JOHN VALLIER and
ANDREW WEAVER

9

Media Services

The rise of digital scholarship (DS) brings with it a parallel need for technologically intensive services, tools, and spaces. Whether it's text mining, GIS mapping, web scraping, or 3-D modeling, library patrons are increasingly seeking out support for such computationally intensive work. In this chapter, we describe how University of Washington (UW) Libraries has somewhat haphazardly met patron demand for intensive digital technologies such as sound recording, video, and moving image-based media.[1] We describe how UW's forty-year-old Media Center morphed from a traditional, circulation-oriented service point into two distinct units: a community-focused digital media lab and staff-side AV preservation lab. We will describe the two spaces and their concomitant missions to support the creation, preservation, and dissemination of media. From supporting media-oriented faculty research and teaching to preserving and disseminating unique media-based cultural heritage materials, we will review opportunities and barriers readers may face when developing similar spaces and services in their own institutions.

From the Culture of Digital Scholarship in Academic Libraries, edited by Robin Chin Roemer and Verletta Kern (Chicago: American Library Association, 2019).

UW LIBRARIES MEDIA ARCADE

Inception and Growth

The Media Arcade was born out of a legacy library unit, the UW Libraries Media Center. Established in 1974, the Media Center, located within UW's Odegaard Undergraduate Library, was charged with collecting and providing noncirculating access to the University's undergraduate curricular media materials. Students who wanted to access audio or video media in the collection had to make requests at a service desk, where they were then directed to a designated cubicle. Once seated, students could dial into the content, which was then played back to the cubicle in real time from behind the service desk.

The Media Center operated in this fashion until about 2006, when John Vallier, a coauthor of this chapter—then a librarian and now the head of Distributed Media—arrived at UW from the University of California Los Angeles (UCLA). With the support of then undergraduate director Jill McKinstry, Vallier oversaw the installation of stand alone DVD players and VCRs in the carrels, equipment that students and other community members could operate without the intervention of Media staff. It was at this time that Vallier also opened up the media collection for circulation. As patrons increasingly learned of the new policy, the Center's collection of DVDs, CDs, and other media soon became the highest circulating collection of items in the UW Libraries system.

In 2012, the Odegaard Undergraduate Library began to undergo a major physical renovation. To facilitate the project, it was decided that the Media Center would permanently move to a new location on the third floor of the Suzzallo and Allen Libraries, another main branch of the UW Libraries system.[2] Unlike its home of nearly forty years, this new location did not have adequate space at its service desk for patrons to access media playback equipment. The new service area for patrons was also unusually cramped; in essence, it was a hallway cordoned off by rows of book stacks on one side. In response to this problem, Vallier requested some of books be moved elsewhere to widen the service area, but this solution could not be realized. The resulting lack of space left Media Center patrons without a place to adequately access media equipment in the library. Although Media Center staff managed to awkwardly squeeze a few playback stations at the edge of a stacks, demand—especially for course reserves—overwhelmed the Center's ability to support patrons' media viewing and listening needs.

This setup forced the Media Center to face some difficult questions. How were patrons now expected to access the Media Center's physical media collections? Under the reconfigured model, they would need to use one of the few playback stations or find off-campus solutions for screening the content, both of which were inconvenient for patrons. Additionally, the lack of an adequate viewing and listening facilities meant that the Libraries was not complying with ACRL's Guidelines for Media Resources in Academic Libraries.[3] The issue required resolution.

From the Culture of Digital Scholarship in Academic Libraries, edited by Robin Chin Roemer and Verletta Kern (Chicago: American Library Association, 2019).

In an effort to recreate a space for listening and viewing, as well as to provide students, faculty, and staff with an expanded capacity to digitize, create, edit, and share audio and video content—Vallier began to scout for an alternative solution within the building. By way of lobbying internal stakeholders (e.g., the head of Facilities, as well as the director of the Reference and Research Services) and identifying a couple of underutilized rooms in the library, Vallier was able to garner support for a potential new service point that supported media access and creation.

Two fundamental obstacles stood in the way:

- Funding to purchase new equipment and software was needed.
- The two potential spaces, although underutilized, were in use: one housed PhD study cubicles, the other a librarian's office.

The funding obstacle was tackled first. At UW, all students pay a self-imposed Student Technology Fee (STF) that is used to fund technology resources for student use. Funding generated from this fee is pooled each quarter and distributed by a committee of students, who vote on proposals received from members of the campus community, including faculty and staff.[4] The Committee reviews each proposal's merits, favoring those that have the most direct and positive impact on students.

