

# User-Centered Conferencing for the Future of the Archival Profession

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**Abstract:** User-centered design simplifies technological engagement by centering users' needs in a collaborative development process. Feedback from conference participants supported the rapid adaptation of information professionals to virtual conferencing during the coronavirus pandemic. Expanding conference development to address the usability needs of all archival workers could radically enhance engagement and fortify the profession. The 2022 Survey of Conference Attendance Preferences, which investigated in-person, virtual, and hybrid attendance preferences of more than 430 library and archives workers, highlights the needs of diverse archival workers and envisions substantial benefits to the archival profession of broadening access to virtual conferences and other opportunities for professional development.

## Introduction

Originally conceived in 1870 with the advent of telegraphy, videoconferencing remained largely unfeasible until web technology advanced and costs lowered in the 1990s.<sup>1</sup> Further technological evolution in the 2000s afforded higher video resolution and wireless networks, driving development of video chat applications for consumers and videoconferencing systems for businesses and educational institutions.<sup>2</sup>

Although online conferencing platforms have been successfully deployed by businesses for the past two decades, they were not used widely by conference designers until public health mandates during the coronavirus pandemic made remote conferencing the only option. Videoconferencing also became affordable to some consumers for their own meetings during the coronavirus pandemic, speeding adoption of what seemed to many a revolutionary technology.

Despite the advantages conferred by greater access to videoconferencing, as with other technology, old and new, videoconferencing cannot be used by those without computers, reliable Internet access, or the ability to use computers. The quick adoption of videoconferencing technology during the coronavirus pandemic rapidly illuminated and widened the so-called “digital divide” between the haves and have nots. It is important to note that the digital divide affects both those with and without discretionary income, including people with disabilities and anyone who lives in a region with inadequate Internet communication infrastructure.

In terms of inclusivity, reduced access to technological advancement has the potential to negatively impact a substantial portion of archival professionals, especially those very early and

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<sup>1</sup> Theresa M. Senft “Videoconferencing,” *Encyclopedia Britannica*, September 29, 2023, <https://www.britannica.com/technology/videoconferencing>.

<sup>2</sup> Senft, “Videoconferencing.”



very late in their careers and anyone who does not have stable connectivity. For those with adequate financial resources, particularly those who are energized by social gatherings, it may still make sense to attend conferences in person. But there are many in the archival profession, from students to administrators, who could be included by remote access to professional conferences. The portion of our profession that does not or cannot attend in-person conferences will remain excluded, unknown, and silenced unless we commit to dismantling the digital divide along with the exclusive tradition of conferences held only in person.

While online conferencing does not inherently address the digital divide, it afforded cutting-edge professional development opportunities to many archivists for the first time during the coronavirus pandemic. Voices previously excluded were suddenly amplified in online sessions, especially those of workers with disabilities preventing or discouraging in-person attendance and underemployed workers, a diverse segment of our profession that grows as budgets tighten and full-time positions are eliminated or converted to temporary or contract positions.

Addressing the digital divide and other barriers to conference access will expand professional engagement opportunities for all and help ensure the future of archives. It is vital to hear from everyone in the profession so that we can appreciate our strengths in the face of emerging threats to our ability to steward our collections and provide access for generations to come. Providing universal access to professional engagement will support our profession as technology evolves while facilitating the transfer of professional knowledge and ethics that have stood the test of time.

With rapid embrace and deployment of videoconferencing during the coronavirus pandemic, archival conference organizers wisely sought the experience of attendees with surveys. While such surveys captured the opinions of those who were able to attend, it would broaden information sharing and strengthen the profession to also seek the experience of those with difficulty attending. Since conference organizers have their hands full, greater inclusion could be supported by committees dedicated to examining and reporting to organizers the needs of workers who are left out of the conference scene. A powerful approach to the challenge of building inclusion is offered by the framework of user-centered design, which simplifies technological engagement by centering users' needs in a collaborative development process.<sup>3</sup>

