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Chapter 15- Funding the Mentoring Program

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FUNDING THE MENTORING PROGRAM

Monica Castañeda-Kessel

Abstract

Chapter 15, *Funding the Mentoring Program*, provides essential resources for allies who want to implement or enhance their existing mentoring programs. Contextually, the discussion of funding opportunities is framed within the formal and informal mentoring language with one caveat. Informal mentoring program funding does not mean that the funding is easy to acquire or not rigorous to implement. Informal mentoring has strategic advantages for developing employee expertise and other desirable skills. Formal mentoring is the most prevalent type and had organizational advantages of scale. This chapter is composed of four sections. First, a brief overview of the theoretical and methodological frameworks. Second, the chapter guides decision-makers through six steps for identifying mentoring program funding. The six steps of mentoring program funding include,

Step 1: Identify the goals of the mentoring program or mentor and mentee relationship

Step 2: Match goal and mentoring funding organization program

Step 3: Assess the levels of commitment required

Step 4: Align the mentoring plan with organizational goals

Step 5: Identify and apply for mentoring program funding

Step 6: Implement the mentoring plan in stages for funding

Examples of how this may occur are provided to identify a range of contexts where mentoring program funding can propel programming outcomes. Third, a modified rapid review is included for mentoring program funding opportunities between 2017 and 2021. The rapid review demonstrates *significant* federal and nonprofit funding available for mentoring that can be leveraged for students,

faculty, and staff. The fourth and final section concludes the chapter and focuses on future directions in mentoring program funding.

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Mentoring is a dynamic process that can be life-changing for both mentors and mentees. Mentoring programs offer opportunities for students to improve goal-setting and self-reflection, for staff to develop their self-confidence and technical skills, and for faculty to strengthen their cross-organizational knowledge and network-enabling capabilities. Organizations of all types have vested interests in supporting mentoring as a proactive "best practice" because the outstanding outcomes, professional development, student scholarship support, internships, and opportunities to conduct research in unique facilities can be costly. These factors or the lack thereof can create a type of deficit thinking about the potential funding available for mentors/mentees and the opportunities for engaging with the larger research and development ecosystem.

While I am not advocating that program coordinators and other stakeholders partake in every funding opportunity, there has been a need to make stakeholders, program coordinators, mentors, and mentees aware of the possibilities. I have mentally connected the analogy that Ruiz (1999), in the *Mastery of Love: A Practical Guide to the Art of Relationship*, used to describe emotional resources in interpersonal relationships and funding development approaches. There were similarities in how higher education approached development. Expectations have been problematic or helpful, depending on one's perspective. Suppose someone did not know there was a potential buffet of opportunities, and they only ever thought there was pepperoni pizza or a single type of opportunity. In this case, what they sought, they found. It was through this lens that they looked for funding during their search. The same has been true for academic resources. For many, the glass has been perceptually and perennially half empty in academia.

Similarly, this singular way of looking at opportunities has been true in fundraising and development. If one only thought that there were a few grants per year from a couple of federal agencies and foundations, then that is all one would find for mentoring programs. The seeker might be anxious or discouraged by their fund rates or areas of interest. Many people recognize that federal funding is highly competitive and typically takes several months (i.e., 6 to 9 months) to hear back on the award. Others turn to private sources but are unsure where to look, whom to connect with, or how to get connected. Without guidance, the program coordinators, other vested faculty, and staff can quickly become discouraged when seeking program funding. In this chapter I aim to share with allies and potential stakeholders how grants from a variety of organizations could potentially fund mentoring programs and to share information about the landscape for funding.

In addition, I want to share the magnitude of public and private support for mentoring program funding in STEM and non-STEM areas. I am actively encouraging decision-makers such as program coordinators, administrators, and other stakeholders to expand their internally funded programs or plan to start one using a combination of hard and soft funding. Hard funding refers to institutional monies, and soft funding is comprised of grants. This chapter has been segmented into four parts: (a) theoretical frameworks, (b) describing the six steps for identifying mentoring program funding, (c) providing a rapid review of public and private mentoring program funding opportunities from 2017 to 2021 to help readers understand the breadth of what is available, and (d) a conclusion and reflection on what the future directions in mentoring program funding might be.

Theoretically, the chapter has been framed using systems theory and ecological systems theory (EST). The rapid review is based on genre theory. Grant funding has genre-related conventions and nuances. My goal is to shift thinking about mentoring programs systemically from incremental parts to a holistic vision by elucidating the unknown or unarticulated elements of the academic research development ecological system (ARDES; i.e., types of funding possibilities in the system) (Castañeda-Kessel, 2021) for mentoring programs. Tricco et al. (2018) indicated that scoping reviews are used for various purposes, including examining the "size, variety, characteristics, and the potential for undertaking a larger investigation" (p. 467). I used a rapid review to examine the potential mentoring program funding available in STEM and non-STEM areas at the scoping review level of granularity. I used a balanced approach in my review because funding mentoring programs has been an essential area to explore for all students, staff, and faculty. Everyone has the potential to benefit from mentoring.

Theoretical Frameworks

Three theories guide this chapter theoretically and methodologically. The first is systems theory (ST), a cross-disciplinary theory that allows individuals to look across multiple systems to place themselves in context. It enables potential users of the chapter to begin to understand and examine elements and "dynamics of . . . systems to interpret problems and develop balanced intervention strategies to enhance 'goodness of fit' between individuals and their environments" (Friedman & Neuman Allen, 2011, p. 3). This theoretical framework allows individuality and context for the mentoring funding need as people discussed developing their mentoring funding plans. In addition, it allows decision-makers to look across a university to identify potential clusters of mentoring and mentoring supports.

Brofenbrenner (1979, 1986) and Bluteau et al. (2017) described ecological systems theory (EST) levels of macrosystem, mesosystem, microsystem, exosystem, and the chronosystem as critical scaffolds for examining the mentoring funding opportunities that affect the developing individual. Castañeda-Kessel (2021) articulated the ARDES elements in academia based on the EST. They will be utilized to discuss the identification of mentoring funding resources for mentors and mentees. Organizationally, stakeholders could decide to leverage internal support with external funding toward collective mentoring supports or mentoring programs to benefit a particular group of major-specific or underserved students.