In 2014, Vallier wrote such a proposal, in which six iMacs with a unique suite of software would be installed in a new media-oriented library space. In it, Vallier stressed the following unmet media-based needs of undergraduate and graduate UW students:

- Equipment to access our audio, video, and film collections, which come on a variety of contemporary and legacy formats
- Hardware and software to create and remix content for new works
- Equipment and expertise to help with the digital conversion and preservation of analog media
- A discipline-agnostic space where students, staff, and faculty can meet to work on media-related projects

Since the STF committee is made up of students and, as noted above, favors proposals that benefit the greatest number of students, Vallier asked several students who were familiar with the Media Center or interested in audio/video production to write recommendations to include in the proposal.

In June 2014, Vallier, the primary proposal author, was called before the STF committee in order to answer questions about the mission and feasibility of the space. Following this conversation, the committee voted unanimously in favor of the proposal, releasing some $70,000 in STF funding. With external funding now approved, Vallier was able to convince Libraries Administration to release one of the identified spaces, the former librarian's office, as a home for this new service point. Once approved, staff spent the six months frantically clearing the former office, ordering equipment, purchasing hardware and

software, imaging computers, creating policies and signage, and assembling many an Ikea table. Officially opened in January 2015, this new digital media lab came to be known as the Media Arcade.[5]

Inside the Media Arcade

An undergraduate student studies a waveform and hunches over a turntable, lining up another LP for a remix. As part of a fieldwork in Tibet project, a professor digitizes Hi8 video shot on another computer. Four more workstations in the room are occupied by students, staff, and faculty working on a variety projects: video editing, typographic design, cassette digitization, and DVD ripping. A student employee bounces back and forth between projects, helping patrons find solutions to their media challenges. The big screen TVs are also in use. A group of Swedish-language students gather around one, watching Girl with the Dragon Tattoo *(in Swedish, of course). A couple of students sit in front of second screen, using it to display slides and rehearse an upcoming presentation. Our last TV is mobbed by student gamers (most of them bio-engineering majors) bonding over numerous rounds of Smash Bros. It's an ideal day in the Media Arcade, a diverse array of needs is being met in an atmosphere that mixes seriousness and good-natured comradery.*

The Media Arcade sits in an open and rectangular room on the third floor of the Suzzallo and Allen Libraries on the Seattle campus.[6] At twenty-four feet wide and thirty-eight feet long, its proportions are close to that of a golden rectangle. Windows on three exterior walls filter in sunlight. Although this effect can be pleasant in sun-starved Seattle, it is simultaneously frustrating when attempting to work with video. All in all, the room has a relaxed atmosphere in which the UW community's projects are encouraged and supported.

A variety of hardware and equipment fills the room: iMacs, TVs, video game consoles, and vintage playback equipment. Due to the configuration of electrical outlets, this gear lines all four walls. The Media Arcade also offers a collection of portable equipment and peripherals available for checkout by UW students, staff, and faculty (check-out times vary from one to seven days). These includes digital cameras, digital audio recorders, USB drives, data projectors, and VCRs (yes, still in demand!). Peripherals cover a wide and ever-evolving array of chargers, cables, adapters, and dongles (see appendix H for a more detailed breakdown of the Arcade's circulating and noncirculating equipment).[7] Figure 9.1 shows the floor plan with workstations.

A service desk at the entrance is staffed by an Arcade tech, either a student employee or one of the Media Center's three full-time employees. These techs are on hand to assist visitors with media creation and viewing, as well as to check the Arcade's circulating equipment and peripherals in and out. They also are the initial point of contact for the Arcade's small but eclectic series of collections, including:

