

Joint Professional Development Institute To Cultivate Collaborative Library Scholars

University Libraries at Virginia Tech (project lead), University of North Texas, and University of Colorado Boulder, in collaboration with Los Alamos National Lab Research Library, request \$499,966 from IMLS Laura Bush 21st Century Librarian (LB21) Program with additional \$310,433 contributions from the participating libraries as cost share, to implement a 3-year joint professional development institute (PDI). Together, we purposefully take an organizational approach to align our workforce development efforts with the library's strategic push for more active and embedded interdisciplinary research collaborations. We aim to not only help individuals to build up research skills, confidence, experience, and local networks but also invest sufficient human capital in order to pivot our libraries towards a future of research-intensive campus partnership.

1. Project Justification

1.1 Program Goal and Objectives

This project is highly relevant to all three LB21 program goals. To increase diversity of the library workforce, we have incorporated a successful seed funding model previously adopted elsewhere at the university level for academic staff (Objective 1.2). We are also strongly motivated by the desire to drastically increase the library's research capacity (Objective 2.1). On balance, however, the most fitting LB21 program goal addressed by this project should be Goal 3: "Enhance the training and professional development of the library and archival workforce to meet the needs of their communities". More specifically, we will implement targeted institutional support and programming to address Objective 3.3 to prepare a library workforce for better embeddedness in the nation's fast evolving research and learning ecosystem. Successful implementation of this project will indeed provide "engaging learning opportunities" for library professionals at various stages of their career, "foster attitudes of discovery, cultivate critical and creative thinking, and facilitate experiential and self-directed learning opportunities for all".

1.2 Statement of Broad Need

The broadly significant need addressed by this project arises from two different levels. At the community level, libraries, especially academic and research libraries, must be better prepared for a disruptive transition of roles towards a campus research partner (Lacchia, 2021). Many decades ago the established library service model has already shown signs of disconnect from the patron's fast-changing information needs. Libraries have been eager to explore new roles, new models of operation, and new growth areas (Jaguszewski & Williams, 2013; Gwyer, 2015; Kamposiori, 2017; Meier, 2016; Lewis, 2016, 2019; T. Hickerson & Brosz, 2019; Evidence Base, 2021; Ducas et al., 2020; Zhang et al., 2021; Fernández-Marcial & González-Solar, 2021; H. T. Hickerson et al., 2022). Library administrators are under increasing pressure to justify the spending and to articulate more engaging and relevant value propositions (Cox, 2018; Lewis, 2016; Murray & Ireland, 2018; McGinnis et al., 2022). A common vision emerged about 10 years ago (Association of Research Libraries, 2010, 2016), claiming that by 2033 the library should "have shifted from its role as a knowledge service provider ... to become a collaborative partner".

This vision requires the library workforce to significantly expedite and deepen research collaborations and generate higher impact (Evidence Base, 2021). The library's traditional collaboration role as a research **supporter** must therefore be upgraded to a **specialist** who directly contributes critical and sought-after resources, skills, and expertise, or even to an idea-generating research **leader** (Robinson-Garcia et al., 2020). Because a regular service provider is rarely considered an equal partner in research (Bright, 2018; Weng & Murray, 2020), the library's relevance and embeddedness (Dewey, 2004) should be measured less by our physical distance from the collaborators (A. J. Carroll et al., 2020; Drewes & Hoffman, 2010), but more by how closely related our substantive research contributions are to the core research idea and its realization. No longer operating in the service provider mode, our impact in research collaborations, particularly with non-LIS scholars (Montelongo et al., 2010), will be signified not only by the amount of time and effort we spent, but also by research outcomes and productivity. Such outcomes include, but are not limited to, co-investigated sponsored projects (Arlitsch, 2013; Bedi & Walde, 2017; Brandenburg et al., 2017; Namachchivaya & McGowan, 2015), co-authored research papers (Borrego et al., 2018; Borrego & Pinfield, 2020), websites, databases, podcasts, open educational resources, and more.

The ARL 2033 vision, however, is still far from a reality. Today, very few libraries are consistently tracking collaborative research productivity, let alone using it as a primary performance metric. Library administrators often find their high expectations for active library participation in campus research (S. A. Berg et al., 2013) and cross-disciplinary expertise (Prucha, 2021) unmet.

At the individual level, scholarly productivity varies significantly among the library workforce (Blecic et al., 2017) and in general is lower than that of the academic faculty. Some studies suggest that librarians are less likely to collaborate across disciplinary boundaries (Bahr & Zemon, 2000; Hart, 2000; Norelli & Harper, 2013). A large body of research has identified many possible root causes (Fennewald, 2008; Kennedy & Brancolini, 2012; Hoffmann et al., 2014; Kennedy & Brancolini, 2018; Hoffmann et al., 2017; Ackerman et al., 2018; Kumaran, 2019; Crampsie et al., 2020; Kennedy et al., 2020; Wahid et al., 2021). Besides knowledge and skill gaps (Auckland, 2012; Schrader, 2011) and innate factors such as self-motivation and confidence (Hall & McBain, 2014; Kennedy & Brancolini, 2018; Crampsie et al., 2020), a number of persistent **institutional barriers** also impede librarians from deep, effective research partnerships (Couture et al., 2020; Sassen & Wahl, 2014; Smigielski et al., 2014; Vilz & Poremski, 2015; Evidence Base, 2021). These include but are not limited to: the lack of systematic training to conduct research; the lack of constructive criticism and mentorship associated with the training; the lack of growth opportunities and experience engaging in multidisciplinary research and scholarship; the lack of startup funding; and the lack of designated time release to pursue research endeavors.