Finally, genre theory guided the rationale for conducting a mentoring funding opportunity rapid review. "Notably, grant proposals are not limited to academic institutions; the analyses of 'rhetorical moves' have been studied in both academic settings and non-profit arenas" (Christensen, 2011; Connor & Mauranen, 1999; Swales, 1981; Swales, 1990, as cited by Castañeda-Kessel, 2021, p. 152).

Six Steps for Identifying Mentoring Program Funding

Mentoring program funding is considered elusive in academia despite the high efficacy of mentoring in various fields. Six steps are described for identifying mentoring program funding opportunities within context to help proactively address the need to implement and support critical mentoring programming. Naturally, some mentoring programs that were already implemented will have different strategies. Throughout the cycles, I provide examples of formal mentoring or program-based strategies to support program coordinators and other decision-makers seeking pragmatic recommendations. I

also provide informal mentoring examples directed at individual personnel attempting to support students or other academic members mentoring as allies.

The six steps for identifying mentor funding can be used by anyone who wants to engage in a mentor/mentee relationship. Although the process is universal, the outcomes will not be due to each mentor's and mentee's unique goals. Other factors that might impact the mentoring program funding plan might be variables such as their strategies for seeking funding, time of year, location, funding support mechanism, embeddedness in a more extensive project or center, and the topic areas in which they seek funding. However, overall, the process has been envisioned as cyclical. Figure 15.1 provides an overview of the six steps.

Figure 15.1

Six Steps of Mentoring Program Funding
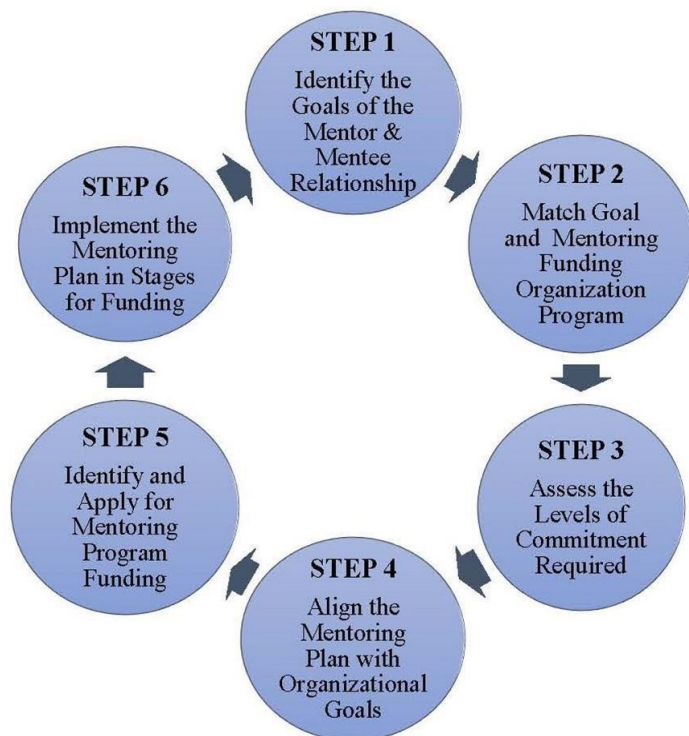
Step 1: Identify the Goals of the Mentoring Program or Mentor & Mentee Relationship

As an example of formal mentoring, nonprofit funding organizations like Northwest Area Foundation (NWAF) sought to build mentoring and overall capacity from the grassroots. Since 2012, NWAF has committed to allocating 40% of its annual giving to Native-led organizations to reduce economic poverty in six states. NWAF routinely met and often exceeded its goal. To date, it has given over $63.4 million to this single topic area (Walker, 2022). Their mission is accomplished through organizational mentoring tools like grantee data and feedback, culturally anchored models, supporting good jobs and financial capabilities, and collaboration with tribal governments and state and federal agencies (Walker, 2022). Native communities often mentor and share replication strategies with other native communities

as part of NWAF's grassroots models. It might be the perfect organization for Native American administrators, students, and stakeholders seeking to connect and be mentored by other Native American communities.

While this step might have seemed obvious, it was critical to identify potential topics or targets for seeking mentoring program funding. The reality was that mentors and mentees come from diverse backgrounds and have a variety of values and perspectives. Unsurprisingly, individuals bring their unique expectations to the mentor/mentee relationship. Importantly, Bozeman and Feeney (2008) suggest that one might strongly have considered "goodness of fit," in which there were both "optimal and minimal conditions" (p. 471). The mentor/mentee relationship has built capacity and interest for both parties by doing this thoughtfully. Some broad questions that might be helpful to ask are:

> Why did you select me to be your mentor/mentee?
> What are your greatest strengths? Weaknesses?
> Who have you learned the most from outside of your family and school?
> If you were an animated cartoon, who would you be? Why?

Informal mentoring has also been highly effective for graduate students and employees developing specialized expertise. One suggested area of focus was where there was an overlap of multiple interests that one wanted to develop. Once the areas of interest are identified, prioritize them to develop your top five target areas. These will become the initial search topics. For example, an aerospace engineering mentor I knew had two mentees that wanted to apply for external funding. They were different people (i.e., backgrounds, genders, abilities, skills) and had different interests and career goals. He discussed with each of them his area of expertise, his background, his network that he could leverage, and the amount of time he was willing to commit to developing their skills in their targeted areas. They, in turn, shared with him the areas of expertise within aerospace engineering that they hoped to develop individually. These resulted in vastly different priority lists and two different funding searches.

Step 2: Match Goal and Mentoring Funding Organization Program

Once program coordinators or mentors/mentees have identified an area of interest or ideally have prioritized targets, many people begin their search. Some use federal agencies without regard to winning rates or agency priorities. This tactic is inherently problematic because it does not account for the numerous variables influencing funding, particularly time and energy. In any case, one could examine prior awards and areas of interest.

Searching for funding has been a question that looms in many people's minds. Some have sought funding from federal agencies, while others seek funding from private foundations. Regardless, one may use free databases such as grants.gov or paid ones such as Grantforward to identify potential funding opportunities. There are many more, and the ones identified above are well known in academia and the nonprofit world. However, sometimes it may be helpful to step back and look at the overall funding for the area by an agency (i.e., awards or secondary data) to prioritize the efforts, particularly since many agencies and organizations have a variety of programs.

