is extensive and not effectively sustainable. Therefore, focusing your research interests is essential to the creation of an effective and sustainable lab.

It is recommended that new faculty determine the mission statement of their labs as early as possible. Both of us engaged in this process with our undergraduate RAs based on early research and feedback from the community. Needs assessments and focus groups with older adults revealed several important and gerontologically interesting avenues that were honed and crafted into mission statements. To create a lab mission statement that will be sustainable and help you plan future research projects, summarize the goals of your lab. This may include envisioning where you would like to see your research taking you (and your students) in 5 years.

Eric Lavigne (2019) recommends thinking about four dimensions to narrow down your research trajectory: passion, skillset, feasibility, and “zeitgeist.” Your personal passions in gerontology may or may not align with the zeitgeist, or what the field of gerontology is currently passionate about. We recommend looking for intersections between your personal passions and those of the field, which are often demonstrated by recent publications and funding opportunities. For example, if there appears to be a lot of funding in Alzheimer’s Disease and Related Dementias (ADRD) research, are there ways to position your lab to capitalize on those funding opportunities? In such considerations, you should also weigh what is feasible and possible at your institution. Be aspirational and reasonable at the same time, accounting for your other university requirements.

Finding collaborators

It is also helpful to form relationships with a variety of people at your institution to get your research lab off the ground and running smoothly. This includes staff in the Office of Sponsored Programs (OSP) and Human Resources (HR). Many institutions have an Office or Division of Sponsored Programs that handles grants and contracts. Relationships with staff in this office are imperative because they help with funding opportunities, proposal development and submission, regulatory compliance, and grant management. Kathy Barker (2010) recommends introducing yourself and your potential projects to OSP staff before you apply for grants to aid this office in the planning process. Likewise, forming relationships with HR is key since these staff members will help you hire, pay, train, and maintain your RAs and other lab staff. We have found that new student employees in your research lab may have a lot of questions about filling out their timesheets, when they get paid, and

how to interpret their pay stubs, which may be mentorship tasks that you have time to take on, but most likely these issues are best addressed by HR staff.

Relationships should also be formed with other researchers within and outside of your institution to increase faculty support for your lab. These may be faculty across the university in closely related fields or faculty whom share a close physical proximity to your office or new lab. We recommend faculty look up their new colleagues within and across their department and college to see who else might be doing aging-related work. In our experience, few other researchers are explicitly working as gerontologists, so sometimes colleagues need a “nudge” to realize their work may line up with yours. Conversations over coffee or lunch can be productive ways to get to know your colleagues on a personal level as well as determining how your research interests may align, now or in the future. If it feels comfortable to you, do not be afraid to “cold call” or e-mail a stranger at your university to introduce yourself and your work. In fact, that is how we got to know each other! Interdisciplinary teams may also increase the number of students who are exposed to gerontological research across the institution while increasing scholarly productivity and the quality of work (Flaherty & Bartels, 2019). Such faculty collaborations also serve as important role modeling opportunities for students to see effective interprofessional teamwork, which is increasingly being emphasized for the provision of comprehensive services for older adults (Long et al., 2017). We also recommend faculty consider reaching out to researchers at other universities with similar research interests at conferences and professional association meetings.

Lastly, but maybe most importantly, community relationships are also fundamental to research. We have spent many hours volunteering at local senior centers and services provider agencies to form the necessary connections to create the trusted relationships for long-lasting research partnerships. Faculty who are starting a research lab might begin by getting their RAs involved in community-based or needs-assessment work at local agencies that can help you set your lab’s research priorities and forge these important community relationships. Once some community relationships have been created, faculty may also consider formalizing a community advisory board (CAB) of local stakeholders who can serve as advisors and co-creators of research priorities. Such groups of older adults can provide intergenerational learning opportunities to faculty and RAs, share in decision-making, and help to foster genuine community engagement with the research lab (see, for example, Mitchell et al., 2020).

Setting the culture of the laboratory

Once the scope of the lab has been determined, it is never too early to begin considering how you want your lab to operate and what values will be emphasized. Creating a positive environment where all team members are valued and supported is essential. The research lab should be a safe environment where diverse opinions are valued and integrity is modeled by others and required of all personnel. The mission statement can help provide motivation for the kind of research the lab will focus on, but there are several additional ways new lab directors can set the tone for the lab culture. Setting clear expectations for yourself and your RAs is a good first step to ensuring that everyone succeeds. Some projects require teamwork while others may focus on developing RAs into independent researchers, so be sure to ask each student what their goals are for joining the lab and for the project they are working on.

