Supplementing the Stacks
Expanding Access and Engagement through Sustainable Digital Exhibitions
by Freja Cole

ABSTRACT Several recent studies have discussed approaches to planning and implementing digital exhibitions in libraries. However, prominent library organizations such as the American Library Association and IFLA have no published best practices or standards for digital exhibitions. The literature shows that digital exhibitions and digital supplements to in-person exhibits have benefits, including increased accessibility and user engagement. Using interviews with professionals at information institutions, this paper reveals and clarifies the common practices used to create digital exhibitions and the challenges of the design process. Additional interviews with professors of religious studies who utilize digital exhibits and resources in their roles as educators provide insight into the use of digital exhibits as tools for expanding public understanding of important historical and cultural topics. The consensus of creators and users of digital exhibitions is that they are valuable educational resources that reach new users, provide additional context for materials, and increase user engagement.

INTRODUCTION

The digital medium presents opportunities for increased accessibility and user engagement with library collections, and a common method of outreach today is the design of stand-alone digital exhibitions or digital companion sites for physical exhibits. This paper assesses recent literature covering the practical implementation of these exhibitions and the challenges and opportunities they present for libraries and their users. The literature review is supplemented by interviews with professionals involved in various stages of their institutions’ digital exhibition curation and launch process. Other interviewees are professors of religious studies from Indiana University and Indiana University – Purdue University Indianapolis (IUPUI) who utilize digital collections and other digital library resources in their educational and research roles. This is one of three collaborative papers, including those by Finch Collins and Christine Goss, produced with funding from the Lilly Endowment via a planning grant under the Religion and Cultural Institutions Initiative of the Lilly Endowment, Inc.

LITERATURE REVIEW

Libraries must adapt their services to suit the ever-evolving needs of their users. Today, digital exhibitions are one of the many programs libraries are using to increase the engagement, accessibility, and visibility of their collections. The digital platform offers an environment for connecting users with special collections different from a traditional physical exhibition, increasing user engagement with library collections. Though it may seem that remote access to special collections through digital platforms would divert traffic from in-person exhibitions, Diantha Schull (2015, 131–32) demonstrates in her book *Archives Alive* that “the scope and number of exhibitions are increasing rather than decreasing. The more special collections are accessible to remote viewers, the more those viewers seem to value the immediacy of the physical object.” It is more uncommon for large academic libraries not to have some form of digital exhibitions available online; each of

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the Big Ten Academic Alliance Libraries, for example, features digital exhibitions on its website. Despite this widespread practice, the International Federation of Library Associations and Institutions (IFLA), which provides internationally reviewed standards, guidelines, and best practices for the library community, does not provide documentation concerning digital exhibitions on its website. IFLA’s (2014) “Guidelines for Planning the Digitization of Rare Book and Manuscript Collections” addresses digitization projects for special collections and provides guidelines for the back-end work that must be done to digitize collections prior to an online exhibition but does not address the implementation of exhibitions themselves. Some individual academic libraries have developed local policies or best practices for their online exhibitions, including Yale University Library and J. Willard Marriott Library of the University of Utah (Grafe n.d.; Library Services Committee and Marriott Library Executive Council 2018), but no official documentation on digital exhibitions from broader library organizations such as the American Library Association or IFLA has been published.

However, the current literature features many instances of observations and how-to guides on digital exhibitions. Often, these are case studies providing examples of libraries using digital exhibitions effectively to increase outreach with their communities, assess user engagement with collections, and improve access to library resources. Fouracre (2015) distinguishes between an “exhibit” and an “exhibition”: exhibits being “relatively simple displays consisting of books or book jackets and other graphics concerning a theme,” while exhibitions are “on a greater scale and more intensively curated ... with more of a narrative and interpretation for viewers, and with perhaps a wider scope” (377). They also note the purpose of creating exhibitions is to attract new users or to inform existing users of the full scope of the collections (377–378). For this paper, “exhibit” and “exhibition” will be used interchangeably to refer to Fouracre’s concept of the more elaborately crafted “exhibition.”

