

Exploring New Frontiers in 21st Century Archival Education

Drexel University's College of Computing and Informatics (Alex H. Poole), in partnership with the Catholic University of America's Department of Library and Information Science (Jane Zhang), and in consultation with the Archival Education and Research Initiative (AERI), the Academy of Certified Archivists (ACA), and the Society of American Archivists' Committee on Education (CoE), its Graduate Archival Education Subcommittee (GAES), and its Archival Educators Section (AES), requests \$147,733 to hold a one-year Laura Bush 21 **National Forum Grant** to **build capacity for lifelong learning in Master's level** archival education.

1) Statement of need

A recent IMLS report identified current, nationally significant gaps in knowledge and skills between LIS graduates and the needs of employers.¹ It underscored the necessity of curriculum changes to meet evolving practice. Bolstering this point, SAA President (2018-2019) Tanya Zanish-Belcher underlined the fundamental need for a closer relationship between professional associations such as the Society of American Archivists, practitioners, and archival training programs.² Diverse archival educators and practitioners in all career stages must rise to the challenge of preparing the next generation of archivists to address these concerns.

The Master's degree is the dominant credential by which one enters professional archival practice. It therefore provides the foundation for successful lifelong learning, prepares the next generation of archivists to meet the evolving needs of the profession and of society more broadly, and is the professional seedbed for most archival educators and faculty members. Centered on developing, sharing, and adopting innovative pedagogical practices for lifelong learning, this project aligns with the IMLS's Strategic Plan (2018-2022).³ It will strengthen the capacity of archival programs to improve the training and skills development of their students, making for a better-prepared and more competent workforce. More specifically, it contributes to the capacity of these aspiring archivists for problem-solving, clear communication, informed decision-making, interdisciplinary inquiry, critical thinking, collaboration, and service to and engagement with their communities and constituencies.

This Forum project will first discern the current state of archival education concepts, principles, methods, skills, competencies, and practices based on an extensive, multi-faceted environmental scan. Second, it will develop strategies to address pedagogical gaps and augment current good practices. Third, it will propagate actionable recommendations for practice and produce concrete, generalizable deliverables. More holistically, it will raise awareness, increase understanding, develop and further solidify strategic partnerships, and help forge a sustainable community of practitioners and educators.

Scholars have struggled to define the appropriate scope of archival education for more than eight decades—effectively since the birth of the profession.⁴ Although developing a core curriculum and knowledge base constitutes the foundation of professionalization, the field has struggled with a lack of vision and articulation.⁵ This problem has only become more acute over time, moreover; archival education has witnessed unprecedented growth, consolidation, and legitimacy since the 1990s.⁶ But the challenge of educating archivists has assumed equally unprecedented urgency in the context of the information society and the data deluge. Entirely new needs and thus fields such as digital curation have arisen, even as traditional priorities such as documenting and preserving a representative cultural record have become ever more challenging.

Recent research literature suggests that archival educators face three broad pedagogical challenges. First, with the proliferation of digitized and born-digital materials, educators must prepare their students to work in technologically sophisticated and fluid environments.⁷ Instructors and students alike would profit from

adopting a mindset grounded in computational thinking.⁸ Key topics to integrate in curriculum development include digital preservation,⁹ digital curation¹⁰ including digital forensics,¹¹ records management and electronic records management (ERM),¹² audiovisual materials,¹³ social media archives,¹⁴ web archives,¹⁵ computational archival science (CAS),¹⁶ personal archives/collections,¹⁷ and digital humanities.¹⁸ Desired competencies include coding and programming, spreadsheets, databases, preservation software (e.g. BitCurator, Preservica, Archivematica, and Bag-It), web archiving services (e.g. Archive-It), content management systems (e.g. ArchivesSpace), social networking tools (e.g. Twitter, Instagram, Facebook, YouTube, and blogs), web design platforms, end user data compilation and analytical tools, automated appraisal and digital ingest tools, encryption tools, rights management tools, and tools to support differently abled users and remote users.

Second, students need educational programs and curricula that welcome diversity and inclusivity and promote equity, especially in terms of race and ethnicity.¹⁹ SAA President (2016-2017) Nancy McGovern promotes “diverse diversity.” As she argues, “no exclusionary -ism is okay in our community.”²⁰ Embracing diversity, inclusivity, and equity in the curriculum involves attending to ethics, values, and social justice,²¹ cultural competency,²² community engagement and service learning,²³ social and cultural memory,²⁴ advocacy and activism,²⁵ community archives,²⁶ and culturally-sensitive arrangement and description.²⁷¹

Third, archival educators must address logistical and infrastructural concerns. The lack of a common curriculum undercuts efforts to prepare students for future practice. Fully 60 Master’s degree programs in the United States offer archives courses (whether ALA-accredited or not). But these programs offer an eclectic mix of courses, often on an irregular schedule, in various departments or schools, and taught by a varied ratio of full-time and adjunct faculty. Students also face a limited number of electives and a curriculum of relatively short duration (usually 36 credits) as well as varying academic calendars (e.g. 10-week quarters versus 15-week semesters). Outstanding questions in this space include in what program education should occur (LIS, IS, History, or Public History),²⁸ optimal methods of content delivery (lecture, discussion, group work), the ratio of classroom versus field learning, best practices for internships, practicums, and experiential learning,²⁹ strategies for robust distance education,³⁰ how students should prepare themselves for teaching undergraduates and other students,³¹ and the role of professional certification, accreditation, and evaluation.³²

There has been a lack of dialogue on these issues among educators and practitioners; this Forum will do much to remedy this communication and collaboration gap. In an exploratory phase of maturity, it will explicitly define a problem space and opportunities moving forward. Further, it will set a foundation for innovative, adaptable, and sustainable national pedagogy supported by appropriate research findings, teaching tools, models, and practices, and collaborations and partnerships. It is imperative to create a sustainable educational framework and intellectual and practical infrastructure that allows the community thoughtfully, reflexively, and dynamically to build capacity vis-à-vis these urgent professional needs.