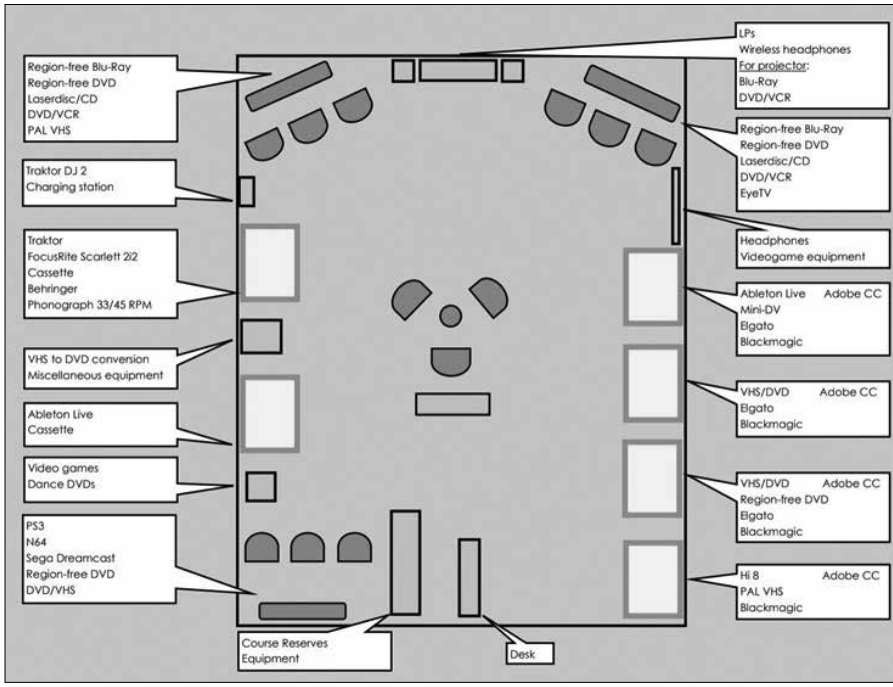

FIGURE 9.1
Floor plan of the Media Arcade

Course Reserves. The Media Arcade serves as the sole access point for Seattle campus students who need to access video that has been put on reserve by instructors. This is a rotating collection of between forty to one-hundred DVDs and other physical media titles that changes each term based on the needs of instructors. The collection is located in the Arcade because the space has the equipment necessary for viewing it. Course reserves can be checked out for several hours but cannot leave the Arcade (unless requested by the instructor of record).

Video Games. A modest collection of about 200 video games is also housed in the Media Arcade. Developed in collaboration with UW iSchool faculty and graduate students, the collection offers video games researchers and practitioners a broad range of noteworthy titles. The collection is browsable and available for one-week check-out. A variety of consoles—from Ataris to Playstations—are available for in-room use with one of the TVs.

Vinyl LPs. A small portion of the Libraries' LP collection is available in the Media Arcade. To increase browsability and to draw attention to the

existence of records within the collection, the LPs are in browsable record store-like storage furniture. They are curated with an eye to keeping an eclectic mix of music (local sounds from the Sonics, Shabazz Palaces, etc., as well as historically significant releases across different eras and genres), spoken word (prose, poetry, and historic speeches), and sounds (sound effects, whale songs, satellite transmissions and the like). The LPs are adjacent to several turntables and a cell phone charging station, thereby giving patrons an analog activity to engage with while powering up.

Dance DVDs. The Arcade is also home to two large DVD collections of contemporary dance. Due to rights and licensing related restrictions, these collections—*Eye on Dance* UW's own Chamber Dance Company Archive—must be viewed within the Libraries. By housing them, the Media Arcade is able to uphold these legal obligations while at the same time providing both the equipment and technical support for screening these videos.

Archival Jukebox. Similar to the physical dance DVD collections, the Media Arcade provides the primary form of access to digital media materials that must be restricted to access within the physical confines of the Libraries (e.g., archival audio materials that were digitized under the section 108 exemption of US Copyright law). This access is created through a computer station known as the Archival Jukebox, which uses commonly available tools such as iTunes, with certain settings and modifications in place to restrict any attempts at copying materials off of the Jukebox. Unlike the Arcade, the Jukebox is available to those who come into the library, whether or not they are affiliated with the UW. Collections hosted on the Jukebox include thousands of hours of local music, speeches by esteemed UW faculty and visiting scholars, radio broadcasts from World War II, remixes created by UW students, and more.

Since the goal for the Media Arcade is to encourage a wide range of simultaneous uses while also upholding the educational mission of the Libraries, a minimum but practical number of policies were implemented to govern the use of the space. It is the arcade tech's job to implement and, if needed, explain these policies, which include the following points.

Access to the space. The space is open to patrons who have current university affiliation (students, staff, and faculty) with priority given to student use. Current affiliation is verified at the entrance to the Media Arcade with the presenting of valid University ID. These limits to usage are tied to the STF funding model initially used for creation of the Arcade. Although exceptions are made from time to time, they must first be cleared by the head librarian for the Arcade.

Priority for use. Although all kinds of activities are encouraged in the arcade, from relaxation and personal artistic creation, in times of high usage academic projects take precedence. Additionally, priority is given to audio-, video-, and design-related projects because other activities, such as word processing, can be conducted using other Libraries' resources (however, during times of low usage patrons are free to use the Arcade computers and stations in any appropriate manner within the bounds of the Libraries' Code of Conduct).[8]

Food and Drink. No food is allowed in the Media Arcade, and drinks must be in spill-proof containers. This policy is essential as the Arcade holds not only computers, but a wide range of unique and sensitive audiovisual equipment as well. And although the Media Arcade is staffed during all hours of operation, patrons are encouraged to be responsible for their property in the same manner as in any other part of the library. This helps to avoid placing an undue burden upon the student staff of the Arcade. Finally, although the Arcade is not a quiet study area, and indeed is often home to discussion and conversation, cell phone use is discouraged in the interest of maintaining the desired atmosphere and functionality of the space.