Much of the literature centers around in-person exhibitions supplemented by digital elements. Keith, Taylor, and Santamaria-Wheeler (2017, 389–390) provide a case study of the University of Florida exhibitions and the development of their Community Engagement Engine (CEE) and support the notion that exhibitions are used to share and promote a library’s collections. The CEE allows visitors to register attendance, submit questions and comments to the curator, and receive supplemental materials to the exhibition via email. Dysert, Rankin, and Wagner (2018) describe another instance of digital components being incorporated into in-person displays with McGill University Library’s use of touch tables in their exhibitions as an example and argue that “the use of technology [facilitates] new encounters with curated materials, creating this sense of cultivation and discovery in public displays” (1). Additionally, they acknowledge the benefits of technology as a means to complement the older materials found in special collections, noting that representing old materials digitally “[adds] a new layer of interaction and interpretation” (2). King (2021) emphasizes technology’s importance in the library more generally, stating that even the most “regular customers spend most of their time outside the library” (18) and highlighting the benefits of using mobile technology and social media to engage with users while they are away from the library. Hoivik (2013, 467–77) similarly argues the value of mobile access and uses examples of several Android applications that improve users’ interactions with library collections. Shannon (2015) describes how the Loyola University Museum of Art used social media, digital exhibits, and videos to supplement the exhibition Crossings and Dwellings: Restored Jesuits, Women Religious, American Experience, 1814-2014. The additional digital media “provided multiple ways to engage the diverse target audiences” (256–59). Though these examples are not exclusively digital exhibitions, the principle of exhibitions as platforms of engagement with existing and anticipated audiences also applies to the purely digital realm.
In their case study of the University of Alabama Libraries, Gentry (2021, 69) recounts how the library’s Digital Services unit repurposed existing digital content while working remotely at the height of the COVID-19 pandemic. By creating new online exhibitions, the unit was able to add context to digital content, share small and relatively unknown collections, and feature materials relevant to historical events. Their exhibits “Woman Suffrage in Dixie” and “Unrest: Two Weeks of Protest at the University of Alabama, 1970” also brought forward holdings that amplified marginalized voices to promote a campus culture of diversity, equity, and inclusion. Though in the context of art exhibition catalogs and curatorial activities, Beene, Soito, and Kohl (2020, 39) similarly describe opportunities for diversity and inclusion through digital initiatives. By introducing collaborative elements in events like Hack the Stacks, libraries can engage with the public and make their collections more inclusive of diverse voices. In their case study of Virginia Tech (VT) Libraries’ Course Exhibit Initiative (CEI), Fralin and Rogers (2019, 176–186) detail the process of creating both physical and digital exhibits to increase partnerships across campus, feature student work, and create new and meaningful experiences for library users. To create the first CEI exhibit, VT Libraries and a VT “Religion in America” class collaborated to feature the students’ physical and digital content. In the years since, the CEI has become a major outreach program, connecting VT Libraries with students and faculty across campus and creating new learning experiences for library users. Regarding exhibit design more generally, Fralin and Rogers observe the benefits of online platforms, such as increased accessibility and the ability to reach worldwide audiences. Because existing media platforms such as “YouTube and Instagram include a majority of the features described by Tammera Race that support user serendipity: easy access, browsing support, suggestions, the use of tagging and metadata, user-input and visual representation of search results,” these platforms facilitate far greater discoverability than a stand-alone exhibition website (183).