Then, using the information and the agency's program descriptions, a decision can be made about the program fit for the field and area of interest. If it does not fit, keep looking. If it does fit, then use the information to develop a one-page description of the idea for the mentor/mentee project within the project guidelines and contact the program officer if it is allowed. Most agencies and organizations encourage this because they could have told the applicant quickly if they were within the parameters of their priorities or the programmatic goals. Program officers often provide helpful and insightful advice. Unfortunately, some funders do not allow this, so check first.

An example of how an individual might match their student for informal mentoring program funding is to know their identified goals. Many agencies, such as the National Institutes of Health, require specific types of mentors. Others, such as the National Science Foundation (NSF), may ask the student to articulate why they want to be mentored in a specific field or how the university will help grow their career pathway. Many nonprofit foundations want to support a student through a process to serve in a specific field as a graduate or postdoctoral student (see Appendix Table 15.3). These all are considerations to juggle when discussing individual applications.

Organizationally, several universities, including the University of New Mexico and the University of Colorado, Boulder, overtly support the strategic applications of their students by holding workshops for significant national awards such as the National Science Foundation Graduate Research Fellowship Program (GRFP), which is awarded to 2,000 students nationally (NSF, 2022). A description of how the graduate student will benefit from being mentored by the principal investigator is required. Similarly, at the postdoctoral level, the NSF Earth Sciences Postdoctoral Fellowship (EAR-PF) is awarded to 12 students (NSF, 2021b). A postdoctoral mentoring plan is a required document. Both grants are awards taught by many universities that mentor their students through the application process. The University of New Mexico and the University of Colorado, Boulder, have both created YouTube videos to support graduate students applying for GRFP and other graduate funding (UNM, 2017; CU Boulder Life, 2020). Video is a replicable tactic that an institution may consider as a scaling strategy.

These are examples of organizational mentoring at scale, implemented by sharing with graduate students how to apply for the grants and potential strategies for making their applications more fundable. Why? Not only do the students benefit, but the universities and colleges do too. For every graduate or postdoctoral student funded, the institution potentially provides funding to another or accelerates their faculty's research. These efforts translate into headcount and innovation. Student workshop development intentionally delineates creating inclusive mechanisms versus gatekeeping of teaching and learning.

Step 3: Assess the Levels of Commitment Required

If one is looking for broad-based, strategic commitment related to formal mentoring, look at Cal-Bridge. This PhD STEM model has students who are 67% first-generation, 45% female, and 64% underrepresented minorities. The Cal-Bridge network has successfully engaged eight cohorts of students (Cal Poly Pomona, n.d. para. 1); Calpoly Pomona Fast Facts, 2021). Cal-Bridge is a statewide network of California State University, the University of California system, and community college campuses working collaboratively for students interested in "PhDs in physics, astronomy, computer science, computer engineering, or related fields" (Cal Poly Pomona, n.d). Underrepresented students

are selected from groups who "display strong socio-emotional competencies and academic potential and provide the support to matriculate" (Cal Poly Pomona, n.d. para. 1). Students accepted into the program sign a contract. Cal-Bridge Scholars receive intensive financial aid application support of up to $10,000 per year, joint CSU and UC faculty mentoring, professional development workshops, and summer research opportunities. The Cal-Bridge has been funded through various programs in the state of California and the National Science Foundation (ID#DUE-1741863; ID #AST-1636646; ID #AST-1836019; Cal Poly Pomona, n.d.). If you are interested, I encourage you to check out their forms and required deliverables on the website.

As the mentor/mentee considers their time and energy commitments over a future period of performance, they may encounter times when there are overlaps with other large projects. Before applying for mentoring program funding, it is essential to consider these items that might require travel, extensive authoring, training, or other onsite internships. Students and others sometimes have commitments such as proposal defenses, major campaign launches, or conferences that impact their workflow. These are helpful considerations prior to applying for mentoring program funding.

At times funders will acknowledge an anticipated fund date, or one might look at prior history. In either case, considerations of the volume and scope of the anticipated workflow between the mentor/mentee will be helpful as individual life events might impact them. Appropriate items and projects could be selected for these times of uncertainty. For example, one of the mentor/mentee goals is to publish more journal articles. A shared document can be created where both could check in and contribute, and if one were to become ill, the other could continue working while the other was rehabilitating. Both would know *a priori* what the goal of the literature review would be so progress could be made while one of them was rehabilitating. This also helps both have a shared purpose and reason to communicate when the world becomes disconnected.

Step 4: Align the Mentoring Plan with Organizational Goals

In Chapter 16, the AWARES program case study provides an example of how an organization has decided to formally mentor female science and engineering undergraduate students on essential skills they will need to succeed in their career pathway and the university. Sometimes, for people who have lived and worked in academia for several years, there has been a tendency to forget the machinations of the system that we operate. The AWARES program goals help students to (a) prepare women with the necessary career management skills to succeed and advance in engineering and science, (b) build the self-efficacy and confidence of women engineers and scientists to encourage perseverance in the workforce, and (c) provide opportunities for women to discover the value of mentorship and networking.

While this step might sound like Step 2, it is different; this is where the mentor and mentee go beyond matching their goals to a funder's program to writing an integrated plan. These will look different for every organization that it is applied to, and one should stick to their guidance. However, the applicant will generally need to describe the need or problem statement, work plan, timeline, outcomes, and why they are uniquely qualified for the funding. It may be helpful to put these snapshots in a shared folder so that items can be clarified and updated for each iteration. Organizationally, descriptions of major

equipment and facilities on campus can be helpful to early-career faculty. These may be housed in a centralized catalog of grant-writing resources for faculty and staff.

Step 5: Apply for the Mentoring Program Funding

Applying for mentoring program funding has been depicted in many ways. The Colorado School for Public Health (n.d.) has depicted the pre- and post-award process in a graphic on their website along with their Grant Management 101 Tool Kit. While many organizations have unique processes and software, the elements in Figure 15.2 are essential elements in the mentoring program funding submission process to discuss in either informal or formal mentoring and other grant development and management. These components will become the stepping stones for applying for and implementing mentoring program funding.