What DS is Practiced and Produced?

Digital scholarship is part and parcel of the Media Arcade's existence. In the Arcade, we have helped patrons digitize unique Noam Chomsky videos, home movies showing long-lost loved ones, audio postcards from Vietnam, and one-off instantaneous recordings from our Special Collections. We've also helped students compose new music, access their video course materials, and simply commune with one another after finals by playing video games. It is a discipline-agnostic space that students, staff, and faculty from all departments and backgrounds are welcome to use. That said, the Arcade tends to work most closely with—and within—such subject areas as gaming studies; information and archival studies; music, cinema, and media studies; ethnic studies; gender studies; and other social sciences fields. However, whatever the discipline or topic, the Arcade supports media access, reformatting, creation, and criticism. Some examples of real-life digital scholarship scenarios include:

- Students, staff, and faculty reformatting archival collections—sound recordings, video, films, slides, photographs, documents—for use in their research and study
- Students composing and creating music and editing multimedia on computers.
- Students, staff, and faculty digitizing personal media
- Students using software to create multi-model course assignments, such as podcasts or remixes

- Faculty and students accessing vintage media that can't be viewed at home (e.g., VHS, 16-mm film,)
- Faculty bringing their students to the arcade for instruction on such topics as copyright, preservation, and media production
- Students attending a media-centric library event (such as screenings of vintage films)
- Library employees and student workers using lab resources for reformatting projects (e.g., special collections)
- Instructors booking instruction sessions in the arcade for their classes about copyright and fair use or media production
- Faculty reserving computers in the arcade for office hours with students in media-intensive classes
- Community members from Native American and other off-campus communities accessing archival collections of media originally recorded within their communities
- Students defending dissertations on music, copyright, and preservation
- Students and staff creating cassette mix tapes from a thumb drive of mp3 files (yes, digital to analog conversion!)

MEDIA ARCHIVING AND DIGITIZATION LAB (MAD LAB)

Inception and Growth of the MAD Lab

The UW MAD Lab and its previous iterations predate the Arcade by several years. Its origins go back to 2006, when John Vallier came to UW. Vallier's experience as UCLA's ethnomusicology archivist drove him to establish a single AV reformatting station within what was, at the time, the Media Center. By slowly building out the Center's capacity to reformat analog media, the Media Center was able to better meet such patron needs as streaming media course reserves and reformatting the Libraries' collections for both preservation and access.[9] As the popularity of physical media formats began to wane in favor of commercial streaming services—and the Media Center's DVD and VHS circulation statistics began to decline—what was once an ancillary function of the Media Center took on an increasingly prominent role. In other words, due to its possession of vast audiovisual collections, along with the relevant equipment and expertise to digitize these collections, a natural and unplanned evolution of the Media Center's functions occurred.

In addition to the organic evolution of functions for the Media Center, an external factor motivated the growth of the MAD Lab: the magnetic media crisis. For the latter half of the twentieth century, magnetic tape was a crucial element in the creation and dissemination of audiovisual materials.

This practice resulted in an extensive amount of AV materials that are held on unstable and rapidly decaying carriers dependent on specialized playback machines for all forms of access. Not only are playback machines and parts across all formats increasingly scarce, but the knowledge and expertise required to repair and maintain these machines are also being lost as previous generations of technicians retire. The simultaneous deterioration of both materials and means of access means that the window for preserving magnetic media is rapidly shrinking and that active preservation must be undertaken for as many materials as possible. The ongoing expansion of the MAD Lab has been a direct response to the need for increased intervention with the audiovisual collections housed in the UW Libraries.

There has been, and continues to be, a more subjective impulse motivating us to build and work in the MAD Lab: the content. Much of the material we work with in the Lab represents traditionally marginalized communities (e.g., recordings from the Ethnomusicology Archives) or content that documents tragic acts of institutionalized hatred (e.g., CBS Radio broadcasts about Japanese-American incarceration). When we in the MAD Lab digitize such material to preserve it for the long-term, we believe we are pushing back against grand narratives, colonial impulses, and the ever-increasing commercialization and standardization of media content. As author Arundhati Roy writes, "There's really no such thing as the 'voiceless.' There are only the deliberately silenced, or the preferably unheard."[10] Through the work of the MAD Lab to digitize these sensitive media, the UW Libraries works to make sure that doesn't happen.