2) Project design and work plan

2.1) Budget

Exploring New Frontiers in 21st Century Archival Education’s request for \$147,733 includes support for even planning costs, advisor-participant and Forum event attendee costs (air travel, accommodations, meals, and transportation), supplies for the Forum event, travel and accommodations for the PIs to disseminate project outputs and solicit input and feedback, salary support for the PIs, and indirect costs.

¹ Archives for Black Lives in Philadelphia’s “Anti-Racist Description Resources,” 2019.

2.2) Personnel

This project will both exemplify and stimulate further the “radical and systemic collaboration” advocated by IMLS, which is key to ensuring project success, implementation, and broad impact.³³ Seeking to further equitable, trusting, and mutually beneficial relationships, the PIs drew upon their professional and scholarly networks to put together a project team whose members contribute diverse demonstrated skills, knowledge, expertise, resources, reputational standing, and accountability. The team well understands the current state of and gaps in archival theory and practice and the economic, political, technological, and social contexts in which archival professionals work.

Including the PIs, the project team represents 15 diverse institutions (see list of project staff). The PIs have put together an Advisory Board whose 13 members will serve as full-fledged *advisor-participants*. These advisor-participants will provide expert input and feedback throughout the duration of the project. Indeed, they have already contributed key input and feedback on this proposal. What is more, nine of 13 advisor-participants have already committed to attending the forum event as well.

These advisor-participants represent extraordinary diversity in terms of race, ethnicity, gender, class, sexual preference, nationality, religion, geographic region, type of institution, professional position and focus, and career stage. What is more, they are distinguished professional leaders who work as instructors, scholars, and practitioners. Notably, they include:

- The current SAA President (Meredith Evans) and her two immediate predecessors (Tanya Zanish-Belcher, Nancy McGovern)
- 6 SAA Fellows (Jeannette Bastian, Anne Gilliland, Rebecca Hankins, Cal Lee, Nancy McGovern, Tanya Zanish-Belcher)
- 2 current SAA Council members (Petrina Jackson, Ricky Punzalan) and three previous Council members (Anne Gilliland, Rebecca Hankins, Nancy McGovern)
- The current SAA Graduate Archival Education Subcommittee (GAES) Chair (Jane Zhang) and immediate past Chair (Alex Poole) as well as current Steering Committee member and incoming vice-chair (Ashley Todd-Diaz)
- The current SAA Archival Educators Section (AES) Chair (Alex Poole) and two members of the Steering Committee (Aisha Johnson-Jones, Ashley Todd-Diaz)
- The editor of *The American Archivist* (Cal Lee)
- Past Chairs of SAA’s Archives and Archivists of Color Roundtable (AACR) (Petrina Jackson), Archival History Section (Alex Poole), Native American Archives Section (Ricky Punzalan), Historical Manuscripts Section (Ashley Todd-Diaz), and the Committee on the Status of Women (Tanya Zanish-Belcher)
- The current and immediate past Archival Education and Research Initiative (AERI) Chairs (Jeannette Bastian, Anne Gilliland), two members of the AERI Interim Board (Cal Lee, Alex Poole), and the AERI 2020 Program Chair (Alex Poole)
- Two Academy of Certified Archivists (ACA) Examination Development Committee Chairs (Rebecca Hankins, Jane Zhang)
- Advisor-participants have also taken on numerous leadership and service positions in regional archival associations such as the Delaware Valley Archivists Group (DVAG), the Mid-Atlantic Regional Archives Council (MARAC), New England Archivists (NEA), the Midwest Archivists Conference (MAC), and Western Archivists.

Further, the project builds an installed base, capitalizing upon numerous other IMLS-funded archival education projects led by advisor-participants. These include the Archival Education and Research Initiative

(Anne Gilliland) (IMLS RE-02-08-0008-08), the Emerging Archival Scholars Program (EASP) (Anne Gilliland, Kelvin White) (IMLS RE-20-16-0110-16), BitCurator and digital forensics education (Cal Lee) (IMLS RE-71-18-0028-18), and both DigCCurr I (Cal Lee) (IMLS RE-05-06-0044-06) and DigCCurr II (Cal Lee, Alex Poole) (IMLS RE-05-08-0060-08).

Experienced educators and researchers, the PIs are ideally suited to take on this project. PI Poole is immediate past chair of GAES, chair of AES, an immediate past member of the Committee on Education, and the program chair for AERI 2020. His publications on diversity, equity, and inclusivity have received awards from the Society of American Archivists, the American Library Association, and the Association for Information Science and Technology. Co-PI Zhang is current chair of GAES, a current member of the CoE, and current chair of the ACA Examination Development Committee; she has written extensively on curricular issues.

2.3) Project Schedule

Exploring New Frontiers in 21st Century Archival Education includes three complementary phases between September 1, 2020, and August 31, 2021: an environmental scan, a national forum event, and final outputs and deliverables (please see schedule of completion). Each phase will bring together the demonstrated leadership and expertise of the project team (PIs and advisor-participants); the latter two will incorporate Forum attendees.

2.3.1) Pre-forum environmental scan

The project team will establish an analytical baseline for the Forum event and subsequent work through a rigorous environmental scan. Products of this scan will include an analysis of current course offerings, a syllabus review, a literature review, a content analysis of annual meeting programs, and a Qualtrics-based survey of archival instructors.

- First, we will compile a database of current archives course offerings at the 60 programs in the United States that offer such courses. We will note required and elective courses, concentration requirements, and internship or fieldwork options or requirements.
- Second, we will undertake a syllabus review, once again focusing on the 60 programs offering archives courses in the United States. This review will include both foundational (e.g. introduction, appraisal, arrangement and description, preservation, reference and access, records management) and advanced/specialized courses (e.g. advanced archival topics, electronic records management, digital curation, digital forensics). We will center our analysis on the most recent iteration of these courses. We will harvest the syllabi online if publicly available; if not, we will rely on our interpersonal and professional networks and contact the program coordinators or faculty directly. This review will examine course goals and objectives, weekly topics, readings, and assignments.
- Third, we will conduct a comprehensive literature review on archival education. We will draw from peer-reviewed literature (scholarly journals, conference papers and presentations), and other professional publications (e.g. white papers, gray literature, social media).
- Fourth, we will complete a topical content analysis of 2019 annual meeting programs including SAA and regional archival associations such as MARAC, MAC, and Western Archivists.
- Fifth, we will conduct a Qualtrics-based (<https://www.qualtrics.com/>) survey (both closed- and open-ended questions) of full-time and adjunct faculty associated with the 60 programs to gauge specific institutional pedagogical needs, concerns, and priorities. Though achieving a robust response rate is a risk, we will mitigate by leveraging our interpersonal and professional networks.