Figure 15.2

Grant Writing Process Pre- and Post-Award Elements
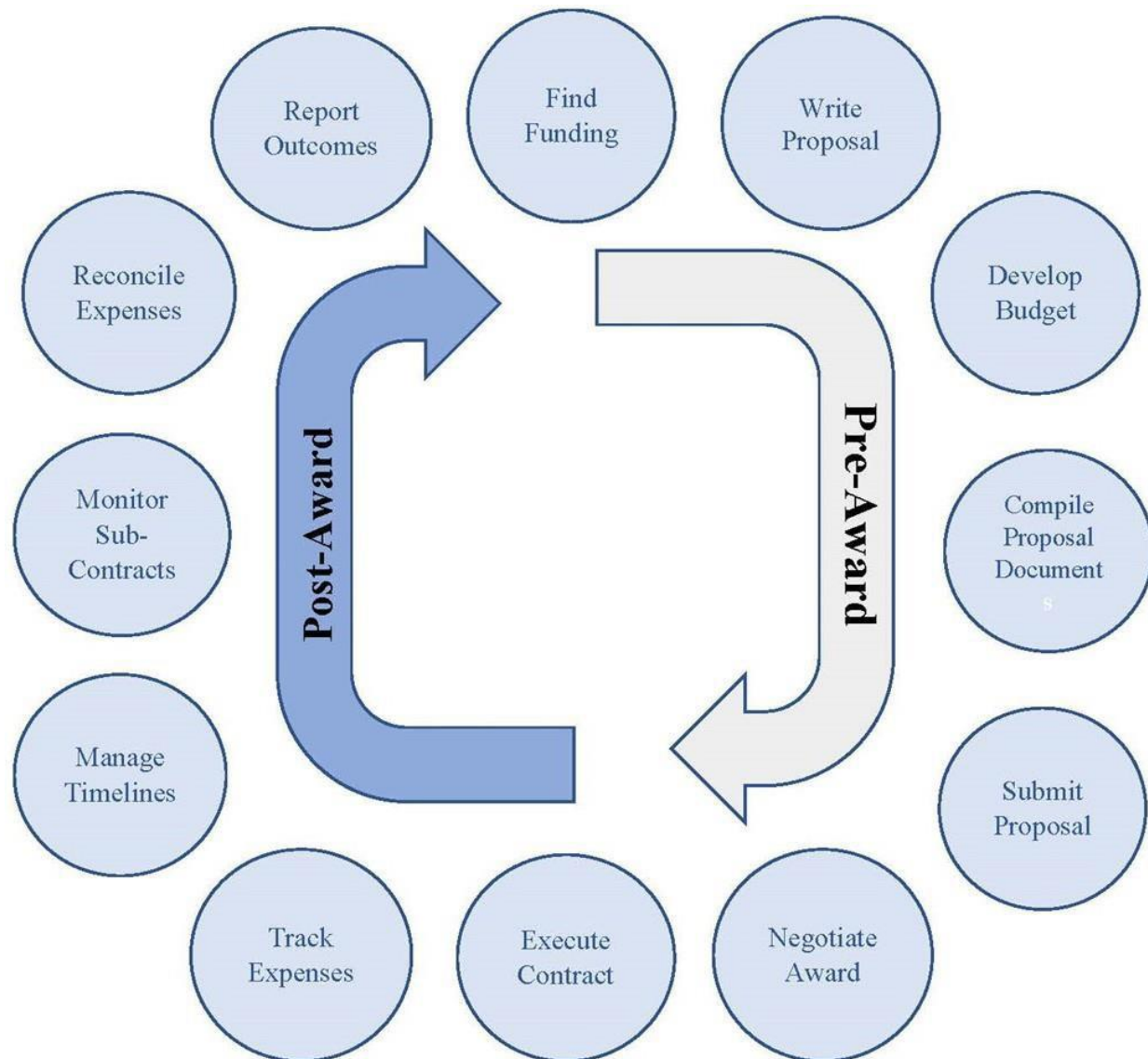
*Note Graphic adapted from the Colorado School of Public Health

Grant writing and management are multifaceted. This step focuses exclusively on pre-award or items before the grant is funded. Notably, this includes searching for relevant funding and applying, which are critical. There are many elements, so one needs to be strategic and proactively schedule a time to write. Applying, depending on the organization's internal protocols and policies, might be another layer of unanticipated work that should be accounted for by the mentor/mentee. It could be a training opportunity for the mentee who might not have imagined the number of internal controls an organization like a university has to ensure that a funding request is submitted on time and within budget. The ecosystem of research and development will come into play with each submission. It will be an excellent opportunity to learn those processes, players, and workflow nuances.

Step 6: Implement the Mentoring Plan in Stages for Funding

Planning and applying can be aligned with program priorities. For example, several years ago, I worked with the College of Southern Idaho's English as a Second Language (ESL) Family Literacy program with 28 sites over multiple rural counties. The program received state funding for teaching the adults English from one agency and TANF funding for work-readiness and parental engagement with K–12. Most of the mentoring activities were funded by a grant. In addition, the program also applied to another small nonprofit grant that purchased books for the children since many of them did not have books of their own in their homes. The diversified strategies reflected the programmatic goals at the time.

The ESL instructors for the adults and the children's teachers pre- and post-tested the participating adults and children each semester. The programs occurred primarily in the evenings. They openly acknowledged that their primary goals were (a) to increase family literacy to support the children in school, (b) to improve adult English at work, and (c) to increase literacy by reading basic materials from school. In other words, parents were given a menu of three items being served or service delivery lines and asked if they were willing to participate. These were the goals, and the how-tos began from there. The formal mentoring included many programmatic-level items involving time, resources, and personnel, but the goals were disclosed up-front. The goals were communicated for both the college and the participants' benefit because mentoring and teaching are intensive and require active participation to be successful.

The mentoring plan allows the mentor/mentee to identify potential areas or targets for funding, but they do not have to be applied all at once. Create a timeline for implementing the mentoring plan and developing the relationship in general. A helpful strategy is to create a calendar of the various agencies' opportunities mentors and mentees are interested in applying to and when they have open solicitations or applications. Sometimes there is one time per year, and other times there are more opportunities. One thing to note is that federal grants could take 6 to 9 months to be reviewed. This has impacted mentoring timelines. Nonprofits often have fewer opportunities open, but there are more nonprofits and private organizations, so weigh the priorities depending on your field.