## **Problem Statement**

Facing persistent lack of funding and time to attend in-person conferences, health concerns, and precarious employment, many information professionals appreciated conferences conducted online during the coronavirus pandemic. Others yearned to return to meeting with colleagues in person. A conversation lounge discussion at the virtual 2021 annual meeting of the Society of American Archivists (SAA) attended by members and conference organizers conveyed desire and support for virtual and hybrid conference modes and interest in addressing technical and

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<sup>3</sup> “What is User Centered Design (UCD)?” Interaction Design Foundation – IxDF, accessed March 11, 2024, <https://www.interaction-design.org/literature/topics/user-centered-design>.

financial challenges they pose to both national and regional conferences. One planning challenge for organizers is the unpredictable technical infrastructure and expertise of conference venues. Another is the ability of virtual meetings to provide value to the vendors that provide much of the funding for conferences. Increasing prices of virtual platforms could especially challenge hybrid delivery of regional meetings.

Following the 2021 SAA annual meeting, members of the Accessibility & Disability Section of SAA contacted SAA annual meeting organizers about their plans, which remained uncertain. By 2022, as concern for public health waned, conference organizers across the information profession seemed poised to return to in-person conferencing to avoid the mounting challenges of virtual and hybrid conferencing modes, including technological limitations of conference venues and mounting costs exacerbated by inflation.

Conference organizers weighed the challenges and benefits by surveying members' experience using virtual and hybrid conferencing modes. Respondents were therefore primarily established professionals with enough funding or employer support to attend in-person conferences. However, the greatest potential of virtual conferencing, if it is affordable and technology available, may be to benefit the precariously employed and other early-career workers without dependable access to funding.

The future of the archival profession depends on the ability of diverse archival workers to develop skills, knowledge, and productive networks. Greater direct engagement with diverse archivists would illuminate what they really need in order to effectively engage in regional and national professional development and dialog. The framework and tools of user-centered design could be leveraged to more deeply and intentionally gather valuable opinions about conferencing from everyone in the archival profession.

User-centered design involves technology users at every development stage, from planning to testing and refining.<sup>4</sup> The process is flexible and iterative, aiming for greater accessibility and intuitive usability. User-centered design not only facilitates addressing special needs but ultimately benefits everyone by focusing on and responding to issues of actual use rather than assumptions about use. The Technology Transformation Services division of the U.S. General Services Administration offers guidelines for implementing user-centered design. For example, a recent blog post by Amanda Kennedy proposes alternatives to surveys in implementing user-centered design, including individual interviews and observing users in their work environment.<sup>5</sup>

Although user-centered design is closely associated with software development, virtual learning and other avenues of library instruction have also benefitted from its insights. Among the early research on virtual teaching, Zaharias and Poulymenakou (2006) discuss implementing *learner-*

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<sup>4</sup> U.S. General Services Administration, Technology Transformation Services, "User-Centered Design Basics," (2023) <https://www.usability.gov/what-and-why/user-centered-design.html>.

<sup>5</sup> Amanda Kennedy, "Customer experience: beyond surveys," *18F* (blog), U.S. General Services Administration, March 5, 2024, <https://18f.gsa.gov/2024/03/05/customer-experience-beyond-surveys>.

*centered design*.<sup>6</sup> Advancement in virtual learning platforms helped distance education gain momentum during the 2000s. Presenting a case study of web-based curriculum design, Zaharias and Poulymenakou argue for effective integration of usability with instructional design.

Expanding user-centered design to reference services, Sonsteby and DeJonghe (2013) present a framework for improving LibGuides.<sup>7</sup> Since librarians charged with online content creation may not be familiar with user-centered design, the authors recommend ongoing usability testing of subject guides to produce a style guide to help librarians improve LibGuides accessibility by avoiding jargon, inconsistent language, and confusing visuals.

Korbach, Brünken, and Park (2017) compare ways of measuring cognitive load in multimedia learning by tracking eye-movement, multi-tasking performance, and pupil dilation in computer-based instruction.<sup>8</sup> Their study supports the assumptions of cognitive load theory that high mental demand and low personal relevancy correlate with low success in learning, while low mental demand and high personal relevancy are associated with high learning success.<sup>9</sup> This finding predicts the importance of simplifying virtual interaction for conference attendees, many of whom will be learning how to navigate and use the virtual conference platform for the first time.