Each of these five outputs will constitute a rich resource for Forum event discussions, module development, and broad-gauged curriculum recommendations. Each will help identify common challenges and any proposed

remedies. These outputs will be shared before the Forum event with advisor-participants and Forum attendees for their review, feedback, and co-authorship.

2.3.2) Forum

To be hosted by Drexel University in mid-late June of 2021, the event will include 45 diverse archival educators and practitioners from Library and Information Science, iSchool, and History/Public History programs. It will take place in mid-June 2021, a date that both accommodates the academic calendar and allows for robust subsequent follow-up evaluation and dialogue and dissemination of results at professional meetings.

Complementing the participation of our advisor-participants (9 of 13 have already committed to attending), we shall seek Forum event representation from a wide swath of diverse expert stakeholders, e.g.

- SAA's 30 Sections (especially those focused on demographically underrepresented groups such as the Archives and Archivists of Color Section (AACR), Diverse Sexuality and Gender Section (DSDG), Accessibility and Disability Section, Human Rights Archives Section, Labor Archives Section, Latin American and Caribbean Cultural Heritage Archives Section (LACCHA), and the Native American Archives Section)
- Faculty at the 60 programs offering archives content identified by GAES,
- Leaders from the National Historical Publication and Records Commission (NHPRC), National Association of Government Archives and Records Administrators (NAGARA), and American Association for State and Local History (AASLH)
- Leaders from regional archival associations such as MAC, DVAG, and WCA, from the Academy of Certified Archivists (ACA),
- Members of SAA's Graduate Archival Education Subcommittee (GAES), SAA's Committee on Education, and SAA's Archival Educators Section.

Key considerations in recruiting participants from these pools include race and ethnicity, class, ability, age, gender, language, and geographical region, and type of institution, e.g. government, academic, corporate, and non-profit.

Our recruitment will involve two methods. First, we will seek recommendations from our advisor-participants, who will look to their professional and interpersonal networks. Second, we will offer an open application process advertised through the project website, social media, and professional associations' listservs. As recruiting an appropriately diverse group of participants constitutes a risk, we will mitigate it through this two-pronged targeted outreach. We seek participation from 30 practitioners and 15 instructors.

We will gauge key topics for Forum event based on our multifaceted environment scan and a pre-Forum event attendee questionnaire. The schedule will be consensus-based and fine-tuned with our advisor-participants. Working groups for the modules will be developed based on attendees' preferences. The event itself will feature a varied slate of activities to maximize teaching and learning opportunities. Advisor-participants have already suggested plenary speakers, panels, breakout sessions, working groups, and open discussions. Games, videos, and multimedia will be featured. We will mix experienced and less experienced instructors and practitioners in various event contexts to provide for bi-directional transfer of knowledge, context, and perspectives. The event will also feature small group dinners and coffee/tea breaks to encourage informal knowledge sharing.

The Forum event will be structured as follows:

- Day 1: Information sharing (ideas, needs, priorities, solutions), discussion, and evaluation revolving around the five components of the environmental scan.
- Days 2 and 3: Focus group work on 15 exemplary curriculum modules based on attendee consensus. For example, initial conversation by the project team suggests that “Digital Forensics,” “Enfranchising Community and Participatory Archives,” “Digital Curation in the Humanities,” and “Culturally Competent Arrangement and Description” are quite promising.
- Day 4 (half day): Summary and plans for post-symposium work such as module refinement, publication and presentation preparation, and opportunities for further collaboration and funding.

The event will thus highlight key archival skills and competencies, modular learning outcomes and objectives, core and suggested readings, assignments, and assessments, hands-on activities and exercises, and concrete recommendations and plans regarding further curriculum module development and content. Other foci will include strategies for collaboration across disciplines and fields, professional organizations, institutions, and local communities, recruitment and retention, especially to marginalized and underrepresented populations, and priorities for future research and funding. In short, it will help achieve a common practical and intellectual understanding, practical and intellectual foundation, and context for the future(s) of archival education.

The event will be live streamed as well as recorded for open release (with appropriate participant permissions secured) to achieve the widest possible reach. The recordings and related materials will be circulated through the project website, social media, and professional and institutional listservs.

2.3.3) Post-Forum

The project’s outcomes and outputs will facilitate improved practice. More specifically, the project will connect curricula and competencies with a current understanding of issues and challenges that will enable graduates to better contribute to and engage with their organizations as willing and able partners ready to help solve problems in a variety of professional roles.

2.3.3.1) Outcomes and deliverables

Project outcomes and deliverables include 1) the project website; 2) recommendations for GPAS and DAE revisions; 3) exemplary curriculum modules; 4) a White Paper; 5) publications and presentations at professional meetings; 6) publications and presentations for informal channels such as social media. We will request that advisor-participants and event attendees review and contribute feedback to each of these deliverables.

- First, the project website (hosted by Drexel’s College of Computing and Informatics) will serve as a broad clearinghouse and exchange for all stakeholders. It will include general information about the project and the project team, materials related to and the results of each of the five components of our environmental scan, logistical information (schedules, participants) about the Forum event, and Forum event recordings.
- Second, we will use the data generated through the environmental scan as a base for recommending updates to the SAA’s Directory of Archival Education and to the revision of the SAA’s Guidelines for a Graduate Program in Archival Studies (GPAS).
- Third, we will produce 15 exemplary curriculum modules such as “Digital Forensics” and “Community Archives” adaptable to diverse archival education contexts. Each module will include learning objectives, assignments, lectures, multimedia content, technology requirements, readings, exercises, and rubrics.
- Fourth, the project will produce a White Paper targeting Deans, Department Heads, Program Directors, and senior level administrators as well as faculty, practitioners, and students.