Measuring user engagement is essential to evaluating exhibits’ overall success and planning future services. The literature indicates that evaluating user experiences in both physical and digital exhibitions is often a significant challenge. Dysert, Rankin, and Wagner (2018, 10) describe how using Survey Monkey to assess users was ineffective for McGill Special Collections due to a lack of responses. Libraries struggling to elicit user feedback should strategize new approaches, but Fouracre (2015) reveals a general lack of policy for evaluating exhibitions in academic libraries. The only common evaluation tactics among the libraries in their study are using social media engagement metrics and counting physical visitor numbers. Fouracre determines that measuring engagement is often an afterthought in the exhibition process despite the necessity of these measurements for determining success and setting future standards (382). Keith, Taylor, and Santamaria-Wheeler (2017) discuss the weaknesses of physical exhibitions in engaging users personally, demonstrating that the physical space of the traditional exhibit limits in-person exhibits. There is often a one-way flow of information, meaning “the public is unlikely to have an opportunity to ask questions, share comments, request more information, or be further engaged” (393). Digital tools can provide a solution, and the previously mentioned University of Florida Community Engagement Engine tackles user engagement issues with in-person exhibits. Harvey and Weatherburn (2019), in their case study of the National Library of Australia (NLA), emphasize the growing importance of user contribution and involvement in libraries through digital means: “the NLA is actively seeking new ways to meet the challenges involved in managing, preserving, and providing ongoing access to digital materials, including embracing increased user engagement—a mission that seeks to never allow the library to become irrelevant in a constantly changing digital world” (103). Incorporating digital tools in exhibitions or hosting digital exhibitions increases accessibility, enables interactive elements that more effectively engage users, and opens the door for communication between curator and user, allowing curators to assess the success of their exhibitions in reaching planned outcomes.
Burns (2014) thoroughly assesses the advantages and disadvantages of digital and physical exhibitions and provides compelling examples from the Jewish Museum’s exhibit Crossing Borders: Manuscripts from the Bodleian Library. Another example of a physical-digital hybrid, this exhibition supplemented the manuscripts with interactive touchscreens, allowing visitors to scroll through high-quality images of pages that were not displayed in the case. Though Burns determines this method was ineffective in enhancing user experience, they articulate ways that the digital medium can complement and enhance the contents of a physical collection. While the traditional display of manuscripts (within a glass case, open to a double page spread, and usually showcasing illuminations) distorts objects by overemphasizing images (29, 38), there is also “a deep fragmentation of the manuscript in digitization, including the loss of materiality and three-dimensionality” (40). Using the Jewish Museum’s display of the Kennicott Bible as an example, Burns shows how the disadvantages of the physical or digital format alone can be mitigated by exploiting their combined benefits to “excite new understandings of the object in a way that is not possible in a traditional manuscript exhibit” (40).

INTERVIEWS

Professionals involved in various stages of the digital exhibition curation and launch process were interviewed to better understand current practices and the realities of producing digital exhibitions. Interviewees responsible for digital exhibition design and project management at their institutions include Patricia Cecil, Specialist Curator for Faith, Religion, and WWI at the National WWI Museum and Memorial; Laura Cleary, Instruction and Outreach Coordinator at the University of Maryland Libraries; and Dustin Frohlich, Processing Archivist at the University of Delaware Special Collections. Nick Homenda, Digital Initiatives Librarian at Indiana University Libraries, provides additional technical support for staff creating digital exhibitions at IU. Faculty who use digital library resources in their educational and research roles were also interviewed, including Kevin Jaques, Associate Professor of Religious Studies at IU Bloomington, and Joseph L. Tucker Edmonds, Associate Professor of Religious Studies and Africana Studies and Associate Director of the Center for the Study of Religion and American Culture at IUPUI. Interview topics centered on digital exhibition design, discoverability, sustainability, and user engagement.

Defining Goals and Measuring Visitor Engagement

When designing an exhibition of any kind, it is important to consider the purpose of the exhibition concerning its intended audience. What experiences should users have when engaging with the exhibit? What are the planned educational outcomes, and how will they be measured? Interviewees pointed to institutional priorities as having a significant influence on outcomes and the tone of an exhibition, these often being determined far in advance of any actual exhibition design. Cecil described her institution’s strategic plan and objectives that set the parameters of any digital exhibitions she manages. Every exhibition is crafted to help further the National WWI Museum’s mission of “remembering, interpreting, and understanding the Great War and its enduring impact on the global community.” Due to her background in education and Indigenous studies, Cecil takes a personal approach to support that mission by including the stories of Indigenous groups. Using first-person quotes and written documents, Cecil uses exhibitions to “tell the story of global history through the people who actually lived it.” Cecil also emphasizes the importance of writing an interpretive plan in her exhibition design process. Each plan considers the institution’s mission and specific educational outcomes to streamline the process from beginning to end. Once an exhibition
is launched, Cecil uses visitor surveys to effectively evaluate the exhibition and determine whether those outcomes were met (Patricia Cecil, Zoom interview, June 8, 2022).