Straub (2017) explores the future of informal learning and technology adoption, considering social motivations for adoption and diffusion.<sup>10</sup> Straub finds that although individuals construct unique perceptions that influence adoption, it is an inherently social developmental process, and successful facilitation requires attention to emotional as well as cognitive and contextual concerns.<sup>11</sup> Focusing on the willingness of school teachers to accept change, Straub notes that forced adoption and lack of administrative and practical support for technology in general will discourage adoption.<sup>12</sup> While Straub accurately assesses the power of social behavior over adoption in an era flooded with new technologies, it is worth reflecting that virtual platform and application developers might default toward designing primarily to satisfy thought leaders and influencers, which could negatively impact or ignore the usability needs of siloed information professionals.

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<sup>6</sup> Panagiotis Zaharias and Angeliki Poulymenakou, "Implementing Learner-centred Design: The Interplay between Usability and Instructional Design Practices," *Interactive Technology and Smart Education* 3, no. 2 (2016): 87–100, <https://doi.org/10.1108/17415650680000055>.

<sup>7</sup> Alec Sonsteby and Jennifer DeJonghe, "Usability Testing, User-Centered Design, and LibGuides Subject Guides: A Case Study," *Journal of Web Librarianship* 7, no. 1 (2013): 83–94, <https://doi.org/10.1080/19322909.2013.747366>.

<sup>8</sup> Andreas Korbach, Roland Brünken, and Babette Park, "Measurement of Cognitive Load in Multimedia Learning: A Comparison of Different Objective Measures," *Instructional Science* 45 (2017): 515-536.

<sup>9</sup> Korbach, "Measurement of Cognitive Load," 533.

<sup>10</sup> Evan T. Straub, "Understanding Technology Adoption: Theory and Future Directions for Informal Learning," *Review of Educational Research* 79, no. 2 (2009): 625–49. <http://www.jstor.org/stable/40469051>.

<sup>11</sup> Straub, "Understanding Technology Adoption," 645.

<sup>12</sup> Straub, "Understanding Technology Adoption," 645.

Shivers-McNair et al. (2018) consider developing accountable classroom practice with user-centered design.<sup>13</sup> In line with recommendations of the d.school at Stanford University<sup>14</sup>, they frame the basic process of user-centered design as empathizing, ideating, prototyping, testing, and refining, and approach usability testing as empathetic and flexible ongoing engagement.<sup>15</sup> Acknowledging the contested nature of the term *user-centered*, they urge a more communal and culturally responsive approach to user-centered design that addresses impacts to stakeholders beyond users.<sup>16</sup> They recommend soliciting feedback early and often in the design process.<sup>17</sup> Thoughtful consideration of ramifications beyond individual adoption dovetails with valuing greater inclusion in professional engagement.

Schmidt et al. (2020) explore user-centered design and evaluation methods for learning designers.<sup>18</sup> Acknowledging the difficulty of applying theoretical learning models to design, they recommend iterative design beginning with development of prototypes.<sup>19</sup> They describe various evaluation methods, including observing users in their natural setting and focus groups along with more technical types of evaluation like eye movement analysis once development has progressed to functional prototyping.<sup>20</sup> Their approach weaves user-centered design principles with learning design theory to optimize achievement of learning goals.<sup>21</sup>

Scholars have recently envisioned ways virtual conference development could benefit from the user-centered framework. Saatçi et al. (2020) explore transforming user-centered design into *meeting-centered design* for developing hybrid meetings.<sup>22</sup> Analyzing disruptions during a hybrid meeting and difficulties with turn-taking, they examine the intersection of technology and communication practices of inclusion and exclusion, recommending that meeting design account for communication style and social dynamics of participants as well as technological capability to afford flexibility to address the particular needs, goals, and dynamics of each meeting.<sup>23</sup> Their research emphasizes the importance of considering more than the technological ability of virtual meeting participants; meeting design must also incorporate effective methods of communication and pedagogy. SAA and other organizations are developing and publishing guidelines for virtual

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<sup>13</sup> Ann Shivers-McNair et al. "User-Centered Design in and beyond the Classroom: Toward an Accountable Practice," *Computers and Composition*, 49 (2018): 36-47. <https://doi.org/10.1016/j.compcom.2018.05.003>.