- Fifth, the project will produce presentations and publications for peer-reviewed professional conferences such as the Society of American Archivists, the Archival Education and Research Institute, and the Association of Library and Information Science Educators.
- Sixth, we will produce non peer-reviewed materials that highlight project work such as social media (podcasts, Twitter, Facebook, Instagram, blog posts, webinars, YouTube) and local publications.

To facilitate broad impact and sustainability, these outputs will be promoted, shared, and disseminated gratis through the project website, through professional associations' listservs, through social media, and through local (e.g. Drexel University) channels. This sharing and dissemination strategy will encourage the spreading of project efforts, ideas, activities, and deliverables to other contexts and their adaptation, adoption, and refinement.

2.4) Evaluation

To ensure appropriate evaluation, performance measurement, and consensus-building over the course of the project, we will depend upon transparent, frequent communication with our advisor-participants and our Forum event attendees.

- First, bimonthly meetings will be held with the 13 advisor-participants via Zoom (<https://zoom.us/>).
- Second, we will use Slack (<https://slack.com/>) not only for routine project management duties, but also for sharing resources and works-in-progress and for soliciting advisor-participant input and feedback.
- Third, formative evaluation with the advisor-participants will occur through a mid-point half-day Zoom meeting with the advisor-participants.
- Fourth, the 45 attendees will be invited to complete pre- and post-Forum event surveys.
- Fifth, summative evaluation with advisor-participants will occur in late August via a half-day Zoom meeting. This will serve not only as an evaluative opportunity, but also to set priorities for publication of results, piloting of curriculum modules, and further collaboration.
- Finally, all project outputs will be disseminated widely, as elaborated upon below, and posted on the project website to encourage direct feedback from all stakeholders.

3) Diversity, Equity, and Inclusion

Recent literature indicates an urgent need to increase diversity, inclusivity, and equity in Library and Information Science programs and in the profession overall.³⁴ This project takes seriously these findings, particularly concerning racial and ethnic diversity, and approaches them as both a challenge and an opportunity. Diversity, equity, and inclusion are absolutely crucial priorities in the Forum's overall approach and its collaborations both short- and long-term. The Forum is a key step toward broadening participation and enhancing both master's level education and workforce diversity. Both the project team and the intended participants and beneficiaries of the project include diverse racial/ethnic, socioeconomic, gender, geographical, national, institutional, and disciplinary perspectives. They are fundamentally involved in defining the challenges and opportunities of and implementing every step of the project. Furthermore, this project seeks to diversify the archival education curriculum. This in turn will attract more potential students from underrepresented populations; these students will diversify the demographic composition of the profession and not only help diversify archival collections, but also effect outreach to underrepresented user groups. We hope, in short, to develop a virtuous cycle of diversity, inclusivity, and equity.

4) Broad impact

Exploring New Frontiers in 21st Century Archival Education addresses a vitally significant current issue.

Through its activities and its six outputs, this project will develop skills and competencies and build greater knowledge as it enhances practice and promotes necessary systemic change in archival pedagogy long-term and nationwide. As noted above, our outputs will be widely and freely disseminated through multiple channels and to multiple stakeholder groups; this will be abetted by targeted outreach conducted by project team members. The website and its deliverables will be hosted by Drexel's CCI in perpetuity; project materials will also be deposited in Drexel's institutional repository. Presentations and publication in both peer-reviewed and non-peer-reviewed venues and through multiple media will further augment the project's reach and impact. Sharing project data, findings, and deliverables in these ways will ensure broad and sustainable impact across diverse programs and institutions.

This National Forum Grant will build crucial capacity for lifelong learning. First, it will develop a robust, sustainable, and trusting community of practitioners and instructors. Second, it will promote the use of a common pedagogical language in archival studies among those two groups. Third, it will build consensus around future educational principles and goals and specific mechanisms to reach them. Fourth, it will encourage future collaboration and funded research opportunities between instructors and practitioners, who are all-too-frequently siloed. Indeed, the project itself will represent a model of successful collaboration. Fifth and finally, it will yield deliverables such as curriculum modules that will prove foundational to the future maturation of archival pedagogy and practice and that will be adaptable to educational programs regardless of size, location, or discipline.

Preparing archivists to deal with a historically unprecedented technologically saturated and culturally diverse democratic society, the proposed project will ensure that the archival profession is future ready. It will build on past work, surmount existing barriers, pinpoint new opportunities, and set directions for sustainable, robust pedagogy with a specific focus on technological skills development and diversity, inclusivity, and equity. It will both involve and benefit national stakeholders in archival studies and LIS more generally—not only practitioners but also educators, students, professional organizations, academic, public, and private employers, and the communities in which archivists work. As Helen Tibbo rightly reminds us, we have “so much to learn, so little time to learn it.”³⁵

¹ A.E. Sands et al., “Positioning Library and Information Science Graduate Education for 21st Century Practice” (Washington, D.C.: Institute of Museum and Library Services, 2018), <https://www.ims.gov/sites/default/files/publications/documents/imspositioningreport.pdf>.

² Tanya Zanish-Belcher, “Keeping Evidence and Memory: Archives Storytelling in the Twenty-First Century,” *The American Archivist* 82, no. 1 (March 2019): 9–23, <https://doi.org/10.17723/0360-9081-82.1.9>.