We address these needs through a carefully designed program that bridges the gaps from both ends. The research skills, confidence, experience, and local networks we intend to build up in the target group are very specific and purpose-driven to align with the ARL 2033 vision. Participating libraries will remove institutional barriers to allow a broader spectrum of library workforce in various stages of their careers to benefit from this program. The approach we take is rooted in organizational culture changes that promote scholarship and reward innovation. The program is sponsored by the library administration and backed by local funding, procedures, and best practices.

1.3 Target Group

This project primarily targets employees currently working in an academic and research library, although public and special library employees can still benefit from a large portion of the program. This is a conscientious choice, because the ARL 2033 vision does not necessarily apply to many public and special libraries, which usually have different areas of focus than research collaboration. We do not assume the disciplinary, social-economic, ethnic, and other backgrounds of our target group. Instead, we intend to make the opportunity more widely available to them through our DEI efforts.

Our target group may be further broken down into three subgroups depending on their levels of academic maturity and affiliations. Subgroup 1 are primarily entry-level or early career library employees who have not had sufficient training in conducting research. Library professionals at other career stages who have not had much prior research training or want to brush up their research skills also belong to this group. Subgroup 1 will attend the online instructions and workshops, primarily to gain research skills, confidence, and familiarity to their local institutional research regime. We will make most of the online training materials openly available and free of charge to anyone interested in learning. This will potentially afford all attendees the opportunity to make a career transition towards academic and research libraries. We will not limit the number of attendees, unless limited by the technology chosen for the online instruction. It may be difficult to estimate how many people will participate in the subgroup 1 activities. 100 people in total during the 3-year performance period may be a conservative estimate.

Subgroup 2 are more experienced library employees who work at a participating library and look to expand into in-depth collaborative research. Three founding libraries have dedicated at least \$240K in direct cost over 3 years to fund about 48 of their employees to conduct collaborative research with academic faculty in their home institutes. Subgroup 2 activities are also open to any other library who is willing to commit a similar level of internal funding to support a seed grant program for its employees. The ultimate number of people in Subgroup 2 should be higher, considering the actual seed funding spending will likely be more than the committed budget line. Subgroup 3 are experienced library scholars who need a considerable time release to bring their scholarship

to the next level. We request IMLS funding to buy out 3 months of time for each of the 6 scholars from the three founding libraries.

1.4 Ultimate Beneficiaries

In addition to those in the target group who directly benefit from this program, those working in a participating library will benefit from the cultural change towards discovery and creative thinking even if they do not attend the Joint PDI. Academic faculty members who collaborate with Subgroup 2 participants in research projects not only benefit from the additional funding and pertinent expertise and resources, but also closer relations with the library that can directly impact their research. Students hired through the seed funding will gain precious research experience. The universities hosting participating libraries will benefit from a more engaging, creative, and research-oriented library workforce. The spillover effects of this program will bring in more research dollars and increase the research productivity of the home institute. The academic library community may be spurred by the success of this program to act more forcefully on the ARL 2033 vision. The society as a whole will benefit from a more engaging library community who helps to accelerate innovation and discovery.

1.5 Related Projects

The Joint PDI is inspired by a number of related projects, most significantly Virginia Tech's [Proposal Development Institute](#), Medical Library Association's [Research Training Institute](#) (funded by IMLS RE-95-17-0025-17 and RE-246568-OLS-20), and the [Institute for Research Design in Librarianship](#) (IRDL) (funded by IMLS RE-06-13-0060-13, RE-40-16-0120-16, and RE-250170-OLS-21). We also share many similar rationale, scope, and objectives with Canadian Association of Research Libraries (CARL) [Librarians' Research Institute](#) and Research Libraries UK's [Professional Practice Fellowships](#).

Different from many prior projects that approached professional development through a librarian association, we took an organizational approach to address the persistent institutional barriers, particularly the mentoring, startup funding, and the research time release at each individual library. The library administration at each participating organization not only commits financial support, but also makes organizational adjustments to promote the research culture changes in their own organizations. This is important because without culture changes at the organization level, the skills gained are less likely to stick and translate into research productivity. Past research has demonstrated the importance of the research culture aspects by comparing library research productivity in public vs. private, large universities vs. small colleges, and with or without library faculty status and/or tenure, etc (Galbraith et al., 2014; Kandiuk, 2016; Pickton, 2016; Silva et al., 2017; Tran & Chan, 2020; Walters, 2016). The proliferation of new modes of research support in medical and health science libraries also illustrate the importance of building a research culture in the library (Cain et al., 2016; Kallaher et al., 2020; McKeown & Ross-White, 2019).

Unlike many related projects offering training primarily to novice or entry-level MLS graduates, we target a much more diverse workforce, including library staff without MLS or even master's degree, people with PhDs in non-LIS fields, and people in more advanced stages of their careers. We also align the experiential learning and practicum components with real-world research that often requires funding to proceed. This is adapted from Virginia Tech's [Proposal Development Institute](#), which targets new tenure-track academic faculty who already have a relatively polished research agenda but still lack experience seeking external funding. Navigating funding agencies' complicated systems and jargons, communicating research ideas with program officers, working with local Offices of Sponsored Programs and managing budgets are not often considered critical research skills for librarians in prior projects. This project will facilitate the participants to hone these skills through practice and trial-and-error.