Sustainability

People often have asked, how do we keep the money coming? This is an anchoring post-award discussion. Typically, one of the main ways one could get more money is by doing an excellent job

on the original project, reporting on time (i.e., doing the quarterly and final reports), disseminating findings, and communicating with the program officer. Sometimes people have fallen in love with their way of doing things and curricula. There is nothing wrong with this, but it has not been grant-fundable unless project leaders will try it out on a new population, at a new time, or using a different delivery method (i.e., online). In the case of COVID-19 and other social justice challenges, they have created new barriers. When people have tried to fund something that already exists without altering it in some way, this has fallen into *supplanting*—accountants shutter at the word.

There are at least two ways to successfully position the project for getting and renewing funding: demonstrate outstanding participant growth or need and demonstrate change in regional/national needs. Positioning for sustainability can be accomplished by following the data from the student populations and acquiring regional data. It is also why an evaluation needs to be done well, and it can be incredibly valuable if they have included both formative qualitative and quantitative data. Cohorts of students will be different, but the *how* and the *why* will make all the difference. Documentation is essential. Show the funding agency the data, the pictures and the need. If the current funding agency has decided to shutter the program despite the need, move to another funding source. You have the data to document the need and proof that you can impact the population.

It also helps to frame the overarching goal as an immense problem, as the Cal-Bridge program did. Nationally, there is a shortage of underrepresented people in STEM, and there is likely to be a shortage for several years unless every state gets on board. Similarly, Northwest Area Foundation said it would commit 40% of its targeted funding to Native-led projects because of the poverty. These educational health disparities require solutions, including Native-led models and approaches. "Nothing about us without us" is true for all underserved populations. Sustainable programs have sustainable problems to work on, and they use a variety of funding strategies to do it.
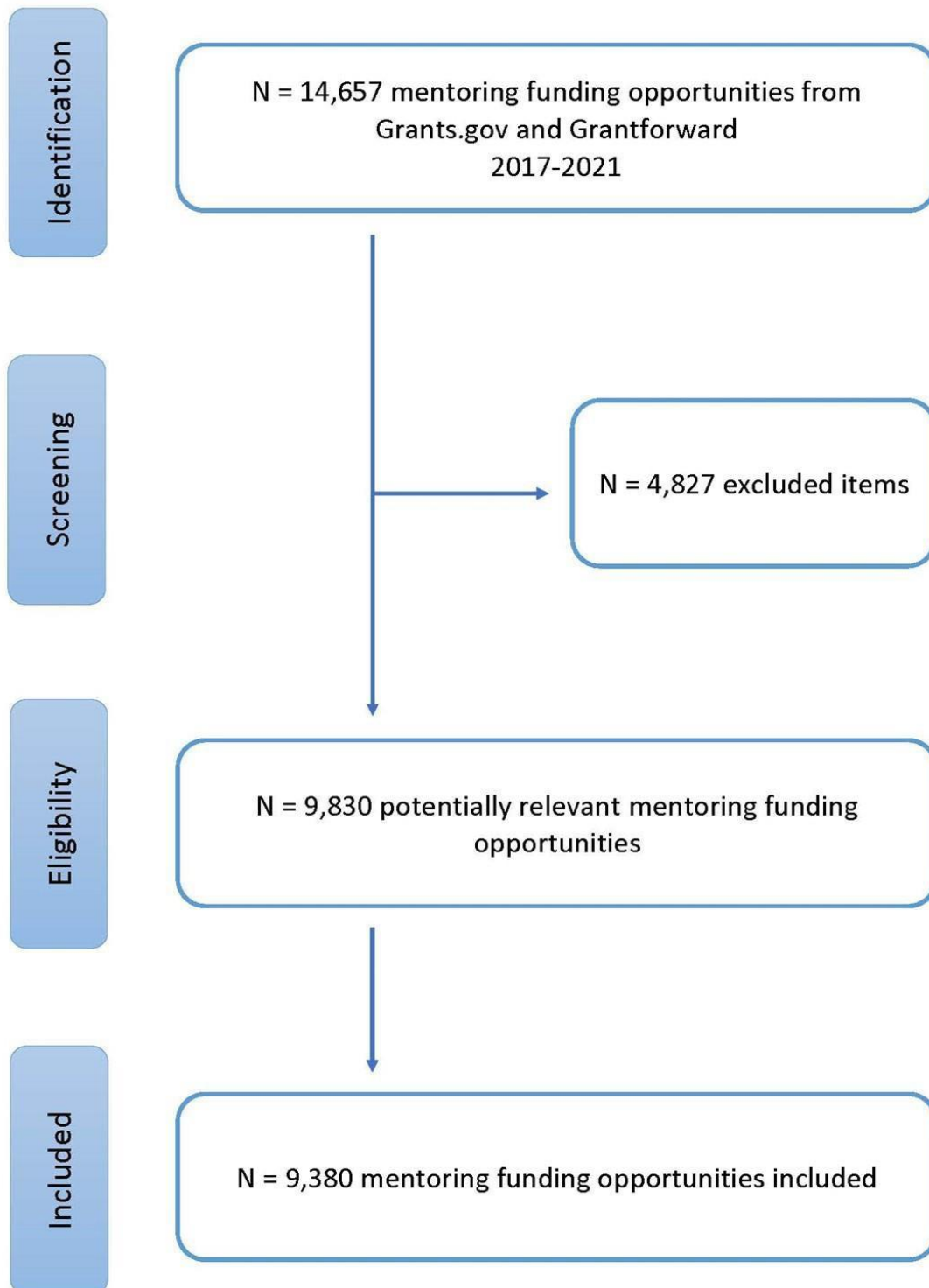
Rapid Review of Mentoring Program Funding

In this rapid review, the purpose is to begin to explore the answer to the question:

How do federal agencies and nonprofit/private organizations fund mentoring for students, staff, and/or faculty?