³ <https://www.ims.gov/about-us/strategic-plan>

⁴ Samuel Bemis, “The Training of Archivists in the United States,” *The American Archivist* 2, no. 3 (July 1939): 154–61, <https://doi.org/10.17723/aarc.2.3.r1ht0v6740rp3053>; Paul Conway, “Archival Education and the Need for Full-Time Faculty,” *The American Archivist* 51, no. 3 (April 1988): 254–65, <https://doi.org/10.17723/aarc.51.3.h83w32487q870239>; Jacqueline Goggin, “That We Shall Truly Deserve the Title Of ‘Profession’: The Training and Education of Archivists, 1930-1960,” *The American Archivist* 47, no. 3 (July 1984): 243–54, <https://doi.org/10.17723/aarc.47.3.4r8116r73063m17k>; H. Jones, “Archival Training in American Universities, 1938-68,” *The American Archivist* 31, no. 2 (April 1968): 135–54, <https://doi.org/10.17723/aarc.31.2.0g14n817068gv665>; Fredric Miller, “The SAA as Sisyphus: Education Since the 1960s,” *The American Archivist* 63, no. 2 (September 2000): 224–36, <https://doi.org/10.17723/aarc.63.2.kh857t69xm658527>; T. Schellenberg, “Archival Training in Library Schools,” *The American Archivist* 31, no. 2 (April 1968): 155–65, <https://doi.org/10.17723/aarc.31.2.g2k6132m5332737k>; Robert Warner, “Archival Training in the United States and Canada,” *The American Archivist* 35, no. 3–4 (July 1972): 347–58, <https://doi.org/10.17723/aarc.35.3-4.125k6746779094q7>.

⁵ Jeannette Bastian and Elizabeth Yakel, “‘Are We There Yet?’ Professionalism and the Development of an Archival Core Curriculum in the United States,” *Journal of Education for Library and Information Science* 46, no. 2 (2005): 95, <https://doi.org/10.2307/40323864>; Richard J. Cox et al., “Educating Archivists in Library and Information Science Schools,” *Journal of Education for Library and Information Science* 42, no. 3 (2001): 228, <https://doi.org/10.2307/40324014>; Helen R. Tibbo, “So Much to Learn, so Little Time to Learn It: North American Archival Education Programs in the Information Age and the Role for Certificate Programs,” *Archival Science* 6, no. 2 (February 12, 2007): 231–45, <https://doi.org/10.1007/s10502-006-9031-5>.

- ⁶ Richard Cox, “Graduate Archival Education in the United States; A Personal Reflection About Its Past and Future,” *Journal of Contemporary Archival Studies* 2, no. 3 (2015), <https://elischolar.library.yale.edu/jcas/vol2/iss1/3>; Alison Langmead, “The History of Archival Education in North America: What’s Next?,” in *Archival Education and Research: Selected Papers from the 2014 AERI Conference*, ed. Richard J. Cox, Alison Langmead, and Eleanor Mattern (Sacramento, CA: Litwin Books, 2015), 115–56.
- ⁷ Nancy Y. McGovern, “Archives, History, and Technology: Prologue and Possibilities for SAA and the Archival Community,” *The American Archivist* 81, no. 1 (March 2018): 9–22, <https://doi.org/10.17723/0360-9081-81.1.9>; Tibbo, “So Much to Learn, so Little Time to Learn It.”
- ⁸ Jeannette M. Wing, “Computational Thinking,” *Communications of the ACM* 49, no. 3 (March 1, 2006): 33, <https://doi.org/10.1145/1118178.1118215>.
- ⁹ Keith L. Pendergrass et al., “Toward Environmentally Sustainable Digital Preservation,” *The American Archivist* 82, no. 1 (March 2019): 165–206, <https://doi.org/10.17723/0360-9081-82.1.165>.
- ¹⁰ Devan Donaldson, “The Trust in Archives—Trust in Digital Archival Content Framework,” *Archivaria* 88 (2019): 50–83; Christopher A. Lee and Helen R. Tibbo, “Where’s the Archivist in Digital Curation Exploring the Possibilities Through a Matrix of Knowledge and Skills,” *Archivaria*, no. 72 (2011): 123–68; Alex H. Poole, “The Conceptual Landscape of Digital Curation,” *Journal of Documentation* 72, no. 5 (September 12, 2016): 961–86, <https://doi.org/10.1108/JD-10-2015-0123>.
- ¹¹ Christopher A. Lee et al., “From Bitstreams to Heritage: Putting Digital Forensics into Practice in Collecting Institutions,” 2013.
- ¹² Donald C. Force and Jane Zhang, “Knowledge Discovery from within: An Examination of Records Management and Electronic Records Management Syllabi,” *Records Management Journal* 26, no. 3 (November 21, 2016): 259–78, <https://doi.org/10.1108/RMJ-11-2015-0034>; Jane Zhang, “Teaching Electronic Records Management in the Archival Curriculum,” *Journal of Education for Library and Information Science Online* 57, no. 1 (2016): 57–68, <https://doi.org/10.12783/issn.2328-2967/57/1/5>.
- ¹³ Jeremy Evans and Melissa Hernández Durán, “Rights Review for Sound Recordings: Strategies Using Risk and Fair Use Assessments,” *The American Archivist* 81, no. 2 (September 2018): 323–72, <https://doi.org/10.17723/0360-9081-81.2.323>; Ricardo Punzalan, “Archival Diasporas: A Framework for Understanding the Complexities and Challenges of Dispersed Photographic Collections,” *The American Archivist* 77, no. 2 (October 2014): 326–49, <https://doi.org/10.17723/aarc.77.2.729766v886w16007>.
- ¹⁴ Ashlyn Velte, “Ethical Challenges and Current Practices in Activist Social Media Archives,” *The American Archivist* 81, no. 1 (March 2018): 112–34, <https://doi.org/10.17723/0360-9081-81.1.112>.
- ¹⁵ Samantha Abrams et al., “Sowing the Seeds for More Usable Web Archives: A Usability Study of Archive-It,” *The American Archivist*, December 20, 2019, <https://doi.org/10.17723/aarc-82-02-19>.
- ¹⁶ Richard Marciano et al., “Archival Records and Training in the Age of Big Data,” in *Advances in Librarianship*, ed. Johnna Percell et al., vol. 44 (Emerald Publishing Limited, 2018), 179–99, <https://doi.org/10.1108/S0065-28302018000044B010>.
- ¹⁷ Christopher A. Lee, “Collecting the Externalized Me: Appraisal of Materials in the Social Web,” in *I, Digital: Personal Collections in the Digital Era*, ed. Christopher A. Lee (Chicago: Society of American Archivists, 2011), 202–38.
- ¹⁸ Alex H. Poole, “The Conceptual Ecology of Digital Humanities,” *Journal of Documentation* 73, no. 1 (January 9, 2017): 91–122, <https://doi.org/10.1108/JD-05-2016-0065>.
- ¹⁹ Meredith Evans, “The Ongoing Effort of Creating an Inclusive Profession,” *Off the Record* (blog), March 23, 2020, <https://offtherecord.archivists.org/2020/03/23/the-ongoing-effort-of-creating-an-inclusive-profession/>; Rebecca Hankins, “Racial Realism or Foolish Optimism: An African American Muslim Woman in the Field,” in *Where Are All the Librarians of Color?*, ed. Rebecca Hankins and Miguel Juarez (Sacramento, CA: Library Juice Press, 2015); Alex H. Poole, “Pinkett’s Charges: Recruiting, Retaining, and Mentoring Archivists of Color in the Twenty-First Century,” *The American Archivist* 80, no. 1 (March 2017): 103–34, <https://doi.org/10.17723/0360-9081.80.1.103>.
- ²⁰ McGovern, “Archives, History, and Technology,” 19.
- ²¹ Anne Gilliland, “Neutrality, Social Justice and the Obligations of Archival Education and Educators in the Twenty-First Century,” *Archival Science* 11, no. 3–4 (November 2011): 193–209, <https://doi.org/10.1007/s10502-011-9147-0>; Pluralizing the Archival Curriculum Group, “Educating for the Archival Multiverse: The Archival Education and Research Institute (AERI), Pluralizing the Archival Curriculum Group (PACG),” *The American Archivist* 74, no. 1 (April 2011): 69–101, <https://doi.org/10.17723/aarc.74.1.hv33964712745684>; Alex H. Poole, “‘Be Damned Pushy at Times’: The Committee on the Status of Women and Feminism in the Archival Profession, 1972–1998,” *The American Archivist* 81, no. 2 (September 2018): 394–437, <https://doi.org/10.17723/0360-9081-81.2.394>; Alex H. Poole, “Harold T. Pinkett and the Lonely Crusade of African American Archivists in the Twentieth Century,” *The American Archivist* 80, no. 2 (September 2017): 296–335, <https://doi.org/10.17723/0360-9081-80.2.296>; Alex H. Poole, “The Strange Career of Jim Crow Archives: Race, Space, and History in the Mid-Twentieth-Century American South,” *The American Archivist* 77, no. 1 (April 2014): 23–63, <https://doi.org/10.17723/aarc.77.1.g621m3701g821442>; Ricardo L. Punzalan and Michelle Caswell, “Critical Directions for Archival Approaches to Social Justice,” *The Library Quarterly* 86, no. 1 (January 2016): 25–42, <https://doi.org/10.1086/684145>; Kelvin L. White and Anne J. Gilliland, “Promoting Reflexivity and Inclusivity in Archival Education, Research, and Practice,” *The Library Quarterly* 80, no. 3 (July 2010): 231–48, <https://doi.org/10.1086/652874>.
- ²² Ellen Engseth, “Cultural Competency: A Framework for Equity, Diversity, and Inclusion in the Archival Profession in the United States,” *The American Archivist* 81, no. 2 (September 2018): 460–82, <https://doi.org/10.17723/0360-9081-81.2.460>.