Also missing from many of the prior projects is the emphasis on local collaborations and cross-disciplinary research capacity. The latter has been clearly demonstrated as an important driving force behind research productivity in recent decades (Abramo et al., 2009; Cummings & Kiesler, 2005; Dhand et al., 2016; Glänzel & Schubert, 2005; Guimerà et al., 2005; Jeffrey, 2003). We intentionally steer clear of the "By Librarians, For Librarians" mantra (S. Berg & Jacobs, 2014) to prevent the potential echo chamber effect. Instead, we introduce as advisors and mentors many scholars with non-library and non-LIS backgrounds, and drive the participating library workforce to reach out to various academic departments in their home institutes. The emphasis on local

research collaboration arises from the observation that similar to trade and economy, more research collaborations occur locally (Cummings & Kiesler, 2005; Sciabolazza et al., 2017). The collaboration friction and overhead is much lower within the institutional border, particularly for funding. For example, there is no indirect cost associated with seed funding transferred from the library to an academic department within the same university, and we can explicitly decline to fund salary and fringe for full-time employees. These measures make our seed grant go much farther than external funding.

The Joint PDI also aims to lower the barriers for entry as much as possible. The training is conceived as being online from the very beginning and will be delivered primarily through online platforms instead of being converted from a prior in-person curriculum. This way we are not limited by the short duration of the in-person training sessions, and can save the travel, accommodation, and meals budget for more productive activities and experience, e.g., seed grant and research time release. There are neither fees nor complicated application processes to dissuade participation in the online course and workshops.

Adapted from University of Michigan’s MCubed program (Brandenburg et al., 2017; Burns et al., 2021), the seed funding behind the practicum portion of the Joint PDI will be distributed via a lottery instead of the more traditional merit review. Research has shown that formal merit review favors more established researchers, “safer” but less innovative ideas, and hinders diversity (Berhe et al., 2022; Bernard & Cooperdock, 2018; Bol et al., 2018; Bromham et al., 2016; A. E. Carroll, 2018; Chen et al., 2022; Nakamura et al., 2021; Pier et al., 2018). Moreover, merit review arguably produces no better results than a lottery (Fang & Casadevall, 2016; Guthrie et al., 2018). The rigorous merit review is therefore only required for selecting 6 PDI fellows to receive research leave support. At their stages of career development, potential fellowship applicants should have accumulated sufficient confidence to face steep competitions and withstand scrutinization and biases. The merit review process in this case will serve as not only a selection tool but also a learning experience.

Virginia Tech Libraries has piloted the lottery based seed funding model through an internal [Collaborative Research Grant](#) program. Since early 2022, the program has completed 3 rounds of lottery, funded 36 projects totaling \$225K. The funded projects were proposed by 47 co-PIs from every VT college and 43 co-PIs (with some duplicates) from various departments of the library. Among the 47 academic co-PIs, 10 or 21.28% are not on the tenure track. Instead, they are postdocs, collegiate professors, instructors, administrative or professional faculty, and staff. Although this percentage is lower than VT’s overall staff composition, it nevertheless is an encouraging sign that non-tenure track academic staff in a research-intensive university still aggressively pursue funding opportunities. Among the 37 tenure-track faculty, 51.35% are assistant professors, 21.62% are associate professors, and 27.03% are full professors. In contrast to VT’s tenure-track rank composition of 30.14% assistant, 31.73% associate, and 38.13% full professor, the lottery successfully reversed the status bias associated with merit review and favored early career faculty. Similarly, female and BIPOC faculty fared significantly better than the average, see Table 1 for details. Because the lottery is completely random, the results can only be attributed to the fact that the applicant pool has a higher concentration of people from these groups. In other words, our program appeals more to applicants from disadvantaged groups.

Table 1: Selected Demographics for Collaborative Research Grant Recipients: Tenure-Track Faculty

Percentage of	Female Faculty	BIPOC Faculty	Assistant Professors
Among Grant Recipients	43.24%	13.51%	51.35%
VT Average	33.12%	8.6% ¹	30.14%

Among the 43 library co-PIs (some are counted multiple times because they are awarded more than one grant), 32.56% have PhDs in disciplines other than information or library science, 4.65% do not have a master’s degree, 69.77% do not have an ALA accredited MLS degree, 41.86% are not on continued appointment (tenure) track but

¹ Number taken from <https://udc.vt.edu/spm/data/prosim/fs/faculty/urm>, inclusive of Non-Tenure Track Instructional Faculty, Research Faculty, and Tenure/Tenure-Track Instructional Faculty.

instead are on administrative, professional faculty or staff status. Among those on the continued appointment (tenure) track, 72% are pre-tenure. Their background is much more diverse than many prior training programs assumed for the library workforce, e.g., fresh MLS graduates or research novices. Their areas of expertise are similarly diverse, from virtual reality, AI, and bioinformatics, to web design, photography, audio/video production, machinery, and systematic review. The lottery based seed funding program has provided a fertile ground for research collaborations between people of drastically different backgrounds.

As of this writing, 10 projects have been completed and reported back. Their deliverables include: 3 external funding proposals submitted, 1 mixed tape and 2 podcasting programs released, 1 scholarly book manuscript completed and submitted, 1 digital humanities website launched, 2 physical collections digitized, and multiple peer reviewed research papers submitted, accepted, presented, or published. Many ongoing projects have also produced promising progress. Using this program as a blueprint for the practicum portion of the Joint PDI, we expect the participants to deliver a similar level of research productivity, gain research experience, and win over diverse collaborators.

2. Project Work Plan

Co-PI libraries at VT, UNT, and CU represent a diverse spectrum of US academic libraries across different geographic regions, with a variety of library employment terms and appointment statuses, and with varied disciplinary strengths. All three universities are categorized “R1: Doctoral Universities - Very high research activity”, whose libraries are more motivated to transition into a critical campus research partner. UNT has a thriving library school while VT and CU do not. Libraries at VT and CU are ARL members while UNT library is currently applying for ARL membership. In comparison to VT and CU, UNT has a more diverse student body and is a member of the Alliance of Hispanic Serving Research Universities. Experience gained from implementing the Joint PDI will be useful to a wide range of academic and research libraries to achieve higher research productivity.