This rapid review briefly summarizes existing federal and private funding and some common themes in the preliminary data. Notably, this is an evolving dataset, but the review intends to identify potential areas of opportunity for those seeking to implement mentoring programs at scale or within their labs. A total of 14,657 potential mentoring program funding opportunities were identified and screened. Subsequently, 4,827 duplicates or excluded items were eliminated. These were drawn from a combined total of 1,625; federal agencies and their bureaus ($n = 88$) and nonprofits and private organizations ($n = 1,537$) that had mentoring opportunities. The mentoring program funding opportunities were posted between 2017 and 2021 and were identified as open, closed, or forecasted from public and private sources. Items from Grantforward were pulled from those periods, but the dates were not provided to me in agreement with Grantforward. Figure 15.3 includes a diagram of the study flow. The screening criteria were established *a priori* as outlined in the protocol. All the screening was performed using the protocol.

Figure 15.3

Protocol for Mentoring Program Funding Rapid Review

Identification

N = 14,657 mentoring funding opportunities from Grants.gov and Grantforward 2017-2021

Screening

N = 4,827 excluded items

Eligibility

N = 9,830 potentially relevant mentoring funding opportunities

Included

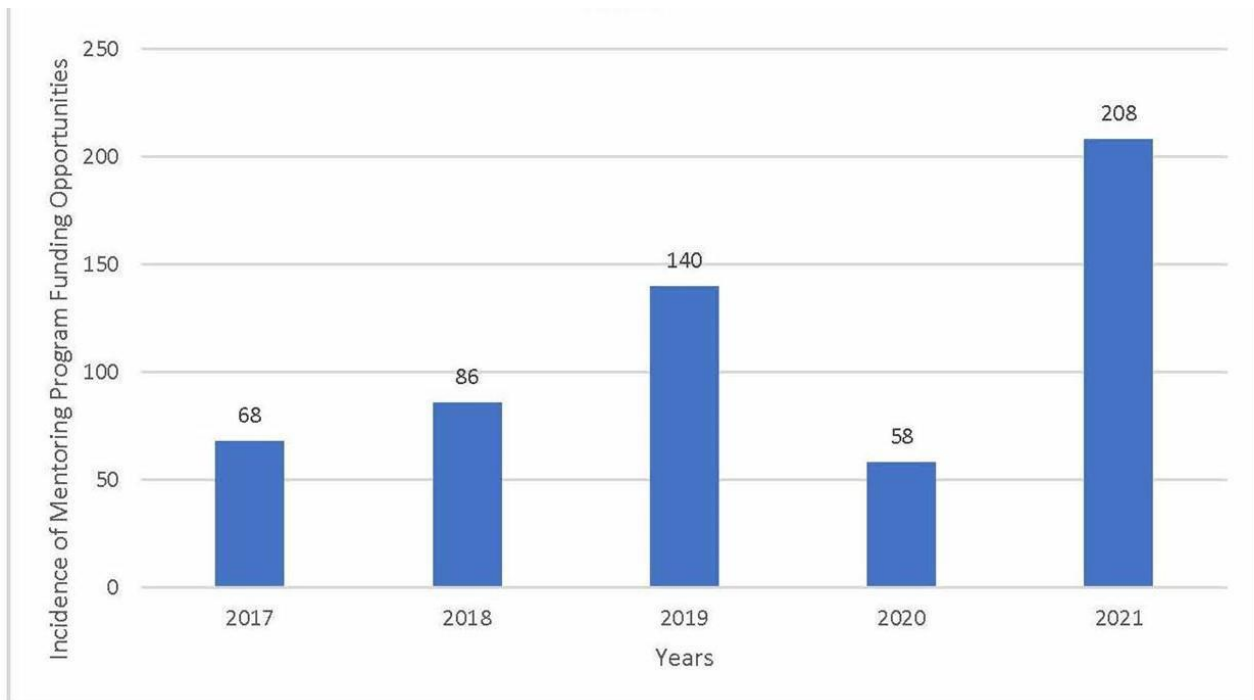N = 9,380 mentoring funding opportunities included

Method

The rapid review methods are briefly described in Table 15.1, with additional details and deviations noted. I have placed the traditional tables for a rapid review in the appendices, but I have generated visualizations for the discussions about the actualities of funding for mentoring programs. Each visualization for the rapid review is explained under the visualization instead of in the results and discussion section to support programmatic staff efforts to accomplish Step 5, apply for the mentoring program funding.

Table 15.1

Rapid Review Methods

Project Stage	Method Description
Eligibility criteria	Published federal funding opportunities
	Published private funding opportunities
	Published between 2017–2021
	Written in English (for feasibility)
Searching for studies	Developed by an experienced research development professional with input from mentoring experts reviewing the chapter
	Peer-reviewed using the rapid review literature (Tricco et al., 2015; Khangura et al., 2012)
	Searches December 2020–January 2021: grants.gov and Grantforward
	Search strategies not restricted by language or location
Study selection	Performed in grants.gov, Grantforward, and Microsoft Excel
	Piloted title/abstract ($N = 14,657$) and full text screening ($N = 9,380$), conflicts resolved by discussion
Data charting	Performed in Excel
	Piloted extractions ($N = 5$), conflicts resolved by discussion
	One reviewer extracted studies, editors reviewed, and conflicts resolved through discussion
Data synthesis	Mentoring characteristics and studies' references
	Identified potential for PRISMA-ScR for future work

Figure 15.4

*Incidence of Mentoring Program Funding Opportunities 2017–2021**

The incidence of mentoring program funding opportunities between 2017 and 2021 was consistent in both databases. The diversity of the mentoring program funding in Figure 15.4 demonstrates the staying power of mentoring strategies across agencies and administrations. Federal agencies (public) have long recognized mentoring as an effective practice. Its prevalence in titles and abstracts of funding opportunities between 2017 and 2021 was valued at over $5 billion in awards (grants.gov, n.d.). There was only one year when the funding opportunities were less than 68, which was 2020, during the COVID-19 pandemic. Between 2017 and 2021 over 38 funding opportunities had multiyear offerings that referenced mentoring in the title or abstract. The academic question was, if mentoring was an organizational priority, how many funding opportunities does it take annually to support mentoring capacity building? One place to look for the answers has been in the existing programmatic data and regional student enrollment projections.