<sup>14</sup> d.school. "An Introduction to Design Thinking: Process Guide." *Institute of Design at Stanford* (2010). <https://web.stanford.edu/~mshanks/MichaelShanks/files/509554.pdf>.

<sup>15</sup> Shivers-McNair et al. "User-Centered Design," 38-39.

<sup>16</sup> Shivers-McNair et al. "User-Centered Design," 38.

<sup>17</sup> Shivers-McNair et al. "User-Centered Design," 45.

<sup>18</sup> Matthew Schmidt et al. "Methods of User Centered Design and Evaluation for Learning Designers," in *Learner and User Experience Research: An Introduction for the Field of Learning Design & Technology*, ed. Matthew Schmidt et al. (EdTech Books, 2020): 21-50, [https://edtechbooks.org/ux/ucd\\_methods\\_for\\_lx](https://edtechbooks.org/ux/ucd_methods_for_lx).

<sup>19</sup> Schmidt et al. "Methods," 24.

<sup>20</sup> Schmidt et al. "Methods," 33-38.

<sup>21</sup> Schmidt et al. "Methods," 44.

<sup>22</sup> Banu Saatçi et al. "(Re)Configuring Hybrid Meetings: Moving from User-Centered Design to Meeting-Centered Design," *Computer Supported Cooperative Work (CSCW)* 29 (2020): 1-26, <https://doi.org/10.1007/s10606-020-09385-x>.

<sup>23</sup> Banu Saatçi et al. "(Re)Configuring Hybrid Meetings," 790.

meetings.<sup>24</sup> While the SAA guidelines focus on providing helpful technical advice, seasoned virtual meeting hosts also take aspects of communication and inclusion seriously. For example, the increasingly common practice of giving participants time to respond by remaining silent for several seconds in virtual meetings is a form of accommodating communication styles in the context of reduced visual cues.

Exploring ways that virtual meeting tools influence user interface design, Lange and Heimgärtner (2021) examine the cultural impact of Zoom, proposing adaptation of user interfaces to accommodate expectations of users in different countries.<sup>25</sup> Looking forward to future conferencing modes, Heitmayer et al. (2021) offer a roadmap for designing virtual reality conferencing based on user-centered design.<sup>26</sup> They propose an ontology that accounts for actors, including roles and statuses, activity steps (behaviors like speaking and hand raising), installations for virtual conferencing, and values (e.g. motives, representations, and attitudes).<sup>27</sup> As with the theory advanced by Saatçi et al. (2020), the ontology of Heitmayer et al. considers complex social dynamics and communication styles in addition to technological abilities.

Such studies suggest that an intentional effort to gather usability data from diverse archival workers throughout conference planning could further progress toward universal access. Building time for user-centered design into conference planning would allow virtual delivery platform testing by volunteers invited from communities with access concerns. Funding, differing abilities, technology, and a lack of leisure time to attend conferences are among the many barriers that diminish the professional engagement experience of workers at all levels and roles in the archival profession. Improving virtual accessibility for professionals of all abilities would support continuous learning and increased transmission of experience and knowledge in an age when archivists often must move great distances for career advancement.

Universal access and inclusion goals for professional engagement require reaching and listening to all archival workers. Conference organizers could attract more early-career participants by contacting workers who need assistance to afford membership. While such workers may not be members of the organization, organization members could invite them to participate in usability studies. Ensuring accessibility for those facing challenges benefits everyone through the inclusion of diverse perspectives. Reaching archival workers who lack access to professional engagement must involve more than just assessing conference attendance. However, broadly documenting conference attendance preferences marks a first step toward more inclusive conferencing that could be continuously improved through user-centered design.

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<sup>24</sup> Society of American Archivists, “Tips for Virtual Meetings & Events,” last modified March 14, 2024, <https://www2.archivists.org/governance/leaderresources/virtual-meeting-events-tips>.