2.1 Project Activities

To benefit the library workforce at different stages of their career, the joint PDI provides three levels of participation with increasing intensity and engagement. At Level 1, members of the target subgroup 1 are invited to attend a series of free online training and mentorship events provided by established scholars in library and information science, liberal arts and social sciences, and STEM. Level 2 and Level 3 participation is limited to target subgroups 2 and 3, who work at a participating library. This is because Level 2 seed funding is contributed by the participating library as cost share and must stay in the same university. Three participating libraries have also made administrative arrangements to release time for their selected employees to participate in Level 3 activities, and all Level 3 budgets have been requested from IMLS and built into this budget. If other interested academic libraries are willing to commit similar resources and administrative adjustments, they are also invited to observe and adapt our implementations and run Level 2 or 3 activities either in parallel or in conjunction. We will design a timeline to give eligible participants the opportunity to attend all three levels in sequence, but this is neither a requirement nor necessary. Level 1 participation is not a prerequisite to participate in Level 2. Neither is Level 2 participation a prerequisite for Level 3. Instead, participants are encouraged to pick and choose the levels and activities that best suit their needs and fit in their career goals.

Level 1: Training & Mentoring, in Four Parts

Part 1 of the Level 1 activities is a 10-unit **research methods** training program for librarians via Coursera or a similar learning platform, developed and delivered by Dr. Sarah Ryan, M.L.S., J.D., Ph.D. The program will be delivered online at no charge to participants in this project and to other interested librarians until 2029 (i.e., typical 5-year Coursera course run). Dr. Ryan has co-taught a successful Coursera public affairs course since 2021.

Our research methods course will draw upon Dr. Ryan’s current information science research methods course ([INFO 4080](#)), her recent research methods textbook for law librarians (Ryan, 2022), and her prior research methods courses for legal research and public affairs students (e.g., via the Lillian Goldman Law Library at Yale Law School).

The new course will cover seven foundational topics: 1) topic selection and description; 2) scholarly literature review compilation and writing; 3) hypothesis and research question construction; 4) quantitative methods

selection and description, including using existing data and collecting data via surveys and other methods; 5) qualitative methods selection and description, including semi-structured interviewing and participant observation; 6) presentation of data, findings, and conclusions; and 7) writing for academic audiences and genres (e.g., conference paper, journal article, academic book).

In addition, the course will contain a series of videos from diverse librarian-scholars and other scholars, including BIPOC and other researchers from underrepresented groups, on the theme: “how I conduct and publish research.” Drs. Ryan and Phillips will solicit speakers for these videos from their network of borderlands, criminal justice, librarianship, and law librarianship colleagues.

Further, the course will contain a module on “public communication.” This module will teach learners how to transform research from a journal article/book chapter into a professional trade magazine/white paper and into a public communication piece such as a blog, local newspaper story, etc. This module will contain videos from university marketing and public relations staff, who will share their strategies for communicating with public audiences.

All of this content will be tailored toward library employees with a range of independent research experiences, including little or no prior independent research experience. In addition to research methods chapters and worksheets, we will post successful grant proposal narratives, sample library science and non-library science literature review excerpts, etc. During the course’s initial run for this project, Dr. Ryan or her graduate assistant will be available for office hours. Different from the research methods training delivered at many similar projects, this course is not intended to be taken in a few condensed days. Instead, it will be like a regular graduate level course offered at a library school, stretching many weeks and giving participants the time to absorb the materials, finish homeworks and assignments, and balance the online learning with their busy professional responsibilities and life events. Successful completion of this course will result in a certificate of completion from the Joint PDI.

Part 2 of the Level 1 activities is a series of online workshops intended to boost participants’ **research confidence** by sharing success stories. These workshops will be offered once every year, from Year 2 through Year 3. All project co-PIs will be involved in the curriculum development, with the inputs from the advisory committee. The emphasis of part 2 will be on the following topics: Balancing service and scholarship in a library career; Bridging skill gaps; Research partnership with academic faculty (part 1: arts, humanities & social sciences & part 2: STEM). We will solicit speakers from established and emerging librarian-scholars, their research partners in academic departments, and library administrators. Successful participants of the Level 2 activities are also added to the pool of potential speakers to share their experience. The speakers will be asked to address a series of prepared questions, then answer questions from the audience in real time.

Because there are no easy answers to the workshop topics, and each success story contains unique factors and circumstances, we intend to build a more comprehensive library of success stories covering diverse experiences, with special emphasis on those from BIPOC and underrepresented groups. Videos from past workshops will be available for asynchronous use, and new content will be added at every new run of the workshop.

Part 3 of the Level 1 activities include a series of guided workshops intended to prepare participants for **competitive external grants**, followed by small group mentoring. Some modules will have significant hands-on components, which will need to be delivered synchronously therefore cannot be recorded for future consumption. These workshops will be offered once every year, from Year 2 through Year 3. The training objectives are much like VT’s [PDI for tenure-track faculty](#) but with special emphasis on the needs of the library workforce. All co-PIs will be involved in the curriculum design, and many will be involved in the mentoring process. Topics in Part 4 include: Navigating funding agencies and OSP; Writing a grant proposal; Learning from successful grant proposals; Grant budget and finance; Managing research projects as PI/co-PI. Contents of this part may need to be customized to each participating institution, and their local Offices of Sponsored Programs may be involved. To gain the most from this part, participants are strongly encouraged to either prepare a rough draft of a grant proposal in advance or are prepared to apply for a specific grant with a compatible deadline. At the mentoring stage, participants will be divided into small groups, each assigned a mentor, who will lead the group to cross-check and polish proposals for group members. For participants who are still struggling to distill research

ideas, they are encouraged to participate in Part 1 activities, especially “writing for academic audiences and genres”.