By determining what your RAs goals and expectations are, you can be clearer when you articulate your own expectations. We recommend meeting with each student individually and using an Individual Development Plan. Researchers can tailor an Individual Development Plan (IDP) found online to fit the needs of their lab (see, for example, the IDP plan from Stanford University, 2022). These forms are often used to set goals and expectations between mentors and mentees and we have found that they work wonders for setting laboratory expectations and goals with RAs. These documents can also serve as a syllabus for documenting student goals and accomplishments as is often required for further education or career opportunities.

Faculty researchers should create written documents explaining lab policies and expectations for RAs (see, for example, https://www.uaa.alaska.edu/academics/college-of-health/departments/population-health-sciences/healthy-aging-lab/_documents/research-agreement.docx). These documents function to orient new RAs as well as codify important components of research in your lab, like timeliness, ethics, and performance expectations. These policies and procedures can outline ways that the lab will stay working and functional and outline important resources for when questions or problems arise (see <https://brl.mit.edu/researcher/lab-policies/> for an example of a larger lab's policies). If you choose to create such documents, also consider specifying the consequences for *not* following lab policies. You can help reinforce these lab policies by being a role model. If your lab policy states that respectful communications are expected, you must also engage in respectful communications in the lab. This may sound obvious, but the ways you interact with your new RAs greatly influence how they will interact with you and with others. We have found it important for our RAs to also observe us interacting with older adults and to see us working just as hard in the lab as they do.

An additional aspect of the lab culture to consider is the importance of research timing. It is a good idea to have several research projects in various stages of completion at any given time to reduce the risk of “dead-time.” Learning to balance the demands of two or three studies at a time requires organization and a great deal of time management. We now each regularly have a study in the design phase, one in data collection, and/or one in the analysis or write-up phase simultaneously; however, this was not the case when we first began our research labs. Remember to start slowly, beginning with a needs assessment-type project to get started, and plan for simultaneous projects in the future, if possible. Timing is also important because most major professional associations require abstracts to be submitted many months in advance of the conference. If projects are not conducted on a rotating basis, it is easy to miss an abstract submission; attending conferences is often a requirement that demonstrates productivity.

Ongoing student mentoring

Closely related to the maintenance of a healthy lab culture is effective and constructive mentorship of student RAs in your lab. Often the hallmark of a well-functioning research lab is the constant and steady stream of RAs in and out of its doors, many of whom will only be there a short while before they graduate. This makes it feel like there is a lot of student “turnover” that needs to be managed. However, we like to reframe the negative connotations of that word to more accurately view our student RAs as “passing through” on their academic careers. When RAs work in and then pass through the lab, faculty are mentoring

them on a variety of research and life skills, like meeting deadlines, teamwork, and respectful communication. Additionally, trained RAs are able to help orient and train the newest cohort of RAs into the lab. For example, JP recruits yearly to help ensure there are experienced RAs in the lab when new ones come in. These new students can learn from more experienced RAs and by the end of the year, they act as “replacements” on research projects for students who graduate. It is also important to reflect on the values, culture, and research experiences of the lab setting to determine if student turnover reflects the natural movement of students through their academic careers or if there are additional issues to address. It is recommended that faculty evaluate their efforts and survey outgoing RAs to determine if the lab is welcoming and inclusive and what can be done to improve student experiences.

Mentoring student RAs can be time-consuming, but if a lab is composed of students with different skill-levels they can serve wonderfully as effective peer mentors. Both JP and BH spend many hours each month mentoring RAs on various aspects of research. We have found that peer mentors are extremely useful in helping the faculty member be more effective and students benefit from the interaction with their peers. RAs who have worked as part of the lab for at least one semester can provide additional guidance and act as a role model for new students. We often stress to our students that working in teams is an essential research skill, which is aptly demonstrated when a more experienced RA is able to teach a new student how to perform a task.

There is much in the research literature about how to effectively mentor undergraduate and graduate student RAs in a variety of research fields, so we will not take this time to suggest we are experts here. Instead, researchers may want to tap into this literature (see, for example Blieszner, 2020; Rooks, Mingo, & Mingo, 2021) or one of the many research mentoring networks for more specific support and guidance (such as <https://cimerproject.org/>). Our next steps include systematically gathering and analyzing feedback from RAs about their experiences receiving research mentorship in the lab and any areas for future development, a process by which all lab directors may derive benefit.