<sup>25</sup> Olga Lange and Rüdiger Heimgärtner, “User Interface Design of Virtual Conferencing Tools – Towards a Method for Considering Cultural Impact – Exemplified by Zoom,” in *Culture and Computing. Design Thinking and Cultural Computing: 9th International Conference, Proceedings, Part II, Vol. 12795* (Cham, Switzerland: Springer International Publishing, 2021): 80–94, [https://doi.org/10.1007/978-3-030-77431-8\\_5](https://doi.org/10.1007/978-3-030-77431-8_5).

<sup>26</sup> Maxi Heitmayer et al. “An Ontology for Human-Centered Analysis and Design of Virtual Reality Conferencing,” *TMS Proceedings* (2021), <https://doi.org/10.1037/tms0000015>.

<sup>27</sup> Heitmayer et al. “An Ontology.”

## Methodology

To learn more about interest in virtual and in-person conferences among information professionals, the Survey of Conference Attendance Preferences was issued in July and August 2022 through the listservs of ALA and SAA, regional library and archival associations, and related organizations that shared the link with their members.<sup>28</sup> More than 430 completed the survey, and many contributed detailed comments. The survey gathered information about professional background, funding availability, opinions about registration costs, past, present, and planned conference attendance, preferences for virtual conference delivery modes, and hopes for future conference options.

Focused on assessing the anonymous opinions of information professionals at three self-reported career stages working in various types of institutions, the survey was not designed to gather detailed demographic information. For example, responses cannot be sorted by age or location. The most significant limitation of the survey, however, is its distribution largely to those with listserv access, many of whom belong to professional organizations and have enough income or institutional support to attend conferences. Nevertheless, since the survey link was shared by listserv members, responses were also received from students, precariously employed workers, and volunteers who were less likely to be organization members. Their participation speaks not only to the potential value of broad professional engagement afforded by equitable access to conferences but also to the genuine desire of all workers to join in professional discourse.

Originally presented in 2023 for the Society of American Archivists Research Forum, this report naturally focuses on a limited subset of survey results. In addition to multiple choice questions, the survey invited comments that are beyond the scope of this report. Additional survey results will be reported in future publications. Operating on the assumption that SAA wishes to increase professional engagement with archival workers early in their careers, results presented here highlight responses of participants reporting less than six years in the information profession who are interested in attending the annual meeting of SAA.

## Results of *Early-career* Respondents Interested in the Society of American Archivists

The survey distinguishes three career segments: less than six years of experience (*early-career*); six to fifteen years of experience (*mid-career*); and more than sixteen years of experience (*advanced-career*). *Early-career* participants comprise 16% of the survey, while *mid-career* and *advanced-career* participants comprise 41% and 42% respectively. As noted previously, the relatively low number of *early-career* participants might reflect distribution of the survey primarily to members of listservs of professional organizations.

A concern shared by many in information professions is how to involve newcomers in professional organizations, especially when they are not likely to have as much disposable income as seasoned professionals with higher salaries. Tight institutional budgets can thwart

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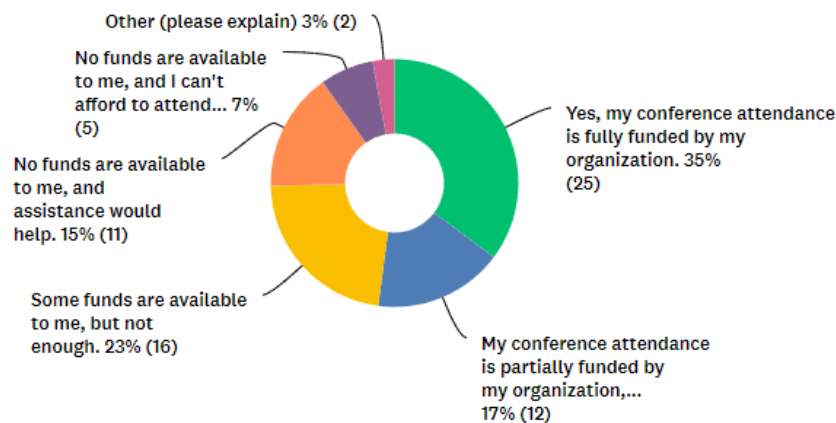
<sup>28</sup> Anne Marie Hamilton-Brehm, *Survey of Conference Attendance Preferences*, Unpublished dataset (2022).

participation of *early-career* professionals who might need financial assistance for professional development and conference participation.