Part 4 of the Level 1 activities include self-organized research interest groups, journal clubs, and/or writing groups. This project will provide opportunities for participants to exchange ideas and facilitate the formation of **peer-mentoring** groups, but we will not interfere with their implementation.

Level 2: Practicum: Seed Funding for Collaborative Research Projects

Following VT Library’s model of [Collaborative Research Grant](#), participating libraries will provide more than \$240,000 (before adding any indirect costs) seed funding for their selected employees to conduct at least 48 collaborative research projects, with particular emphasis on attracting participation from diverse backgrounds. The Joint PDI will facilitate the matchmaking of research interests, expectations, and expertise between researchers from within and outside of the libraries.

VT Libraries will start its first round of seed grant in the second half of Year 1, selecting at least 10 projects at \$5,000 (direct cost only) each for funding. During the process, CU and UNT teams are invited to observe and participate in the whole process and explore opportunities to adapt the VT practices for their local use. In Year 2 and 3, VT, CU, and UNT will each launch its own seed grant, funding 10, 5, and 4 projects respectively each year at \$5,000 each. After each funding cycle is completed, the project team will discuss what works and what does not, and make adjustments accordingly for the next round.

From the perspective of program co-directors, Level 2 activities mainly consist of the following components: 1) **Administrative preparation**, including forming a team of local program managers (initially Xie and Eska at VT, Philips and Alemneh at UNT, Witternberg and Seals at CU) and smooth out the finance. The finance is particularly important because the funding source from each institution may vary and carry its own complications and caveats. For example, at VT we have the flexibility to carry over the seed grant money across fiscal year boundaries. This allows us to design the program in a way that each project may last either approximately 6 months to a full year, and in all cases include the summer in the performance period. The performance period is aligned with the academic calendar instead of the fiscal year, primarily for the convenience for academic faculty to arrange their research activities around the teaching workload and to easily recruit students into the project. It is also beneficial to have voices from local academic faculty, students, and library employees, where local word-of-mouth is an important factor to ensure the program's success. At VT this is accomplished by both having an established professor as the program co-director and consulting library colleagues before finalizing the call for proposal. The amount of \$5,000 (and we later added the option of \$10,000 for a full year) and setting an upper limit of participants’ parallel projects are the results of such consultations. 2) Formulate effective **strategies and operating rules** to realize the organizational goals and make the program stand out from competitions. At VT, through multiple rounds of brainstorming and consultation, we have settled on adapting the MCubed model from University of Michigan. At the core of MCubed is its selection mechanism, the lottery. However, we decided to change the original funding model, where all participating colleges and departments must chip in. Instead VT Libraries would fully fund the program in order to attract more collaborators from academic departments. These collaborators must in turn abide by our additional stipulations that the research projects must leverage the library resources and/or expertise, and they must take the library co-PIs as their equal partners. To ensure this, we also stipulate that the funds must flow through the library co-PI and what constitutes appropriate use of funds. 3) Finalize the call for proposals and the timeline, build a program website, and relentlessly **market** the program to different colleges/schools and library colleagues. In our initial run we have included a program information webinar, which was recorded for later use. To market the library as a collaboration powerhouse and a hidden treasure trove of valuable resources and expertise, we also recorded a long video tour of the library showing our equipment, spaces, and most importantly, the people. 4) **Matchmaking**. This is accomplished through an online registration for potential collaborators to introduce themselves and calling for help. We then supplemented the registration with an online/in-person hybrid meet-and-greet event, where research speed dating could be arranged if necessary. Emails and phone calls still constitute a very effective matchmaking tool, and program co-directors must stay vigilant and respond promptly and cordially to turn casual queries into research teams. 5) **Scope review and selection**. We have made it very clear that the selection is not a competition, let alone a writing competition. However, program co-directors must ensure all required components are present in the proposal, the deliverables

are clearly identified, measurable, and achievable, the budget is appropriate, and the research is in scope of the program. We take this opportunity to mentor less experienced researchers, and guide them through the process by polishing their proposals and revising their budgets. Even if we decide to decline an out-of-scope proposal, we make sure the proposers learn from the experience. 6) **Project management**: kickoff, orientation, monitoring, and making necessary changes including project extension. This involves funding code distribution, orientation on budget management, spending approval and monitoring, progress monitoring, exception handling, scope change negotiation and when unavoidable, project extension and finally, final reporting. 7) **Review and make adjustments**.

The VT team will share experience with participating libraries in running the seed grant program and work together to address common issues and help finding solutions to local challenges.

Level 3: PDI Fellowships: Research Leave

Six library professionals from co-PI libraries will be selected through a competitive process as PDI fellows, starting from 2 fellows at VT in Year 2, followed by another 2 at VT and 1 fellow each at CU and UNT libraries in Year 3. In Year 2, CU and UNT will observe the fellow selection process at VT, then adapt and formulate their own processes. Candidates for PDI fellowships should have accumulated some collaborative research experience, either through Level 2 activities or other means, and aspire to progress their academic capabilities to the next level. They will submit a full application dossier in addition to a research proposal and a diversity statement, to be rigorously reviewed by a selection committee. Each participating library can independently specify the format and the substance of the dossier. To integrate the Joint PDI activities in the home library's organizational structure, the application material may be in the same or similar format as used for promotion in rank at the home library. For example, at VT this will be a full dossier submitted for promotion in rank as specified by VT's [faculty handbook](#). As indicated above, the Joint PDI will leverage the selection process as a mentoring experience, therefore form a mentoring group to help potential candidates to present their cases in the best possible manner. The selection committee will consist of experts who are not members of the mentoring group and will make independent recommendations to the home institutes.