Balancing research and other university requirements

This may already sound like a lot of work considering faculty members (especially junior ones) find that balancing the many demands of academia to be challenging (Owens, Kottwitz, Tiedt, & Ramirez, 2018). Expectations vary greatly between universities, colleges, and work units; however, one thread remains the same: junior faculty are expected to be productive. Both BH and JP started with the expectation of contributing 20% of their workloads to pursuing research. This percentage is a small contribution given the time required to establish a productive and vibrant lab environment. In addition to conducting research and publishing findings, we were expected to include undergraduate students in our research, which adds substantially to one’s mentorship and teaching load.

At our respective universities, our tripartite faculty appointments require teaching and university service in addition to our research, which is common at many universities. It is often essential to advance in the tenure process by going above and beyond the basic requirements of one’s workload. Finding time for recruiting student RAs, forming relationships, designing research, conducting studies, writing manuscripts, and so forth can be extremely challenging and time-consuming when balanced with the requirements of

university teaching and service. As mentioned above, one way we recommend working on research and teaching goals at the same time is to assign community-based projects as required components of the courses you teach. This creates a bit more up-front work for you, but it allows you to run a research project, train your students as RAs, drum up interest in your research lab, and engage in research in your classroom, a high-impact teaching practice (AAC&U, 2022). Likewise, there may even be university service that can be considered a research and/or teaching opportunity so that you are economizing your efforts to check multiple boxes at a time (see for example, Howell, Buckingham, et al. n.d., and Howell, Harvey, & Aguiniga, 2023 for projects that qualified as research and service).

That being said, balancing the demands of a faculty position while starting a new research lab is hard and it is not always possible to “double dip” your research efforts. There will be times when a perfect research opportunity or collaboration falls into your lap but you just do not have the resources or time to take on that project. One of the skills that can help all academics, is mastering the art of saying “no” (see, for example, Fido, 2021). This is much harder for new, female, and underrepresented faculty members to do, but is an important aspect of maintaining a healthy work-life balance in the long-run.

Sustaining the lab despite roadblocks (such as a global pandemic)

As mentioned above, little funding and no physical space is required to get a small research lab (about 5 people) off the ground and running. We both began our labs without funding by soliciting interested students and beginning work on volunteer and community-based class projects. By talking about “the lab,” having RAs help to create lab policies, and having regular lab meetings (in-person or virtual), we suggest that research faculty are able to begin cultivating a sense of community before any funding or physical space has been obtained. Since much social science research, especially in these days of peri- to post-pandemic life, can be conducted outside of a physical lab space, the gerontology research lab in today’s world is more like an imagined community with shared research priorities. The RAs may conduct their work on campus or remotely, but research faculty should strive to maintain a sense of community regardless of where the work occurs.

This may have been difficult for some gerontologists to accomplish during the COVID-19 pandemic, where early and consistent messaging focused on the vulnerability of older adults. This may have led many researchers to wonder how they could possibly continue their work with a research population that was considered to be at increased susceptibility to the virus. We suggest that the pivot we all made to online learning during that time has taught us much about pivoting our research. It may be more cumbersome with more barriers to think through, but many gerontologists were able to conduct meaningful research during this time. The resilience we all learned as faculty, students, and family members during the pandemic can help us to forge ahead when other roadblocks present themselves on the path to sustaining our (physical or virtual) research labs.

As the lab progresses through the years, it may get larger or obtain more funding. Lab managers or project managers may enter the mix; however, to keep up the momentum of a new lab, it is important for the research faculty to keep their finger on the pulse of the lab work. Kathy Barker (2010) writes that “leaving the bench is one of the biggest mistakes a new P.I. can make” (333), meaning that a faculty researcher should remain in contact with the research. Although others in the lab may be able to field the day-to-day tasks,

remembering to think through experiments and create hypotheses may be just as important for staying engaged in the research work as the paper and grant application writing tasks.

Conclusion

In this paper, we have provided two case studies of gerontology research labs that were created in very different university environments. These case studies serve to demonstrate that a research lab can begin with little to no funding or physical space requirements. By gathering interested students, incorporating research into your classroom, and starting small, you can be well on your way to developing a sustainable research lab. We recommend that faculty look for small, internal pots of funding to help conduct a community needs-assessment or other local project that can form the basis for your lab. The data from this initial project can help set future research priorities and provide you with invaluable experience working with student RAs.