- ²³ Andrew J. Lau, Anne J. Gilliland, and Kimberly Anderson, “Naturalizing Community Engagement in Information Studies: Pedagogical Approaches and Persisting Partnerships,” *Information, Communication & Society* 15, no. 7 (September 2012): 991–1015, <https://doi.org/10.1080/1369118X.2011.630404>; Christopher B. Livingston, “Imagined Spaces, Preserved Places: A Case Study of Historic Preservation through Applied Learning Environments and Service-Learning,” *The American Archivist* 81, no. 1 (March 2018): 216–30, <https://doi.org/10.17723/0360-9081-81.1.216>.
- ²⁴ Jeannette A. Bastian, “Documenting Communities Through the Lens of Collective Memory,” in *Identity Palimpsests: Archiving Ethnicity in the U.S. and Canada*, ed. Dominique Daniel and Amalia Levi (Sacramento, CA: Litwin Books, 2013), 15–33; Jeannette A. Bastian, “The Records of Memory, the Archives of Identity: Celebrations, Texts and Archival Sensibilities,” *Archival Science* 13, no. 2–3 (June 2013): 121–31, <https://doi.org/10.1007/s10502-012-9184-3>.
- ²⁵ Zanish-Belcher, “Keeping Evidence and Memory.”
- ²⁶ Jeannette A Bastian and Andrew Flinn, *Community Archives, Sustaining Memory: Heritage, Memory and Identity*, 2020; Anne J. Gilliland and Andrew Flinn, “Community Archives: What Are We Really Talking About?,” in *Nexus, Confluence, and Difference: Community Archives Meets Community Informatics: Prato CIRN Conference Oct 28-30 2013* (CIRN Prato Community Informatics Conference 2013, Melbourne: Centre for Community Networking Research, Centre for Social Informatics, Monash University, 2013), 1–23, https://www.monash.edu/_data/assets/pdf_file/0007/920626/gilliland_flinn_keynote.pdf; Alex H. Poole, “The Information Work of Community Archives: A Systematic Literature Review,” *Journal of Documentation* ahead-of-print, no. ahead-of-print (March 17, 2020), <https://doi.org/10.1108/JD-07-2019-0140>; Ricardo L. Punzalan, “‘All the Things We Cannot Articulate’: Colonial Leprosy Archives and Community Commemoration,” in *Community Archives: The Shaping of Memory*, ed. Jeannette A. Bastian and Ben Alexander (London: Facet Publishing, 2009), 197–219; Kelvin L. White, “Meztizaje and Remembering in Afro-Mexican Communities of the Costa Chica: Implications for Archival Education in Mexico,” *Archival Science* 9, no. 1–2 (June 2009): 43–55, <https://doi.org/10.1007/s10502-009-9102-5>.
- ²⁷ Archives for Black Lives in Philadelphia’s “Anti-Racist Description Resources,” 2019. https://archivesforblacklives.files.wordpress.com/2019/10/ardr_final.pdf
- ²⁸ Brenda Banks, “Delivering Archival Education to a Broader Audience,” *The American Archivist* 74 (supplement 2011): 306:15-306:18; Edwin Bridges et al., “Historians and Archivists: Educating the Next Generation,” *The American Archivist* 56, no. 4 (September 1993): 714–17, <https://doi.org/10.17723/aarc.56.4.e1152074748q8616>; F. Ham et al., “Is the Past Still Prologue?: History and Archival Education,” *The American Archivist* 56, no. 4 (September 1993): 718–29, <https://doi.org/10.17723/aarc.56.4.7151h15363320751>.
- ²⁹ Donghee Sinn, “Collaborative Education between Classroom and Workplace for Archival Arrangement and Description: Aiming for Sustainable Professional Education,” *The American Archivist* 76, no. 1 (April 2013): 237–62, <https://doi.org/10.17723/aarc.76.1.u86275j711w471m6>.
- ³⁰ Cox, “Graduate Archival Education in the United States; A Personal Reflection About Its Past and Future.”
- ³¹ Lindsay Anderberg et al., “Teaching the Teacher: Primary Source Instruction in American and Canadian Archives Graduate Programs,” *The American Archivist* 81, no. 1 (March 2018): 188–215, <https://doi.org/10.17723/0360-9081-81.1.188>; Danielle Emerling, “Civics in the Archives: Engaging Undergraduate and Graduate Students with Congressional Papers,” *The American Archivist* 81, no. 2 (September 2018): 310–22, <https://doi.org/10.17723/0360-9081-81.2.310>; Christy Fic, “Working as an Embedded Archivist in an Undergraduate Course: Transforming Students into Scholars through an Archival Workshop Series,” *The American Archivist* 81, no. 2 (September 2018): 290–309, <https://doi.org/10.17723/0360-9081-81.2.290>; Patricia Garcia, “Accessing Archives: Teaching with Primary Sources in K–12 Classrooms,” *The American Archivist* 80, no. 1 (March 2017): 189–212, <https://doi.org/10.17723/0360-9081.80.1.189>; Chris Marino, “Inquiry-Based Archival Instruction: An Exploratory Study of Affective Impact,” *The American Archivist* 81, no. 2 (September 2018): 483–512, <https://doi.org/10.17723/0360-9081-81.2.483>; Kathryn G. Matheny, “Instruction Consultation for Archives Visits: Why No One Talks About It, and Why They Should,” *The American Archivist*, December 20, 2019, <https://doi.org/10.17723/aarc-82-02-03>; Erin Passehl-Stoddart, “‘Let Me Tell You What I Learned’: Primary Source Literacy and Student Employment in Archives and Special Collections,” *The American Archivist* 81, no. 2 (September 2018): 438–59, <https://doi.org/10.17723/0360-9081-81.2.438>; Leslie Waggener, “Milestone, Not Millstone: Archivists Teaching First-Year Seminars,” *The American Archivist* 81, no. 1 (March 2018): 165–87, <https://doi.org/10.17723/0360-9081-81.1.165>.
- ³² Edward Benoit and Donald C. Force, “One Size Does Not Fit All: Graduate Archival Education in the Twenty-First Century,” *The American Archivist* 82, no. 1 (March 2019): 24–52, <https://doi.org/10.17723/0360-9081-82.1.24>.
- ³³ Ricky Erway et al., “IMLS Focus: The National Digital Platform for Libraries, Archives, and Museums” (Washington, D.C.: Institute of Museum and Library Services, 2015), 8, <https://www.ims.gov/sites/default/files/publications/documents/2015imlsfocusndpreport.pdf>.
- ³⁴ Poole, “Pinkett’s Charges”; Alex H. Poole et al., “Where Do We Stand? Diversity and Social Justice in North American Library and Information Science Education,” under review; Sands et al., “Positioning Library and Information Science Graduate Education for 21st Century Practice.”
- ³⁵ Tibbo, “So Much to Learn, so Little Time to Learn It.”