If selected, each fellow will be granted with about 3 months' full-time release from work to conduct focused research and produce concrete scholarly work, which may be in the form of manuscripts, grant proposals, data sets, and/or experimental results. Each PDI fellow may negotiate with the home library on how to spread the 3 months full-time research leave throughout the year, e.g., 3 months during the summer, winter, or half time for 6 months, or taking 1 to 2 days off per week throughout the year, etc. The PDI, through project staff or external experts, will provide PDI fellows with group and one-on-one career and academic mentorship and assistance.

2.2 Personnel and Budget

The Joint PDI project team consists of: 1) The VT team: Zhiwu Xie, PI, chief strategy officer of the library and library co-director of the seed grant program, will be overall responsible for the project planning, execution, and management; Tyler Walters, dean of the library and Charlene Eska, professor of linguistics, Guggenheim fellow, and faculty co-director of the seed grant program, will be in charge of the VT Libraries' participation; 2) The UNT team: Mark Phillips, associate dean of the library, will be in overall charge of UNT's participation; Daniel Alemneh, program manager at the library will assist Dr Phillips; Sarah Ryan, associate professor at the department of information science, will develop and deliver the Research Methods course and participate in the course design and mentoring of other parts of the program; 3) The CU Boulder team: Jamie Wittenberg, assistant dean for research & innovation strategies and Vanessa Seals, assistant dean of organizational development & inclusive practice, both at the library, will be in charge of CU's participation; 4) The LANL team: Martin Klein, scientist, team lead for research and prototyping at the library, will participate in curriculum design, mentoring, and results dissemination. There will be one summer student at UNT who assists Prof. Ryan with visual arts and design, not counted as IMLS student support. There will be another graduate assistant at VT to assist Prof Xie with program management and logistics, also not counted as IMLS student support.

All co-PIs' salary requests to IMLS are at or below 3% annually, except for Year 1 for Prof. Ryan, who will dedicate 2 months' time to develop the free online course Research Methods. We request around \$10K plus indirect cost as honorariums to invited speakers and mentors, and additional \$9K plus indirect cost for 3 domestic

travels. The majority of the IMLS funding will be spent on the 3 months' research leave for 6 PDI fellows at Level 3, counted as student support. Three participating libraries dedicate about \$240K and associated indirect costs to cover 48 seed grants awarded to Level 2 participants and their collaborators, counted as cost share. Although not listed in the budget, some participating libraries, VT Libraries in particular, have already planned to allocate more funding than currently budgeted to the seed grant.

Advisory committee: We have also established an advisory committee to advise this project. Members are solicited from established librarian-scholars, LIS scholars, library administrators, long-time research collaborators and alliances of the library, and experts/administrators on professional development and DEI issues. They are:

- Jiangping Chen, Professor and Chair, Department of Information Science, University of North Texas
- Dr. Ashley Grice, Senior Diversity, Equity, and Inclusion Consultant, Office of Senior Vice Chancellor of DEI, University of Colorado Boulder
- Evan Lavender-Smith, Assistant Professor of English, Virginia Tech
- Alexander Leonessa, Professor of Mechanical Engineering and Director of [Proposal Development Institute](#), Virginia Tech
- Richard Luce, Dean Emeritus, University Libraries, University of Oklahoma
- Steven Mandeville-Gamble, University Librarian, University of California Riverside Library
- Gail McMillan, Professor Emerita, Virginia Tech Libraries
- Dina Smith-Glaviana, Assistant Professor of Fashion Merchandising and Design, Virginia Tech
- Herbert Van de Sompel, Research Fellow, DANS KNAW, The Hague, The Netherlands

2.3 Project Timeline

The Joint PDI will be launched progressively and in lockstep. Led by Prof Ryan launching the Research Methods and VT launching the seed grant in year 1 and VT launching the fellowship in Year 2, other participating libraries will follow the year after and then repeat annually until Year 3, when all 3 levels have been executed at least once in all three libraries. For details please refer to the Schedule of Completion.

2.4 Evaluation

We have built-in evaluation steps to ensure feedback from stakeholders are taken into account and adjustments are timely made. During the pilot phase at VT we have already made many adjustments to the seed grant program based on feedback, e.g., on the performance durations, funding levels, reporting methods, budgeting and spending, etc. The design of the Joint PDI provides two to three more iterations to implement project activities at different participating libraries, giving us more opportunities to catch problems. The ultimate metrics for performance evaluation are the project outcome, e.g., deliverables from the funded activities and their DEI demographics, as used and illustrated in our pilot phase. We will continue to track these outcomes and supplement them with surveys and teaching evaluations.

2.5 Communications Plan

The project team will promote the Joint PDI activities and share outcomes with the library community nationwide through both formal scholarly channels and community mailing lists. Formal scholarly channels may include conference presentations, e.g., at ALA, ACRL, CNI, ARL, iConference, and published articles, e.g., at C&RL and JASIST, etc. We have budgeted three domestic travels to national conferences. We will also create a project website as the primary communication medium.