Inside the MAD Lab

The sound of 1960s garage rock floats quietly out of a pair of speakers as a vintage studio reel-to-reel spins tape at fifteen inches per second. The graduate student who is conducting the ongoing archival transfer is simultaneously monitoring the tape output on one computer while using a neighboring station to run digital preservation processes on the output of prior transfers, electronically packaging them for long-term storage. Across the room a technician is finishing up migrating a VHS tape (an early 1990s interview with a NASA astronaut). The technician shuts down the monitors and tape machine before walking over to the Media Arcade for a scheduled consultation with a professor about digitizing research materials. Meanwhile, a curator from Special Collections stops by to use one of the Labs' iMac programs to retrieve data from an encrypted RAID array.[11] *In an adjacent space, another student is inserting a cassette into a player, one of four running concurrently to complete the preservation of a University of Washington lecture series dating from the 1970s. On this day, the MAD Lab is humming at full capacity, helping to safeguard the audiovisual heritage of its community.*

The MAD Lab is housed within the former Media Center's closed collection and staff-side space in Suzzallo Library. It is essentially a large cubicle of

120 square feet. Its repurposed push-pin office divider walls support a locking door. The Lab houses audiovisual reformatting stations along two walls, with one side focused on video and the other on audio. A fifth computer is dedicated to digital file management and audio restoration. The audio stations are primarily intended to play back quarter-inch reel-to-reel tape. Two Studer A-802s, one Ampex ATR-100, and a collection of other assorted reel-to-reel decks are available for use. Other audio formats are also supported on these stations as needed, including compact and micro cassette, DAT, analog disc, and MiniDisc. These stations have Apple computers with Apogee Symphony A/D converters running WaveLab software for audio capture.

The video stations in the MAD Lab enclosure have access to a full rack setup with video players ranging from VHS to U-matic and MiniDV to BetacamSP bolted into a vertical stack, along with associated hardware and monitors to aid in high-quality captures. A 16-mm Tobin Telecine is available for integration in the signal chain as necessary for film. Two Apple computers on this side of the Lab use Blackmagic hardware. The open source capture software vrecord handles the analog to digital conversion. FinalCut is used for editing and simple post-production rendering.[12]

The fifth Apple computer in the Lab sits along a back wall in the lab. In both a physical and virtual sense, this workstation bridges the Lab's audio/video divide. Its primary function is to describe, manage, and store all files created in the Lab, whatever their type. Tethered to the computer are three RAID arrays, totaling some 50 TB storage. One of the arrays (a Drobo) acts as a primary storage for projects and as a platform that can support post-production work such as metadata embedding, editing, and restoration. The remaining two Raids (Synology Nas) supply the station with secondary storage, a kind of intermediary step between post-production and lolo, our institution's cloud tape-based repository.[13] Lolo is effectively our preservation repository and tertiary storage solution (see figure 9.2). The few remaining work areas within the Lab's enclosure support hands-on efforts to maintain, repair, and organize equipment and collections.

Space Advantages and Challenges

Space is both a challenge and an advantage to the functioning of the MAD Lab. Although its relatively small area can create complications during equipment movement and setup, being located in an enclosed physical space makes it much easier to secure the valuable equipment contained within the lab. The enclosure, and resulting lack of distractions, promote focus. At the same time, the confined nature of the space encourages collaboration among those working in the Lab, creating a small purpose-driven world within the greater Libraries environment.

Due to limited space, the function of the MAD Lab must extend beyond its confines. Outside of the space and around the corner, four Apple computers