Once you have a small number of RAs working in your lab (physically or virtually), you can work together on creating a lab community, setting the culture, and formalizing lab policies that will help train and orient future RAs. Working with others across the university, from research faculty to HR to the Office of Sponsored Programs to students outside of your discipline, helps to create a collaborative lab culture built on respectful communications that you can role model for your RAs. Modeling a healthy work-life balance is another way to ensure you are setting your RAs, and the lab, up for success. We recommend research faculty learn how to prioritize their academic workloads (this may mean saying “no” at times) and look into best-practices for student mentoring in their field to incorporate into their lab work. It is also recommended that once the lab becomes self-sustaining from larger grants, researchers remain engaged in the research for as long as possible.

The road to creating a research lab has not been smooth for either of us. We have experienced ups and downs and several hurdles that seemed insurmountable at the time. Like many other faculty, we apply for lots of grants and do not receive all of them. We propose the perfect new project idea but cannot get our community partners on board. We experience bewildering bureaucratic barriers both inside and outside of the university. We want all faculty to know that these experiences are normal in academia and do not need to constitute roadblocks to the creation of a research lab. By integrating some aspects of your university service and teaching into your research, you just might be able to check off two or three boxes at a time on your road to tenure and promotion in academia while building a research lab in the process.

Acknowledgements

Partial financial support for the Healthy Aging Research Laboratory was provided by the University of Alaska Anchorage Center for Community Engaged Learning and an Institutional Development Award (IDeA) from the National Institute of General Medical Sciences of the National Institutes of Health (NIH) under grant number 2P20GM103395.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

The work was supported by the National Institutes of Health [2P20GM103395]; Center for Community Engagement and Learning, University of Alaska Anchorage .

ORCID

Brittney M. Howell  <http://orcid.org/0000-0002-9724-5367>

References

- AAC&U. (2022). *High-impact practices*. American Association of Colleges and Universities. <https://www.aacu.org/trending-topics/high-impact>
- Ahern, K., & Manathunga, C. (2004). Clutch-starting stalled research students. *Innovative Higher Education*, 28(4), 237–254. doi:10.1023/B:IHIE.0000018908.36113.a5
- Barker, K. (2010). *At the helm: Leading your laboratory* (2nd ed.). Cold Spring Harbor, NY: Cold Spring Harbor Laboratory Press.
- Bass, S. A. (2013). The state of gerontology--opus one. *The Gerontologist*, 53(4), 534–542. doi:10.1093/geront/gnt031
- Blieszner, R. (2020). Enacting generativity, sustaining gerontology through mentoring. *Gerontology & Geriatrics Education*, 41(4), 388–389. doi:10.1080/02701960.2020.1767099
- Braunschweiger, P., & Hansen, K. (2010). Collaborative institutional training initiative (CITI). *Journal of Clinical Research Best Practices*, 6, 1–6.
- Fido, D. (2021). *How to say no – and do it successfully*. Times Higher Education. <https://www.timeshighereducation.com/opinion/how-say-no-and-do-it-successfully>
- Fisher, S., & Justwan, F. (2018). Scaffolding assignments and activities for undergraduate research methods. *Journal of Political Science Education*, 14(1), 63–71. doi:10.1080/15512169.2017.1367301
- Flaherty, E., & Bartels, S. J. (2019). Addressing the community-based geriatric healthcare workforce shortage by leveraging the potential of interprofessional teams. *Journal of the American Geriatrics Society*, 67(S2), S400–408. doi:10.1111/jgs.15924
- Haron, Y., Levy, S., Albagli, M., Rotstein, R., & Riba, S. (2013). Why do nursing students not want to work in geriatric care? A national questionnaire survey. *International Journal of Nursing Studies*, 50(11), 1558–1565. doi:10.1016/j.ijnurstu.2013.03.012
- Hernandez, P. R., Woodcock, A., Estrada, M., & Schultz, P. W. (2018). Undergraduate research experiences broaden diversity in the scientific workforce. *BioScience*, 68(3), 204–211. doi:10.1093/biosci/bix163
- Howell, B. M., Buckingham, S. L., King, C., & Kelly, T. (n.d). “A little bit fun, a little bit frustrating.” Utilizing photovoice to document student responsibility during a global pandemic. *Educational Action Research*, .
- Howell, B. M., Harvey, H., & Aguiniga, D. M. (2023). Creating and improving a faculty learning community for community-engaged research at a mid-sized, open-enrollment university. *Journal of Higher Education Outreach and Engagement*, accepted.
- Howell, B. M., Redmond, L. C., & Wanner, S. (2021). “I learned that i am loved”: Older adults and undergraduate students mutually benefit from an interprofessional service-learning health promotion program. *Gerontology & Geriatrics Education*, 42(2), 252–267. doi:10.1080/02701960.2020.1791104
- Howell, B., Seater, M., Davis, K., & McLinden, D. (2020). Determining the importance and feasibility of various aspects of healthy ageing among older adults using concept mapping. *Ageing & Society*, 42(6), 1403–1421. doi:10.1017/S0144686X20001580
- Howell, B. M., Seater, M., & McLinden, D. (2021). Using concept mapping methods to define “healthy aging” in Anchorage, Alaska. *Journal of Applied Gerontology*, 40(4), 404–413. doi:10.1177/0733464819898643