The success of this project also depends heavily on our internal communications, e.g., those with library colleagues, researchers at various academic schools and departments, and our local administrative offices and university leadership. To shape the perceptions of the library, the project team has in the past leveraged both the library's communications department and our job responsibilities to promote the library's changing roles and our workforce development efforts. Marketing and communications materials have been circulated via the physical medium such as the library magazine, annual reports, bookmarks as well as digitally through the library's social media channels, the colleges and department faculty mailing lists, the Office of the Vice President for Research's research highlights, and campus news stories. We have given invited talks and briefings at various university-level committees, commissions, and the faculty senate. We will continue to leverage these channels for effective internal communications of this project.

3. Diversity Plan

Level 1: We will solicit participants from a diverse group of library professionals, including but are not limited to [ALA/ACRL BIPOC groups](#) and [Spectrum Scholars](#). To attract more people from underrepresented groups, we will make every effort to bring the individual participation cost to zero. Additionally, we will not require additional paperwork to participate, and will support an ad hoc, at-your-own-pace style of learning. By bringing in speakers and instructors from BIPOC communities and people with diverse backgrounds, we hope to maintain a satisfactory rate of retention from underrepresented groups.

Level 2: We will continue the successful practice of awarding seed grants through a lottery of pre-qualified candidates in place of a merit review. This has shown to help eliminate systematic barriers against underrepresented groups, women, and junior researchers, and drastically increase the diversity of participation from the library workforce.

Level 3: Instead of being based purely on credentials and past achievements, the selection of fellows will balance the participating institutes' disciplinary strengths and growth strategy, as well as take into consideration the candidates' potential, needs, timing, and DEI aspirations. The selection committee will include three DEI advocates who have received training (e.g., VT's [Diversity Search Advocates](#)) to do so.

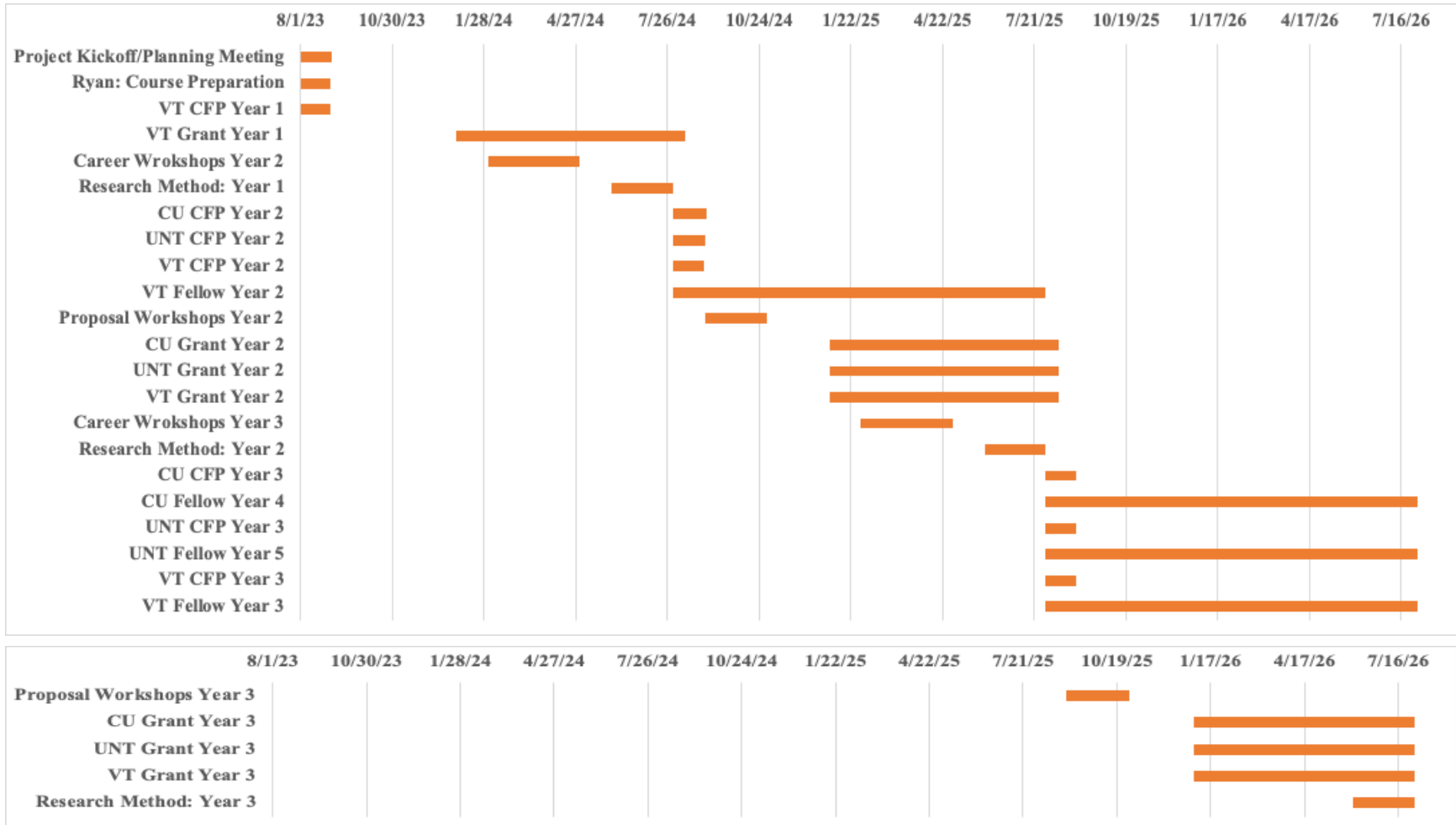
We will market this program to academic libraries serving disadvantaged groups. As of this writing, the library at University of California Riverside, another member of the Alliance of Hispanic Serving Research Universities in addition to UNT, has expressed interest to join the Joint PDI as a new member. UC Riverside will commit a similar level of resources and organizational support for its employees to participate in both Level 1 and Level 2 activities. This sets a precedent and model for other university libraries serving BIPOC communities to be part of the PDI. For additional guidance and consultation on our Diversity Plan, we selected Dr. Ashley Grice as member of the advisory board specifically for her experience with creating strategy and assessment plans of diversity, equity, and inclusion efforts.