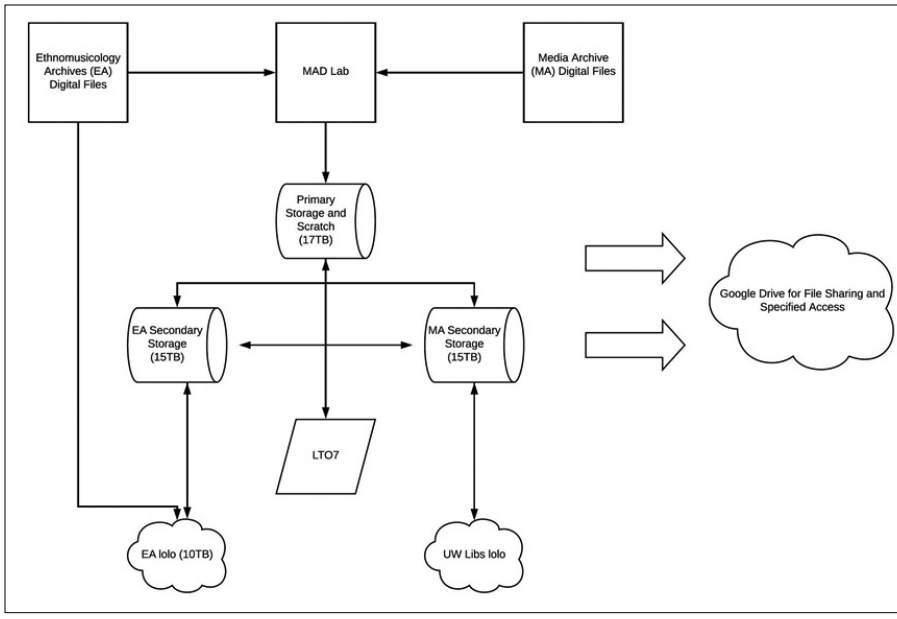

FIGURE 9.2
Schematic of the MAD Lab's Digital Storage and Preservation Infrastructure

sit in a row, repurposing what was once the staff side of the Media Center's service counter. Each of these four Macs is outfitted with Apogee A/D audio converter and compact cassette deck. This quad setup allows a single operator to run four transfers at a time, averaging between twenty and forty digitized cassettes per day. Four stories down, in the bowels of Suzzallo Library, a closed storage space waits for collections associated with the MAD Lab, the Arcade, and recently the Ethnomusicology Archives. This surge space also accommodates ingest processing of archival collections (see figure 9.2).

What Digital Scholarship Is Practiced and Produced?

Just as digital scholarship is a presumption of the purpose of the Media Arcade, the MAD Lab exists within the same value-space as the field of digital scholarship. The MAD Lab is primarily driven to preserve and provide enduring access to the media collections housed within the UW Libraries. Although it serves more of an auxiliary function as compared to the Media Arcade, there is a symbiotic relationship between the two, with the MAD Lab contributing to digital scholarship within the University in several key ways. First, through its ongoing shepherding of physical holdings into the digital realm, the Lab is a key component of the maintenance of these items' utility. Second, through its ongoing reformatting efforts and its capacity to digitize on demand, the

MAD Lab ensures that legacy and archival media collections are usable in a digital context. This role in turn is linked to the collections available within the Arcade, with a significant portion of the contents of the aforementioned Archival Jukebox being products of the MAD Lab.

Having this direct connection between a digitization lab and a digital creation lab not only increases the visibility of archival collections, but also helps overcome one of the primary barriers to the digital preservation of audiovisual materials, namely, the byzantine restrictions placed on them by copyright law. Due to copyright it can be problematic to add digitized audiovisual materials to online collection access systems; however, with the critical issue of the magnetic media crisis, it would be an ethical failing to let this obstacle stand in the way of preservation. Having a dedicated and clearly established station for creating legal access to archival materials helps overcome logistical difficulties and institutional objections to engaging in proactive digitization. Although this connection may seem a small component of the Media Arcade's overall functions, it is of far-reaching importance for the MAD Lab and digital media collections.

By building out a related set of equipment, tools, and workflows for preservation of UW Libraries-owned collections, the MAD Lab serves both as a cornerstone of Libraries infrastructure and a crucial ground for training and knowledge transfer, for Media Arcade support staff and aspiring archival professionals.[14] The MAD Lab has also been an active contributor in the Open Source preservation community, alternatively relying on and contributing to open projects and workflows.[15] This balance allows the Lab to take advantage of recent community developments while also expanding its impact outside of the University.[16]

CONSIDERATIONS

Although the physical space of the Media Arcade is critical in fostering its open and inviting atmosphere, it does provide some functional limitations that should be considered by any institutions planning a similar space. For instance, the large windows in the Arcade, although part of its appealing environment, also bring a degree of light that can be detrimental to the use of screens, which is problematic for an audiovisual oriented space. Additionally, there is no sound isolation either within the Arcade itself or between the Arcade and the Suzzallo and Allen Libraries at large. This means that patrons are dependent on headphones for all sound-producing activities in the Arcade. Because the Arcade is stocked with headphones, this does not create a barrier to access per se, but nonetheless can be an inconvenience for certain activities such as group media viewing.

The constraints of the space also arise from the Arcade's overall physical location on the third floor of a main campus library. The adjacent space

to the Media Arcade houses a group of study carrels that, until recently, was designated as a quiet study area. Although this area is no longer designated for quiet study, there still have been periodic tensions with patrons in the surrounding library stacks. Because the Arcade's doors are kept open to enhance visibility and create an inviting atmosphere, a certain amount of noise spillage does occur during periods of active use.

The makeshift nature of the MAD Lab's space offers similar challenges. Since it is situated within a shared office environment (one in which cubicles of catalogers hammer out MARC records nearby), use of the MAD Lab must be headphone-based. When we have deviated from this policy in the past, sounds from the Lab have disrupted the work of our Libraries colleagues. The open-top nature of the Lab also raises potential concerns about the security of the equipment and collections, as well as our inability to keep its environs free from dust and other airborne particulates.