Going into the initial search there were many federal opportunities, but a surprising number of opportunities were outside of the federal realm. Hundreds of nonprofits and private organizations had mentoring-related activities based on their titles and abstracts. While the preliminary data indicates that not all career pathways or majors are represented equally in the nonprofit sponsorship of mentoring activities, many were community building, family connecting, and grassroots. The efficacy of mentoring practice made it a "best practice" for federal and nonprofit investment, which must be made broadly because it invests in connection and people learning from each other. Figure 15.5 bears further discussion related to this because it reflects the diverse strategies used to get funding and support to potential applicants.

Figure 15.5

Types of Mentoring Program Funding Mechanisms Awarded*
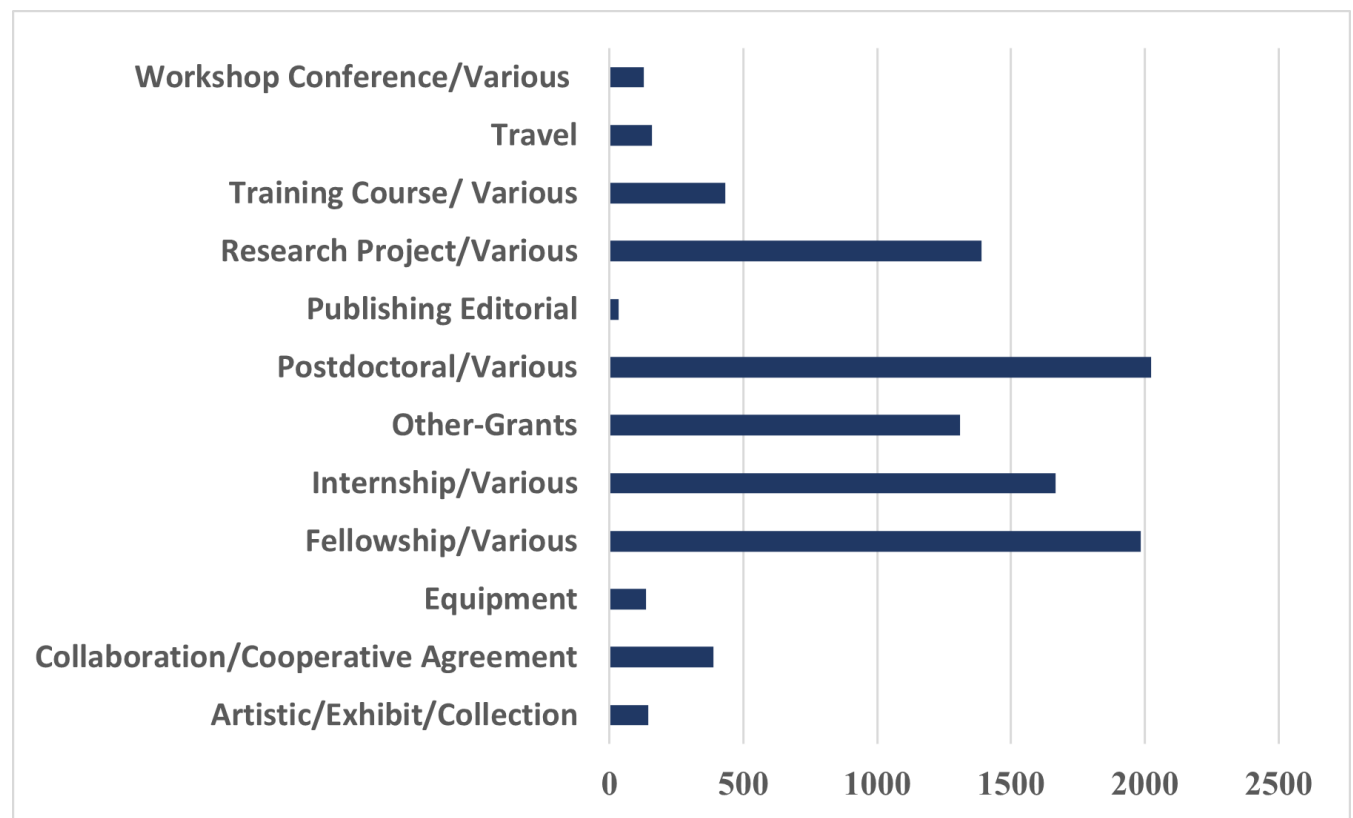
*See Table 15.3 in Appendices

Figure 15.5 was developed from Table 15.3 data because I often hear faculty, staff, and students *categorically* discuss informal and formal mentoring program opportunities. As I conducted the rapid review, I wondered if the incidence of categorical types of mentoring program mechanisms were awarded. I thought it might be a discussion point for mentor(s) and mentee(s) or for decision-makers who wanted to discuss potential possibilities and priorities at scale. There was a surprising variety of mentoring program funding mechanisms awarded.

Fellowship/scholarship/dissertation and postdoctoral awards were particularly strong. For a research grant professional who sees budgets and grants routinely, these were high-ticket items depending on your field. Sometimes applicants cannot afford to include them in the projects, but they can often be game-changers in advancing the work. It was a welcome surprise to find several opportunities in the nonprofit/private sector. Organizationally it may be worth asking, do we actively encourage our graduates and postdoctoral students to apply for funding?

The high incidence of diverse types of internships/work-study yielded more than 1,500 mentoring opportunities; intuitively and professionally, there were more. Most people believe that they must work with employers directly first, but there are grant mechanisms that will sponsor the costs of those opportunities. Typically, using these has created a win-win situation for everyone. Although many employers enjoy sponsoring internships as a mechanism of early recruitment, many universities and other organizations have worked with them directly to create opportunities for various workforce

needs. Other organizations do extraordinary work that cannot absorb the integration of another person on the fly. These mechanisms have helped create opportunities for people to partner with them too. In addition, some postsecondary organizations and K–12s have industry liaisons and counselors or work closely with local workforce development offices to connect people with employers and potential internships.