4. Project Results

The Joint PDI will produce the following results throughout the performance period: 1) An open course "Research Methods," to be taught annually for five years, from Coursera or similar platforms. 2) A series of openly available training materials (e.g., videos and slides) to facilitate library professionals' scholarly career development; 3) Up to 48 funded collaborative research projects, each producing their proposed research outcomes; 4) Potentially high-impactful manuscripts, proposals, and/or research outcomes as the result of the time release and intensive mentorship/assistance for 6 PDI fellows; 5) A cohort of aspiring library scholars who have received institutional support to grow to the next level; 6) Data on training program utilization and completion, and seed grant and fellowship participant performance and goal attainment; and 7) A final report summarizing best practices and the lessons learned from the project, released as a white paper, to be widely disseminated to relevant audiences as a blueprint for replications and expansion, through venues such as ALA/ACRL/iConference, CNI, and ARL meetings.

This project is designed to sustain. Level 1 activities are all online and do not cost much to continue once developed, produced, and openly shared. Level 2 activities are funded by the participating libraries to begin with. Once its value becomes clearer to both the library administration and staff as well as their local research collaborators, there will be a strong case to make to dedicate part of the library's professional development budget to level 2 activities. The success of level 2 activities, especially the external funding attempts, will help to offset some of the cost associated with the fellowship. Its ultimate sustainability, however, depends on the broad consensus yet to be reached in the community, that capable library researchers need dedicated time to bring their scholarship to the next level. This could take the form of either a research leave as proposed in this project, or modified job responsibilities that contain higher research percentages than currently allocated for librarian-scholars. Their compensation structure will also need to be revisited when the right time comes.

Schedule of Completion



Joint Professional Development Institute To Cultivate Collaborative Library Scholars Digital Products Plan

Type

This project will generate open educational resources including text and audio/video recordings. Moreover, publications, presentations, and white papers will be prepared at various project stages to share progress and preliminary results.

Availability

The results of this project will be made available through multiple channels to ensure availability. These channels include depositing whitepapers, publications, and presentations in VTechWorks (<https://vtechworks.lib.vt.edu/>) and Virginia Tech Data Repository (<https://data.lib.vt.edu/>), hosted by the VT Libraries (<https://lib.vt.edu/>). Video recordings may be backed up and if needed, streamed from <https://video.vt.edu>.

A project website will be set up to serve as a comprehensive information source about this project, offering links to digital resources made available through this project.

Access

All publications and educational resources will be made available through the VT Scholarly Repository.

Rights will be assigned to this project with a flexible reuse license based on the resource type. Publications and presentations, when feasible, will be made accessible through a Creative Commons License, such as CC-BY.

Sustainability

Once deposited into the VTechWorks or Virginia Tech Data Repository, digital resources become a permanent part of the VT Libraries' digital collections. Although long-term access to these materials is expected to be infinite, the project team commits to providing access to all products and data from this project for at least five years after the grant period ends. Online courses, if offered through Coursera, will be available till 2029.

Organizational Profile

Mission Statement

Inspired by our land-grant identity and guided by our motto, Ut Prosim (That I May Serve), Virginia Tech is an inclusive community of knowledge, discovery, and creativity dedicated to improving the quality of life and the human condition within the Commonwealth of Virginia and throughout the world. (from <https://vt.edu/about/facts-about-virginia-tech.html>)

Governance Structure

Virginia Tech is Virginia's most comprehensive university and a leading research institution. It has more than 37,000 undergraduate, graduate, and professional students. It manages a research portfolio of \$556 million and has over 2,000 instructional faculty members. It had a 1.89 billion operating budget in 2022-23. (from <https://vt.edu/about/facts-about-virginia-tech.html>)

Service Area

The Commonwealth of Virginia, the nation, and the world community.

Brief History

Virginia Polytechnic Institute and State University, popularly known as Virginia Tech, officially opened on Oct. 1, 1872, as Virginia's white land-grant institution. During its existence, the university has operated under three other legal names: Virginia Agricultural and Mechanical College since 1872, Virginia Agricultural and Mechanical College and Polytechnic Institute since 1896, and Virginia Polytechnic Institute since 1944. The state legislature sanctioned university status and bestowed upon it the present legal name effective June 26, 1970.

Established in 1872 with 500 volumes, Virginia Tech Libraries now includes holdings of more than 2 million volumes physically located in Newman Library and four branches. The library is a selective depository for federal documents and is an invited member of the Association of Research Libraries (ARL). The library's mission is to invent the future of libraries at Virginia Tech. We honor tradition as we excel in our core mission to provide access to information. We acknowledge change as we adapt to address the new information needs and Open Web's reframing of the academic and research enterprises in higher education. We embrace a diversity of thought and culture as we find solutions to information challenges when meeting user needs. Over the next decade, we anticipate seismic shifts in the nature of libraries across the globe. The form, function, and overall identity of the library as an institution will evolve. At Virginia Tech, we envision the library of the future emerging as a platform for student success and faculty innovation in a global context, a hub for strategic partnerships, and a regenerating entity that adapts to changing user needs and expectations.