DIGITAL PRODUCT FORM

INTRODUCTION

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to digital products that are created using federal funds. This includes (1) digitized and born-digital content, resources, or assets; (2) software; and (3) research data (see below for more specific examples). Excluded are preliminary analyses, drafts of papers, plans for future research, peer-review assessments, and communications with colleagues.

The digital products you create with IMLS funding require effective stewardship to protect and enhance their value, and they should be freely and readily available for use and reuse by libraries, archives, museums, and the public. Because technology is dynamic and because we do not want to inhibit innovation, we do not want to prescribe set standards and practices that could become quickly outdated. Instead, we ask that you answer questions that address specific aspects of creating and managing digital products. Like all components of your IMLS application, your answers will be used by IMLS staff and by expert peer reviewers to evaluate your application, and they will be important in determining whether your project will be funded.

INSTRUCTIONS

If you propose to create digital products in the course of your IMLS-funded project, you must first provide answers to the questions in **SECTION I: INTELLECTUAL PROPERTY RIGHTS AND PERMISSIONS**. Then consider which of the following types of digital products you will create in your project, and complete each section of the form that is applicable.

SECTION II: DIGITAL CONTENT, RESOURCES, OR ASSETS

Complete this section if your project will create digital content, resources, or assets. These include both digitized and born-digital products created by individuals, project teams, or through community gatherings during your project. Examples include, but are not limited to, still images, audio files, moving images, microfilm, object inventories, object catalogs, artworks, books, posters, curricula, field books, maps, notebooks, scientific labels, metadata schema, charts, tables, drawings, workflows, and teacher toolkits. Your project may involve making these materials available through public or access-controlled websites, kiosks, or live or recorded programs.

SECTION III: SOFTWARE

Complete this section if your project will create software, including any source code, algorithms, applications, and digital tools plus the accompanying documentation created by you during your project.

SECTION IV: RESEARCH DATA

Complete this section if your project will create research data, including recorded factual information and supporting documentation, commonly accepted as relevant to validating research findings and to supporting scholarly publications.