Another helpful data point in the rapid review was the number of mechanisms for travel, which were more than 160 opportunities when combined with other items. Travel for many departments and stakeholders is a luxury. It would require advance planning to apply for a grant for travel to a conference or special event, but if the applicant won, it would help the mentee(s) understand that there are times one has to adjust their plans and be fabulous! Another wonderful item in the data was the number of nonprofit/private foundations that are sponsoring art, particularly the development of artistic exhibits and collections. Finally, the support for research training was strong, with just slightly fewer than 1,400 items.

Figure 15.6
Funding Activity Locations by Continent*

Figure 15.6 data reveals that North America and Europe led the overall funded activity locations. This is parallel to the geographic locations of many of the wealthiest first-world countries. These regions naturally develop or reward philanthropic behaviors because of their increased disposable- income levels. Figure 15.6 presents the same information in more detail and may be more useful for those seeking to develop projects in particular regions of the world. Specific country locations are in over 3,573 US locations and numerous countries all over the world. Significantly, mentoring program funding opportunities are fundable in many locations worldwide. Nearly half of the total items reviewed were in the United States.

Limitations

Through the rapid review, I identified that over $5 billion was available for mentoring program

funding in STEM and non-STEM areas. These funding opportunities are by both public and private entities between 2017 and 2021 within two databases that are not comprehensive. $3 billion was directed toward activities that were K–12 or postsecondary. The rapid review revealed more mentoring program funding opportunities through various organizations than previously thought in preliminary discussions. Grantforward provided proprietary data that did not include the year but were within the 2017–2021 period and included the word "mentor" in the title or abstract. If the word "mentor" did not appear in the title or the abstract, it was not counted among the potentially viable funding sources as this was a rapid review.

Conclusion and Future Directions

Mentoring is an opportunity to share the best parts of our professional lives and the challenges. It builds deep skills that will propel individuals to excellence and build organizational capacity. It is not one-sided but, like all healthy relationships, it blossoms and thrives when cared for, valued, and supported. Fundamentally, as organizations, it is about engaging faculty and staff in ways that acknowledge and cultivate their expertise. Then, mentoring asks that we pay it forward by sharing with someone else. If we are honest, we have all been "newbies" at one time or another. Some people helped us evolve. This chapter provides an overview for allies who want to implement or enhance their existing mentoring programs. Chapters 16–26 provide in-depth case studies as examples for those seeking to implement. Formal mentoring has been the most prevalent type and has organizational advantages of scale.

As previously indicated, this chapter has been segmented into four parts: (a) theoretical frameworks, (b) describing the six steps for identifying mentoring program funding, (c) providing a rapid review of public and private mentoring program funding opportunities from 2017 to 2021 to help readers understand the breadth of what is available, and (d) reflecting on what the future directions in mentoring program funding might be. The final segment below is a brief sampling of the many potential future directions for mentoring funding, depending on your area of interest

In the future, a more detailed PRISMA scoping review (PRISMA-ScR) might help future seekers and mentors/mentees embark on their audacious development of informal and formal mentoring programs. The prevalence of mentoring as a strategy in the research and development ecosystem would suggest that it works in various environments since it is used far beyond academia for nation rebuilding, combatting human trafficking, and developing rural communities. Mentoring is certainly more than a lab or classroom cloning strategy; it has evolved into a critical tool in the portfolio of strategic enrollment management and employee professional development. It is a best practice that has been replicated worldwide. A part of the power of mentoring is the ability of mentors and mentees to connect and share knowledge in a way that has been lost in many settings in the modern world. Formal mentoring through the organization of critical program coordinators, administrators, and key community stakeholders is an essential part of successful student learning, employee engagement, and faculty innovation.

My future personal directions for research are a minimum of threefold going forward. First, I want to identify the areas where nonprofits/private foundations have prioritized funding for mentoring. Second, I would like to identify potential connections between funded and unfunded mentoring areas

in academia. Third, I would like to identify the potential for a formal mentoring program to leverage federal mentoring program funding opportunities as a collective.

Does this information mean that all K–12s and postsecondary institutions should suddenly halt internal funding for their current mentoring programs? No! If the organization plans to build capacity, it will need to utilize a combination of hard and soft funding to build the mentoring and mentoring support in various programs or for specific underserved populations. The rapid review demonstrated an ecosystem of mentoring program funding, both public and private, that is accessible if allies know where to look.

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Table 15.2

Incidence of Mentoring Funding Opportunities 2017–2021

Incidence of mentoring funding opportunities 2017–2021	Items
Years offered	
2017	68
2018	86
2019	140
2020	58
2021	208
Multiple Years	38
Dates not provided	9830*

*Due to Agreement for the Data from Grantforward

Table 15.3

Types of Mentoring Funding Mechanisms Awarded

Funding Mechanism Type(s)	Items
• Artistic/exhibit/collection	145
• Collaboration/cooperative agreement	389
• Equipment/facilities/organization	137
• Fellowship/scholarship/dissertation	1818
• Fellowship/scholarship/dissertation/postdoctoral	76
• Fellowship/scholarship/dissertation/research project	28
• Fellowship/scholarship/dissertation/training course	39
• Fellowship/scholarship/dissertation/travel	17
• Fellowship/scholarship/dissertation/travel/workshop conference	6
• Internship/work-study	1524

• Internship/work-study/fellowship/scholarship/dissertation	12
• Internship/work-study/postdoctoral	82
• Internship/work-study/research project	23
• Internship/work-study/training course	20
• Internship/work-study/travel	5
• Other	1311
• Postdoctoral	1529
• Postdoctoral/collaboration/cooperative agreement	50
• Postdoctoral/collaboration/cooperative agreement/other	8
• Postdoctoral/equipment/facility/organization	89
• Postdoctoral/fellowship/scholarship/dissertation	205
• Postdoctoral/work-Study	118
• Postdoctoral/training course	12
• Postdoctoral/travel	3
• Postdoctoral/workshop conference	10
• Publishing editorial/various	34
• Research project/various	1389
• Training course	289
• Training course/artistic exhibit/collection	3
• Training course/collaboration/cooperative agreement	5

• Training course/fellowship/scholarship/dissertation	43
• Training course/various	92
• Travel/various	160
• Workshop conference/various	128

Table 15.4

Funded Activity Locations by Continent	**Items**
Africa	32
Asia	72
Europe	319
North America	3573
Oceania	6
South America	28
Unrestricted	74
Not Indicated	3990