Responding to the question, “Does your organization provide professional development funds to you that can be applied to conference registration fees and travel?” *early-career* participants from all information professions surveyed report various levels of conference funding, from fully funded (a heartening 35%) to not funded at all (22%). None of the *early-career* respondents chose the option “No funds are available to me, but I don’t need assistance at all.”

## Does your organization provide professional development funds to you that can be applied to conference registration fees and travel?

Answered: 71 Skipped: 0



While the survey gathered opinions from a broad range of information professionals, further results reported here highlight responses from up to 42 *early-career* respondents who would like to attend the Society of American Archivists (SAA) annual meeting if there were an affordable option. They represent an opportunity for SAA to attract and maintain new participants.

Since some questions were skipped by participants, numbers of participants are reported along with percentages. Sixty percent (n=25) of the *early-career* participants interested in SAA work for colleges and universities. As for professional roles, only 5% (n=2) report tenure track status, and 24% (n=10) report working as contracted, temporary, or part-time staff.

Despite probable funding challenges, 64% (n=27) report having attended conferences in person before the coronavirus pandemic, mainly for networking opportunities. Those who had not attended conferences noted the cost of attendance and travel as decision factors. While virtual conferencing has expanded rapidly since 2020, 24% (n=10) report having attended virtual conference sessions before the coronavirus pandemic, noting the advantages of cost savings. Those who did not largely reported that virtual conferences were not available. Interestingly, while some information professionals reported having to catch up with technology to go online



during the coronavirus pandemic, no one in the *early-career* segment reported not having the right equipment to attend virtual conferences before the pandemic.

Widespread domestic public health concern about the threat of COVID-19 in the United States intensified by March 2020, with mandated quarantine lockdowns in some states. Ninety percent (n=38) of the *early-career* participants reported refraining from in-person conference attendance from April 2020 to April 2022, with concern about public health overcoming cost as a decision factor. During the coronavirus pandemic, difficulty traveling was almost as concerning as cost to the *early-career* segment, with both challenges identified by more than half of the respondents.

It was not surprising to find that 86% (n=36) of the *early-career* respondents reported attending virtual conferences from April 2020 to April 2022. The most popular reasons indicated were to avoid travel and save money; public health tied for third place with the opportunity to view sessions at a convenient time. The few who did not attend virtual sessions during the coronavirus pandemic indicated that conferences of interest were not available.

Asked for preferred type of virtual session, 64% (n=27) of *early-career* participants selected live recorded sessions, largely citing the opportunity to engage with colleagues during the live event and the ability to watch later if live attendance were not possible. Those who preferred live sessions that are not recorded indicated mainly that they personally felt safe asking questions in an unrecorded session, rather than being motivated by the expectation that others would contribute more freely to an unrecorded session.

As concern for public health waned in August 2022, 60% (n=21) of *early-career* respondents reported plans to attend a conference in person in the next year, again primarily indicating networking opportunities as the primary decision factor, though many also were interested in workshops and renewing in-person visits with colleagues. Those who remained uninterested in attending conferences in person selected public health as the primary decision factor over cost. Still, 84% (n=27) of *early-career* respondents reported planning to attend virtual conferences in the next year, and the most popular reason was the expectation of cost savings. The few who were not planning to attend virtual conferences indicated they were not affordable; virtual attendance at some conferences had been free during the coronavirus pandemic, and as public health became less of a concern, organizations began charging for virtual attendance, in some cases approaching in-person registration rates for virtual attendance.