Academic libraries often cater to different audiences than public-centered institutions such as the National WWI Museum and Memorial. Primarily academic audiences of faculty, undergraduates, and graduate students are usually taken into consideration due to universities’ institutional priorities. Cleary described how UMD Libraries’ exhibits are geared toward an academic audience; however, she would like to make exhibitions more accessible for younger audiences, and she identifies a slow-moving trend in that direction at UMD Libraries (Laura Cleary, Zoom interview, June 10, 2022). Frohlich is the administrator of UD’s online exhibitions website and works closely with curators to prepare exhibitions. As academic research libraries, UD Libraries are heavily involved in teaching and working with faculty and students. In addition to considering objectives for exhibition visitors, Frohlich prioritizes educational outcomes for the students who are involved in creating exhibitions, ensuring that students of diverse backgrounds and varying experiences working with special collections are supported throughout the design process (Dustin Frolich, Zoom interview, June 13, 2022). Interviewees indicated that, whether accommodating the general public or academics, information institutions share common purposes of education and access. When crafted with well-defined objectives, digital exhibitions are valuable tools for supporting institutional goals and enhancing the education of their visitors.

Funding agencies and other stakeholders are often eager to see quantitative data verifying that grant funding is being used effectively for projects that engage the community. There are options available for measuring audience engagement with digital exhibitions and taking advantage of these tools is essential to appease stakeholders, gauge success, and improve future exhibitions. Homenda and Frohlich both pointed to web analytics software for tracking page views, recording the length of time spent on different areas of websites, and identifying from what geographic areas visitors are accessing sites. Both interviewees named Google Analytics as one option their libraries have used to collect data on exhibit site engagement (Nick Homenda, Zoom interview, June 7, 2022; Frolich, Zoom interview, June 13, 2022); however, Homenda (Zoom interview, June 7, 2022) warns that Google’s web analytics service lacks transparency and that access can be unstable as Google makes changes to available features, leaving little control in the hands of its users. According to Homenda, most of IU Libraries’ digital applications have moved to using Matomo for web analytics, as it offers a transparent, open-source alternative to Google Analytics. Matomo also provides better privacy protection for site visitors than Google Analytics, which retains the data collected from sites serviced by Google and uses it for marketing purposes.

Homenda and Frohlich agreed that though the quantitative data provided by web analytics software is useful for measuring engagement with digital exhibitions, it does have its shortcomings. Homenda shared how receiving qualitative feedback from staff, faculty, students, and other users is often more meaningful than the numbers, places, and times that web analytics are limited to:

Oftentimes, really useful data from these sorts of projects can be qualitative, not just quantitative—particularly if your audience is really tailored and small. ... [If] you happen to personally know who the audience is, you know who the scholars are in this field who are interested, then you hear from one of them saying, “Oh, this is really cool. I’m going to cite it in my book,”... That counts a whole lot for scholarship, even though it might just be two blips on your web analytics software. (Zoom interview, June 7, 2022)

Homenda advises that this kind of feedback can be challenging to get, though, saying that most people will not volunteer a detailed response unless they have a particularly strong positive or neg-
ative experience. Gathering a mixture of quantitative data from web analytics and qualitative feedback from users is an effective approach to measuring visitor engagement with digital exhibitions.

**Discoverability**

Digital exhibitions provide accessible remote alternatives to in-person exhibits, but users cannot engage with exhibitions they cannot reach. Promoting digital exhibitions and improving their discoverability must be prioritized to maximize user engagement. Interviewees shared multiple strategies they use in their professional roles to draw more visitors to their online exhibitions. Homenda (Zoom interview, June 7, 2022) explained that digital exhibitions are not easily discoverable via search engines, and for users to find them, they require additional marketing and outreach. Creating a social media presence was the most obvious common approach among interviewees, but other communications such as campus newsletters, LISTSERV, and local news were mentioned as being important outreach tools (Cecil, Zoom interview, June 8, 2022; Frohlich, Zoom interview, June 13, 2022; Homenda, Zoom interview, June 7, 2022). Interview responses went beyond media marketing; however, Cleary and Frohlich each emphasized the importance of their relationships with faculty and staff around campus in getting the word out about their libraries’ collections. While describing a digital exhibition he collaborated on with a faculty member and their students, Frohlich stated, “Having a faculty advocate who will consistently bring students to the collections is really important” (Zoom interview, June 13, 2022). Cleary also named relationships with faculty the most fruitful way of making digital exhibitions more discoverable. She described how she spends a significant amount of time finding faculty, classes, student groups, research centers, or other organizations on campus that might be interested in library programming. Once she accumulates these names, she reaches out to each of them personally to spread the word about relevant exhibitions and look for new opportunities to create programming (Zoom interview, June 10, 2022).