- Jennifer, R. P., & Sheppard, D. (n.d). New faculty research model: The power of early student immersion in the research process. *Prep*.
- Lavigne, E. (2019). Defining a research trajectory. A calm place. <https://acalmplace.org/impostor-syndrome/2019/10/13/defining-a-research-trajectory-ii>
- Liston, A., & Lesage, S. (2021). Starting your independent research laboratory. *Stroke*, 52(8), e520–522. doi:10.1161/STROKEAHA.121.035333
- Long, P., Abrams, M., Milstein, A., Anderson, G., Apton, K. L., Dahlberg, M., & Whicher, D. (2017). *Effective care for high-need patients*. Washington, DC: National Academy of Medicine.
- Meiboom, A. A., de Vries, H., Hertogh, C. M. P. M., & Scheele, F. (2015). Why medical students do not choose a career in geriatrics: A systematic review career choice, professional education and development. *BMC Medical Education*, 15(1), 101. doi:10.1186/s12909-015-0384-4
- Mitchell, J., Perry, T., Rorai, V., Ilardo, J., Lichtenberg, P. A., & Jackson, J. S. (2020). Building and sustaining a community advisory board of African American older adults as the foundation for volunteer research recruitment and retention in health sciences. *Ethnicity & Disease*, 30, 30. doi:10.18865/ED.30.S2.755
- Nicholas, D. A., Trejo, J. A., & Termini, C. M. (2022). Building a laboratory and networks during the COVID-19 pandemic. *Trends in Biochemical Sciences*, 47(9), 725–727. Elsevier Ltd doi:10.1016/j.tibs.2022.04.012
- Ní Chróinín, D., Cronin, E., Cullen, W., O’Shea, D., Steele, M., Bury, G., & Kyne, L. (2013). Would you be a geriatrician? Student career preferences and attitudes to a career in geriatric medicine. *Age and Ageing*, 42(5), 654–657. doi:10.1093/ageing/aft093
- Owens, J., Kottwitz, C., Tiedt, J., & Ramirez, J. (2018). Strategies to attain faculty work-life balance. *Building Healthy Academic Communities Journal*, 2(2), 58. doi:10.18061/bhac.v2i2.6544
- Peterson, J. R., Baumgartner, D. A., & Austin, S. L. (2020). Healthy ageing in the far North: Perspectives and prescriptions. *International Journal of Circumpolar Health*, 79(1). doi:10.1080/22423982.2020.1735036
- Resnik, D. B., Lee, E., Jirles, B., Smith, E., & Barker, K. (2021). For the “good of the lab”: Insights from three focus groups concerning the ethics of managing a laboratory or research group. *Accountability in Research*, 1–20. doi:10.1080/08989621.2021.1983799
- Rooks, R., Mingo, C., & Mingo, C. (2021). Diversity, equity, and inclusion in gerontological research mentoring and methodologies. *Innovation in Aging*, 5(Supplement_1), 235. doi:10.1093/geroni/igab046.908
- Rosenthal, G. T., Soignier, R. D., Barr, J. E., & Soper, B. (2019). Do not pet the crawfish: Starting an invertebrate behavioral lab. *North American Journal of Psychology*, 21(4), 769.
- Russell, S. H., Hancock, M. P., & McCullough, J. (2007). Benefits of undergraduate research experiences. *Science*, 316(5824), 548–549. doi:10.1126/science.1140384
- Stanford University. (2022). *Individual Development plan and mentoring*. Office of Postdoctoral Affairs. <https://postdocs.stanford.edu/faculty-mentors/individual-development-plan-and-mentoring>
- Verbruggen, C., Howell, B. M., & Simmons, K. (2020). How we talk about aging during a global pandemic matters: On ageist othering and aging ‘others’ talking back. *Anthropology & Aging*, 41(2), 37–51. doi:10.5195/aa.2020.277
- Videka, L., Blackburn, J. A., & Moran, J. R. (2008). Building research infrastructure in schools of social work: A university perspective. *Social Work Research*, 32(4), 294–301. doi:10.1093/swr/32.4.294