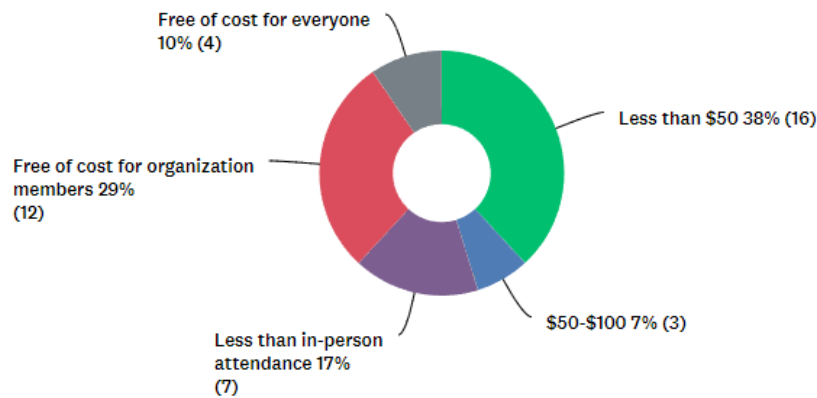
Finally, the survey asked participants if they would attend a hybrid conference both in-person and online. Only 8% of participants (n=3) responded *yes*, with 46% (n=18) responding *no* and the same percentage responding *maybe*. Comments expressed the expectation of too much content to absorb during the week of the in-person conference, though live recorded sessions afford enormous flexibility and access to content beyond the live conference. Since hybrid delivery was an innovative concept in 2022, it might have been difficult for survey participants to imagine the possibilities. As hybrid delivery evolves, conference designers and organizers could benefit from reassessing opinions about bundling registration for in-person and virtual attendance.

Since cost emerged as a major decision factor for *early-career* workers, professional organizations might attract more of them by refining conference registration price points. While some organizations have surveyed their members to help determine price points for hybrid meetings, the Survey of Conference Attendance Preferences reveals price points specific to *early-career* workers. Furthermore, the survey suggests that *early-career* archival workers think differently about fair virtual rates than those regularly attending archival conferences.

The following chart displays *early-career* opinions about reasonable registration rates for partially or underemployed workers attending a virtual national or major section conference. Most *early-career* respondents (67%, n=28) think registration should be less than fifty dollars (38%, n=16) or free for organization members (29%, n=12) who are partially or underemployed.

Please indicate what you think is a reasonable registration price for partially or under-employed professionals to attend a virtual national conference or major section conference:

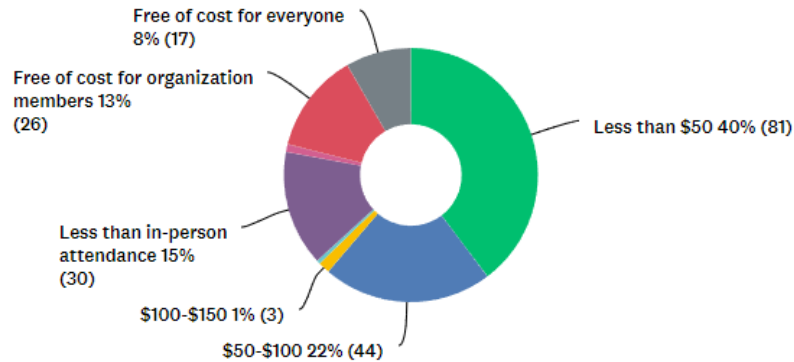
Answered: 42 Skipped: 0



Despite some similarities, the following chart shows that the responses of 204 survey participants who report attending the SAA annual meeting contrast in key ways with those of the *early-career* subset.

Please indicate what you think is a reasonable registration price for partially or under-employed professionals to attend a virtual national conference or major section conference:

Answered: 204 Skipped: 7



Close to 40% of respondents in both subsets recommend less than \$50 registration for partially or underemployed workers to attend a virtual conference, and between 8% and 10% recommend free registration for all partially or underemployed workers. However, the percentage of *early-career* workers who think virtual attendance should be free to partially or underemployed organization members (29%, n=12) is more than twice the percentage of those who attend the annual SAA conference (13%, n=26). Conversely, while 22% (n=44) of those who attend the annual SAA conference think the price point for a virtual conference should fall between \$50 and \$100, only 7% (n=3) of *early-career* workers agree. Thus, while there is general awareness of funding challenges for partially or underemployed workers, *early-career* archival workers, perhaps drawing from personal experience, are more cognizant of their potential need for funding. Although such results might seem intuitive, these responses document conflicting perspectives of economic disparity and the lived reality of underfunded *early-career* workers.