Equipment maintenance remains another consistent challenge in the Media Arcade and MAD Lab. Because it is used for a wide range of functions, it can be complicated to maintain the variety of software and hardware available in both spaces. Adding to this issue, both the Arcade and Lab use Apple computers, which are not supported by the Libraries' IT department. Therefore, all IT imaging, formatting, and computer support must be done internally. Even setting these IT considerations aside, expertise in both antiquated analog playback machines and digitization technology demands a specialized skill set not easily found in Libraries staff. In the case of the Media Arcade, this knowledge gap is effectively covered through its close relationship to the MAD Lab, where there is often an overlap in Library staff and student workers. Libraries looking to create similar spaces dedicated to patron media digitization activities would strongly benefit from forming a similar relationship with the relevant preservation staff.

Due to the wide variety of activities supported by the Arcade, it is necessary to have staff available on-call to assist patrons in using the space. The Arcade's desk is primarily staffed by student employees of the UW Libraries, who must be trained by the Media Center staff to be reliable jacks of all trades for low-level functions while directing more in-depth question to full-time staff.[17] Because this can be difficult, especially for newer student workers who lack the confidence to provide first-line technical support in technical matters, it results in high demand for help from on-call staff. Some of this difficulty can be ameliorated by encouraging patrons with specific projects or technical needs to make appointments with appropriate experts in advance, but to rely completely on appointment-based services would negatively impact the creative and impromptu spirit at the core of the Arcade's mission. Institutions planning similar ventures should expect to invest in dedicated staff time in order to realize the full potential of the space.

The Media Arcade and MAD Lab have also had to grow and operate within an organizational structure that has been ambiguous about its support for DS.

Up to this point, the UW Libraries' approach to supporting DS has been decidedly laissez faire, tolerating individual agency over centralized efforts and coordination. This hands-off approach, in which individual staff are given the freedom to pursue the development of DS-related services and spaces, elicits both opportunities and challenges for the development of digital scholarship across the UW community as a whole. On the one hand, having a decentralized approach to DS—especially as it relates to media—encourages staff to respond flexibly and creatively to unmet patron needs. This organizational receptivity to user-centered nimbleness was critical to the birth of the Media Arcade and MAD Lab.[18] By allowing those of us on the ground to listen, understand, and creatively respond to our users' needs, the Libraries encourages staff to meet evolving demands, such as those found in DS. When coupled with staff expertise and external funding sources (e.g., grants and endowments), this approach embraces a positive culture of risk-taking and, consequently, the possibility of developing new services that may succeed.

On the other hand, such an approach to digital scholarship also presents challenges. For example, although the UW Libraries values individual agency, the organizational reality of the Libraries is hierarchical, departmentalized, and siloed. The resulting clash of laissez faire values with legacy organizational structures could result in stasis, which the Libraries attempts to temper by highlighting collaboration as an aspirational value.

CONCLUSION

Challenges aside, the sister spaces of the Media Arcade and the MAD Lab have had a tangible impact on their surrounding community through facilitating the creation of new digital scholarship while also expanding the relevance of analog collections to the digital realm. Our example is offered as a case study of a successful grassroots implementation, as well to encourage those of you who are looking to usher traditional media services into a new role that creates and supports a culture of multimodal digital scholarship.

FURTHER READING

Kroski, Ellyssa. *The Makerspace Librarian's Sourcebook*. Chicago: ALA Editions, 2017.

Walton, Graham, and Graham Matthews. *University Libraries and Space in the Digital World*. London: Routledge, 2016.

Webb, Katy. *Development of Creative Spaces in Academic Libraries: A Decision Maker's Guide*. Cambridge, MA: Chandos Publishing, 2018.

Willingham, Theresa, and Jeroen DeBoer. *Makerspaces in Libraries*. Lanham: Rowman and Littlefield, 2015.

Takeaways

- The question of the shifting roles and evolution of media centers and media collections in academic libraries is not unique to the University of Washington. When faced with changing technologies and user needs, many institutions are now unsure of how to best use these materials in teaching, research, and study. The Media Arcade and MAD Lab combination shows that media resources need not be viewed solely as a dichotomy of digital versus analog. With a DIY spirit, commitment to infrastructure, and collaborative sensibility, existing collections can be effectively blended into ongoing digital initiatives.
- Institutions considering the creation of digital media labs and digitization facilities should consider the staff resources that can be devoted to the space. Making equipment available without adequate support will create barriers to use for a wide range of patrons. Establishing a system of triage with a combination of front-line generalists and on-call area experts can be beneficial.
- If traditional funding sources and other internal sources of support are scarce, consider going directly to your patrons and making your case.