SECTION I: INTELLECTUAL PROPERTY RIGHTS AND PERMISSIONS

A.1 We expect applicants seeking federal funds for developing or creating digital products to release these files under open-source licenses to maximize access and promote reuse. What will be the intellectual property status of the digital products (i.e., digital content, resources, or assets; software; research data) you intend to create? What ownership rights will your organization assert over the files you intend to create, and what conditions will you impose on their access and use? Who will hold the copyright(s)? Explain and justify your licensing selections. Identify and explain the license under which you will release the files (e.g., a non-restrictive license such as BSD, GNU, MIT, Creative Commons licenses; RightsStatements.org statements). Explain and justify any prohibitive terms or conditions of use or access, and detail how you will notify potential users about relevant terms and conditions.

A.2 What ownership rights will your organization assert over the new digital products and what conditions will you impose on access and use? Explain and justify any terms of access and conditions of use and detail how you will notify potential users about relevant terms or conditions.

A.3 If you will create any products that may involve privacy concerns, require obtaining permissions or rights, or raise any cultural sensitivities, describe the issues and how you plan to address them.

SECTION II: DIGITAL CONTENT, RESOURCES, OR ASSETS

A.1 Describe the digital content, resources, or assets you will create or collect, the quantities of each type, and the format(s) you will use.

A.2 List the equipment, software, and supplies that you will use to create the digital content, resources, or assets, or the name of the service provider that will perform the work.

A.3 List all the digital file formats (e.g., XML, TIFF, MPEG, OBJ, DOC, PDF) you plan to use. If digitizing content, describe the quality standards (e.g., resolution, sampling rate, pixel dimensions) you will use for the files you will create.

Workflow and Asset Maintenance/Preservation

B.1 Describe your quality control plan. How will you monitor and evaluate your workflow and products?

B.2 Describe your plan for preserving and maintaining digital assets during and after the award period. Your plan should address storage systems, shared repositories, technical documentation, migration planning, and commitment of organizational funding for these purposes. Please note: You may charge the federal award before closeout for the costs of publication or sharing of research results if the costs are not incurred during the period of performance of the federal award (see 2 C.F.R. § 200.461).

Metadata

C.1 Describe how you will produce any and all technical, descriptive, administrative, or preservation metadata or linked data. Specify which standards or data models you will use for the metadata structure (e.g., RDF, BIBFRAME, Dublin Core, Encoded Archival Description, PBCore, PREMIS) and metadata content (e.g., thesauri).

C.2 Explain your strategy for preserving and maintaining metadata created or collected during and after the award period of performance.

C.3 Explain what metadata sharing and/or other strategies you will use to facilitate widespread discovery and use of the digital content, resources, or assets created during your project (e.g., an API [Application Programming Interface], contributions to a digital platform, or other ways you might enable batch queries and retrieval of metadata).

Access and Use

D.1 Describe how you will make the digital content, resources, or assets available to the public. Include details such as the delivery strategy (e.g., openly available online, available to specified audiences) and underlying hardware/software platforms and infrastructure (e.g., specific digital repository software or leased services, accessibility via standard web browsers, requirements for special software tools in order to use the content, delivery enabled by IIIF specifications).

D.2. Provide the name(s) and URL(s) (Universal Resource Locator), DOI (Digital Object Identifier), or other persistent identifier for any examples of previous digital content, resources, or assets your organization has created.

SECTION III: SOFTWARE

General Information

A.1 Describe the software you intend to create, including a summary of the major functions it will perform and the intended primary audience(s) it will serve.

A.2 List other existing software that wholly or partially performs the same or similar functions, and explain how the software you intend to create is different, and justify why those differences are significant and necessary.

Technical Information

B.1 List the programming languages, platforms, frameworks, software, or other applications you will use to create your software and explain why you chose them.

B.2 Describe how the software you intend to create will extend or interoperate with relevant existing software.

B.3 Describe any underlying additional software or system dependencies necessary to run the software you intend to create.

B.4 Describe the processes you will use for development, documentation, and for maintaining and updating documentation for users of the software.

B.5 Provide the name(s), URL(s), and/or code repository locations for examples of any previous software your organization has created.

Access and Use

C.1 Describe how you will make the software and source code available to the public and/or its intended users.

C.2 Identify where you will deposit the source code for the software you intend to develop:

Name of publicly accessible source code repository:

URL:

SECTION IV: RESEARCH DATA

As part of the federal government's commitment to increase access to federally funded research data, Section IV represents the Data Management Plan (DMP) for research proposals and should reflect data management, dissemination, and preservation best practices in the applicant's area of research appropriate to the data that the project will generate.

A.1 Identify the type(s) of data you plan to collect or generate, and the purpose or intended use(s) to which you expect them to be put. Describe the method(s) you will use, the proposed scope and scale, and the approximate dates or intervals at which you will collect or generate data.

A.2 Does the proposed data collection or research activity require approval by any internal review panel or institutional review board (IRB)? If so, has the proposed research activity been approved? If not, what is your plan for securing approval?

A.3 Will you collect any sensitive information? This may include personally identifiable information (PII), confidential information (e.g., trade secrets), or proprietary information. If so, detail the specific steps you will take to protect the information while you prepare it for public release (e.g., anonymizing individual identifiers, data aggregation). If the data will not be released publicly, explain why the data cannot be shared due to the protection of privacy, confidentiality, security, intellectual property, and other rights or requirements.

A.4 What technical (hardware and/or software) requirements or dependencies would be necessary for understanding retrieving, displaying, processing, or otherwise reusing the data?

A.5 What documentation (e.g., consent agreements, data documentation, codebooks, metadata, and analytical and procedural information) will you capture or create along with the data? Where will the documentation be stored and in what format(s)? How will you permanently associate and manage the documentation with the data it describes to enable future reuse?

A.6 What is your plan for managing, disseminating, and preserving data after the completion of the award-funded project?

A.7 Identify where you will deposit the data:

Name of repository:

URL:

A.8 When and how frequently will you review this data management plan? How will the implementation be monitored?