### Additional Survey Findings

The Survey of Conference Attendance Preferences also documents that conference registration costs affect decisions beyond those of *early-career* workers. Respondents noted that cost savings were an incentive for virtual attendance even before the free virtual conferences of the pandemic. Additionally, while most administrators and directors in the survey indicated satisfaction with conference funding, some reported needing more funds to attend conferences, and half of them work at colleges and universities. Besides funding, there are many other challenges to universal professional engagement, whether virtual or in-person, including continuing concerns about public health, lack or accuracy of captioning, unrecorded sessions, audio quality, reliable online access, difficulty with or permission to travel, employer support for attendance, and evolving technology and assumptions about ease of use.

Despite perceived cost advantages of virtual attendance, many *early-career* survey participants embraced returning to in-person conferencing, hoping recorded sessions would also be available. However, some were concerned that a hybrid option would keep employers from funding in-person attendance. Some recommended that while hybrid conferencing may be too challenging for small organizations, at least larger conferences should be hybrid to be more equitable and accessible. They envision virtual options opening possibilities to many without means. They recognize that virtual sessions can accommodate physical and social disabilities and the immunocompromised. Many favor hybrid conferences for the broader engagement options they provide overall.

## **Conclusion**

For archives to thrive, we must find ways to increase engagement and development for all workers, including equitable access to professional discourse in regional and national organizations. To that end, we need to find ways to survey and include the voices of students and precariously employed workers in conference design. User-centered design offers frameworks that can delve deeply and iteratively into the needs of diverse participants to expand and refine professional opportunities for all. Burgeoning research merging learning and communication theory with virtual meeting practice could nurture a grassroots effort across the profession to reach and mentor *early-career* archival workers.

*Early-career* and underemployed archival workers engage intensely with collections and the public, contributing a fresh perspective. Welcoming them to professional discourse will build and strengthen service. As technology rapidly advances in all aspects of daily life and work, it becomes increasingly questionable whether anyone is served adequately by continuing to normalize the in-person conferencing mode. While conference design seeks to balance interests and promote the welfare of all participants, including vendors, conferences could be enhanced with user-centered design to give every participant a richer and more profitable experience. The basic notion of conferences is, after all, to encourage and facilitate engagement. New technology affects everyone in our profession and must be embraced in an inclusive way that serves all professionals to ensure the future of archives and archival workers.

The exclusively in-person mode of conferencing contradicts organizational goals of inclusion and engagement with underserved members of our profession. Continuing to normalize the in-person mode in the face of rapid technological advancement will only alienate and silo diverse *early-career* archival workers who will be tasked with perpetuating archival treasures for future generations. Moreover, as institutional budgets decline and educational focus shifts away from the humanities, it is unclear how any archivist can communicate and defend best practices and even professional ethics effectively without access to leading perspectives and ideas generated by regular engagement with colleagues.

There are several ways forward for conference organizers interested in expanding inclusion and engagement with underserved archival workers, which will also strengthen engagement for all archival professionals, whether through access to fresh ideas or mentoring opportunities. The

survey clearly demonstrates that *early-career* workers view conferences as a cost burden. Conference organizers could expand inclusion by making both in-person and virtual attendance more affordable or free to underserved and *early-career* workers. While major information professional organizations already provide some form of aid, such as a limited number of scholarships, this benefit might be expanded by working with vendors to sponsor participation, which could help generate foundational awareness of and interest in vendors among *early-career* workers. National level technological advisory committees could serve regional organizations with assistance in selecting virtual delivery platforms and negotiating with conference venues.

If professional organizations are truly committed to universal inclusion, they could form and support the work of usability committees to test platforms and convene focus groups with diverse users to advise conference design. Such a commitment will ensure that all archival professionals maintain stride with rapid technological developments. As long as organizers continue to struggle with two-dimensional virtual meetings, capitalizing on virtual reality remains distant and roots all professionals in outdated modes of engagement. But professional organizations could avoid much of the heavy lifting by delegating engagement across grassroots local networks. Reaching underserved archival workers and other information professionals might best be accomplished by launching and supporting locally distributed groups of professionals interested in virtual engagement and resource sharing. If we are determined to perpetuate archives and expert archival service, we must all move forward together.

## **Acknowledgments**

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