Maintaining relationships with organizations outside the institution is another important responsibility for curators of digital exhibitions. Frohlich (Zoom interview, June 13, 2022) and UD Libraries are involved with the Philadelphia Area of Special Collections Libraries (PASCL), and their partnership with these libraries increases outreach and amplifies their exhibitions. Cecil (Zoom interview, June 8, 2022) shared the importance of identifying specific audiences and tailoring exhibitions to attract and retain those visitors. As an example, Cecil described how she and the National WWI Museum’s education team work to meet curriculum standards for different education levels, guaranteeing traffic from schools for as long as those standards are in place. Interviews showed that though a marketing team or communications department can manage a library’s social media, newsletter, and other outreach systems, dedicated staff who foster lasting relationships with communities inside and outside their institution are most important for amplifying a library’s digital exhibitions.

**Sustainability**

Once an exhibition has had its time in the gallery, it is promptly replaced by other materials and becomes fully inaccessible in its original form, only represented through exhibition catalogs or other records that its institution retains. Digital exhibitions can outlast their physical counterparts, but just like the buildings that house galleries, they require maintenance and care to remain available for users. Careful choices of exhibition platform and design are necessary to create a sustainable digital exhibition. Frohlich explained how UD Libraries use WordPress for digital exhibitions despite its design and media limitations. Because the University of Delaware uses WordPress for all its sites, exhibit sites have guaranteed support from university systems designers and programmers and will not face compatibility issues with other university websites. Frohlich also plans for
the future by keeping digital exhibitions relatively simple; every exhibition has a common design and navigation structure so that the sites will be longer-lasting and have a consistent appearance. Sustainability is crucial for libraries—Frohlich gave an example:

I can give a little bit of a sense of our need to keep these exhibitions rolling. Once they're created, ... we use them in our instruction for students. We use them in reference so we can point patrons to the exhibitions if they're interested in certain topics. ... It's definitely important to our staff that these things remain up and available and public-facing. (Zoom interview, June 13, 2022)

Homenda (Zoom interview, June 7, 2022) described Indiana University's use of Omeka as its primary digital exhibition software. Designed specifically for online exhibitions, Omeka provides more relevant design features through plugins but also requires ongoing maintenance to keep exhibitions available and avoid security vulnerabilities. Cecil (Zoom interview, June 8, 2022) voiced similar ideas, mentioning that because technology is constantly changing, a commitment to regular maintenance is necessary to support any digital exhibition site. Persistent URLs within a digital exhibition can help avoid users encountering broken links and empty web pages but having someone “checking for things that have fallen away or things that don’t work” is part of the cost of hosting digital exhibitions.

Both Frohlich and Jaques voiced concerns about access compatibility across different platforms. Not all users have computers, so designing exhibitions to be accessible from mobile devices like tablets and phones is one way to improve the user experience and keep exhibitions available regardless of a user’s location. Jaques explained that very few researchers and students in the Middle East have computers or laptops:

It's a completely different world if you’re trying to read and do all these things on a phone as opposed to laptops or desktop computers. One of the things I don’t think a lot of people in the West have thought a great deal about is the fact that outside the West, studies show that the vast majority of people access a lot of these materials on their phones. (Kevin Jaques, Zoom interview, June 3, 2022)

Designing digital exhibitions with sustainability in mind is necessary to support local users, but sustainability also enables libraries to improve accessibility and reach users from many different backgrounds.

Challenges and Opportunities

Digital exhibitions can be valuable tools for generating interest in a library's collections, but they need dedicated resources and staff to promote and maintain them. These interviews revealed that designing, launching, and maintaining a digital exhibition often requires a curator or project manager, technical support staff, outside faculty support, and relationships beyond the institution's bounds. The fast pace of changing technology presents additional challenges; software must be regularly updated and checked for security vulnerabilities, and services managed by external organizations can lose support and disappear, leaving significant holes in an exhibit's functionality.