NOTES

1. For the purposes of brevity, the authors refer to sound recordings, videos, and moving images simply as "media." Although the term "media" is imperfect, libraries have adopted it to describe such collections, services, and tools. See Lori Widzinski, "The Evolution of Media Librarianship: A Tangled History of Change and Constancy," *Simile* 1, no. 3 (2001).
2. The Media Center's former collections, staff, and patrons spaces would soon be reconfigured into staff offices and meeting rooms.
3. "The necessary equipment to access media resources should be available and maintained to provide ready access to collections" (www.ala.org/acrl/standards/mediaresources).
4. Tech Fee Committee, https://depts.washington.edu/thehub/home/in-the-hub/tech-fee-committee/.
5. Most libraries—be they public or academic—with similar kinds of spaces tend to call them "digital media labs" or "digital media commons." Our somewhat unorthodox choice of the word *arcade* grew out of discussions with and suggestions from staff and student employees. *Arcade* is a word perhaps most popularly associated with a video game arcade. In this sense, it is apt, because the space provides access to a video game collection and complementary assortment of consoles. Along these lines, we also thought it would draw students into the space. Further solidifying our use of *arcade* was Walter Benjamin's critical treatment of the term in his *Arcades*

Project (Cambridge, MA: Harvard University Press, 2002). This work, at once commentary on bourgeois consumerism and a creative example of collage technique in literature, mirrored on our values of supporting critical investigation of popular culture and encouraging the remix and creation of new works.

6. University of Washington Libraries, "Media Arcade," www.lib.washington.edu/media.
7. In this way the Arcade is well situated with the existing framework of a Digital Media Lab. "A digital media lab (DML) is a library creative space devoted to the creation of multimedia, including digital video, video games, audio, and images. The focus of one of these labs in an academic library environment is normally on helping students realize their projects, although faculty and course assignments may also be supported." Amanda Goodman, "Digital Media Labs in Libraries," *Library Technology Reports* 50, no. 6 (Chicago: ALA TechSource, 2014).
8. The full code of conduct available online at https://www.lib.washington.edu/about/policy/conduct.
9. Because of the age of the Media Center and rapid evolutions of media formats over the years, with each new format resulting in the attrition of certain available titles, a not insignificant portion of the Media Center's circulating collection became unique enough to require the planning of proactive preservation. Concurrently, due to active outreach efforts over the years, the Media Center's noncirculating archival materials had become considerable.
10. Arundhati Roy, "2004 Sydney Peace Prize Lecture," http://sydney.edu.au/news/84.html?newsstoryid=279.
11. RAID (Redundant Array of Independent Disks) is used at the MAD Lab to create duplicate copies of archival information as insurance against drive failure.
12. As of the time of writing, the vrecord project is available for participation and download at https://github.com/amiaopensource/vrecord.
13. "Shared File System for Research Archives (lolo),"IT Connect, https://itconnect.uw.edu/service/shared-central-file-system-for-research-archives-lolo-archive/.
14. The iSchool at the University of Washington does not have an archives-specific path of study and does not offer classes relating to media preservation. The MAD Lab has been an invaluable resource for providing instruction and hands-on work experience to students interested in careers in this area.
15. This ethos is effectively described in the call to action "Digitization Software Obsolescence, Too?" by Dave Rice, originally published in *IASA Journal* 45 (October 2015) and available in an open-access form via the author's website at http://dericed.com/papers/digitization-software-obsolescence-too/.

16. Much of this output is available through the "pugetsoundandvision" Github repository, actively maintained by Weaver at https://github.com/pugetsoundandvision.
17. The Arcade employs roughly eight students per year. They work solo shifts on a rotating basis. The Arcade is open nearly 100 hours per week during the academic term.
18. These values are highlighted in the Libraries' Strategic Plan. For example, on flexibility and responsiveness: "We align our services and programs with the needs of our communities and strive to create shared ownership of the Libraries. We do this by . . . being flexible in response to evolving user needs and leveraging the expertise of our staff to guide decision-making in partnership with user communities (www.lib.washington.edu/about/strategicplan). Creativity is one of the Libraries' core values: "We embrace a culture of exploration, experimentation, and reflection to improve services, anticipate needs and manage change. We do this by: Creating a culture of openness to alternative solutions and empowering staff to propose new ideas that address shared challenges; Developing robust and respectful feedback loops to ensure ongoing organizational and individual learning; Providing spaces, services, resources and tools that facilitate interactivity and creativity for our organization and our user communities." (www.lib.washington.edu/about/strategicplan).