Beyond technical problems, sometimes material objects do not translate well to digital space. Burns (2014) articulated many of the disadvantages of digitization; Frohlich (Zoom interview, June 13, 2022) named some of those disadvantages, providing one example of a digital exhibit that could not match the expectations of the curator because of incompatibilities between the material object and the digital exhibition platform being used. Legal issues must also be taken into consideration.
When a digital version of a physical exhibition is designed, not all the materials included in the in-person exhibit may be able to be displayed online due to copyright restrictions.

Despite the many hurdles that must be overcome to get them working effectively, digital exhibitions are common among academic libraries—and not without reason. Digital exhibitions are some of the best tools for improving collection accessibility, engaging with materials in new and impactful ways, and amplifying libraries’ physical collections and exhibits. Frohlich (Zoom interview, June 13, 2022) named several advantages of digital exhibitions, including adding more items than a physical space can hold and looking at materials much more closely than a glass display case allows. He gave a compelling example of a digital exhibition enhancing its physical version: students at UD were looking at an engraved crypt in person, but it was not until they looked at the item on the digital site that they were able to zoom in and see that the engraver had put something reflected in the eye of the person depicted there—something so small that they could not see it with the naked eye. Going beyond simple engagement with the object, Tucker Edmonds brought up questions that digital scholarship and projects like digital exhibitions might raise:

What’s at the core of digitization? How does this connect to notions of equity and democracy? How does this present a more robust, historical, or aesthetic narrative? ... What are other examples of this that we can now look at and rely on so that we can look at the most impactful and effective mechanisms of or models of this type of work? (Joseph Tucker Edmonds, Zoom interview, June 6, 2022)

He indicated that archives can be tools for creativity and radical disruption and that digitization can help us reengage with history and think critically about the present.

Digital exhibitions’ ability to provide access to remote users and communities that might be uncomfortable visiting a university campus is also invaluable. Jaques (Zoom interview, June 3, 2022) highlighted the feelings of inadequacy that many first-generation college students experience and the fear of coming to campus that they and other communities might have. While a digital exhibit is no substitute for university faculty and staff visiting those communities personally and building relationships with them, digital exhibitions can provide accessibility for people who cannot visit or do not feel welcome visiting campus.

Finally, interviewees indicated that digital and physical exhibitions work well when paired together. Much of the work required to make digital exhibitions can easily be done while preparing materials for physical exhibits. For example, scanning can be done, and publicity photos can be taken during the conservation process before installation. Once an exhibition pair is launched, the digital exhibit also serves as a marketing tool for the library. Frohlich (Zoom interview, June 13, 2022) described how the website for each UD Libraries digital exhibition features a landing page that includes wayfinding information for the physical exhibition, enabling users to navigate to the physical location easily from the digital access point. Because digital assets are shareable, digital exhibitions also function as effective marketing tools to bring people into the library (Cecil, Zoom interview, June 8, 2022; Frohlich, Zoom interview, June 13, 2022). When paired, the physical and digital exhibition formats complement each other and expand a library’s reach, allowing more users to engage with its materials.

CONCLUSIONS

The literature and interviews showed that incorporating digital components in physical exhibitions and using purely digital exhibits are effective ways to improve the accessibility of library
collections. Special collections are often housed in places where users of diverse backgrounds feel uncomfortable or unwelcome. Digital exhibitions can initiate outreach with those communities by putting materials online in more accessible formats than aggregate digital collections databases; however, they lack physicality and are no replacement for direct personal encounters that build lasting relationships with communities inside and outside the institution. Digital exhibitions are valuable educational resources that share a sampling of the collections and show users contextual information that guides them through the process of exploring and interpreting primary sources. Though there are many technical challenges throughout the design process, digital exhibitions are widely used by information institutions of all kinds because of their unique opportunities for improving user engagement and collection accessibility. By thoughtfully employing digital exhibitions, curators open collections to new users and provide further context for their materials, enriching public understanding of important historical and cultural topics.

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