

20

Creation Culture and Makerspaces

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Editor's Introduction

Chapter 20: Creation Culture and Makerspaces highlights creative and engaging library spaces that are not only incorporating novel services and technologies but, perhaps more significantly, are developing communities of like-minded people who come to experiment, work, and collaborate together within the library. Kristin Fontichiaro, who coordinates the University of Michigan School of Information's Michigan Makers projects, begins with a brief history of makerspaces. She describes makerspaces as a culture that is community-oriented and focused on supporting and teaching one another.

Information professionals need to be attuned to community needs and wants and have the patience to create a space that supports creative and collaborative practice in the information organization. Fontichiaro emphasizes the importance of always keeping an eye on what is coming next for makerspace activities. She offers guidance in planning for long-term success, including asking key questions for defining program goals and expectations. She also suggests documenting the plan and explains how to disseminate it.

Effectively designed with the user in mind, makerspaces can be an important tool to not only effectively educate patrons but also foster a community for patrons who have similar interests and learning styles. Fontichiaro shares successful makerspace experiences, demonstrating the possibilities available with open source and sharing or partnering. Her rich examples provide readers with excellent ideas on how to get started, what resources are available, and how to make makerspaces into a long-term option and not a quick fad.

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When talking about makers, it is worth highlighting as an exemplar Leonardo da Vinci, the Italian creative whose work could not be pigeonholed into a single discipline, media, or set of tools. Leonardo could sketch portraits or draft scientifically accurate diagrams, build inventions or paint frescoes, paint wall-sized murals, or experiment with reverse or "mirror" writing. When curiosity struck, he would set out to learn about aerodynamics, anatomy, or the natural world. His life was an ongoing cycle of learning new ideas, testing them, and using the lessons learned on his next round of creativity. Both in his breadth of interests and in seeing himself as a lifelong learner, Leonardo epitomizes what has been called the Renaissance man (or person): someone who can blend art and science in potent and powerful ways and who remains hungry to keep learning, experimenting, growing, and creating.

The ideals of the "Renaissance person" correlate well when talking about makerspaces in libraries and information centers, which have historically served as places that welcome human curiosity, create safe havens for niche interests, and kindle a desire for learning that today's nascent Leonardos of all

ages have. Today, these “Leonardos” might be called makers. “Maker” is an inclusive term for anyone who sews, solders, welds, creates, tinkers, prototypes, designs, cooks, codes, gardens, or otherwise transforms one set of materials into another. One need only wander into the nonfiction section of a public library to see titles that reflect these traditional and new interests. From carving pumpkins to coding web pages, the creative possibilities have sat on library shelves for decades. What is different in today’s information environment? Today’s libraries offer the potential for the creative acts themselves and not merely materials *about* creative acts.

Although makerspaces in the library are not new, the COVID-19 pandemic set the stage for a new phase in library makerspaces. During the early months of the pandemic, many people reported having more time for hobbies like needlework, woodworking, art, or baking. Many public librarians also reported that their creation of take-home craft kits were their most popular outreach activities when traditional programming in the building was not an option. But there was one overarching complaint communities expressed over the closure of schools, libraries, churches, and other

community gathering spaces: they desperately missed social interactions. With that in mind, this chapter returns to previous definitions of the maker movement, reinforcing the goals of self-directed making and social engagement that have too-often been overshadowed by the mania for high-tech STEM machines, gee-whiz tech tools, coding camps, and all things novel.

“Creation culture,” the democratization of digital tools and a community-based hunger for personal and creative connections in an era of unprecedented hurry and change, has given birth to new opportunities to reenergize and restimulate the creative impulses in patrons and citizens. Carving out temporary or permanent spaces, many information organizations continue to experiment with novel services to attract new patrons or a wider range of services for existing patrons. After completing this chapter, the reader should have an understanding of:

- the big ideas behind creation culture; and
- how—by looking beyond fads to the wants, needs, and aspirations of makers—information professionals can create sustainable, welcoming spaces.

Makers and Makerspaces

“All of us are makers,” says Maker Media founder and CEO Dale Dougherty.¹ To use one’s hands to create an object that is personally satisfying and helpful is an inherently human instinct. At a time when an unprecedented number of people are doing sedentary screen-based work or highly repetitive manual labor, makers possess a hunger to use their hands to create and customize their world. Making involves creating things as well as building social connections and interactions with other makers. Massimo Banzi, for example, was an early participant in global maker initiatives as codeveloper of the Arduino microcontroller—a low-cost, open-source microcontroller or “brain” that acts as home base for sensors, lights, and other future inventions. He says:

The whole idea of being a maker involves concepts of collaboration, community, and working with other people. It is very hard to be a maker and be by yourself locked in a room or even in a lab. It is really something that involves a lot of collaborations at different levels.²

Check This Out

For more insight into what makers are interested in doing, check out Appendix 20.1 What’s in Your Patrons’ Dream Makerspaces in Part IV: Chapter 20 of the Online Supplement.

Beginning around 2011, many information organizations expanded beyond their typical role as resource providers to also provide experiences in their library spaces, shifting from “check out our DIY materials and leave” to “check in and linger.” Forming spaces that may be named makerspaces, digital labs, or production studios, along with activities for creators known as “makers,” many information organizations experimented with how to invite in new patrons while expanding services for existing patrons.

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In the early years of the maker movement, many pointed to the dramatic price drops in digital fabrication tools like 3D printers as a sign of new manufacturing and prototyping opportunities that could be deployed in libraries. A 3D printer was the most common tool one saw in early library or information center makerspaces. Soon, those expensive tools—whether a library owned them or were provoked to think about doing so—sparked conversations between staff and patrons. The question shifted from: “We know what patrons want” to “What other kinds of hands-on, open-ended learning do patrons want?” Listening to what patrons want resulted in some important diversification of offerings that are customized to the communities they serve. For example:

- *Rochester Hills Public Library*, outside of Detroit, serves many engineers and others affiliated with the automotive and technology industries interested in high-tech offerings for students, so their pre-pandemic programming prioritized coding and engineering tasks.
- *Benzonia Public Library*, located in an artist-heavy resort town in northern Michigan, leans into hands-on activities with artisanal flair.
- *DeLaMare Library*, at the University of Nevada in Reno (one of the first academic library makerspaces), focuses on tools and practices that support the prototyping needs of engineering and science students, such as a digital milling machine and an industrial laser cutter. This filled a campus gap.

In contrast, the University of Michigan’s art and engineering schools have access to these items in the school itself, so the University of Michigan Library did not need to acquire these items for its Shapiro Design Lab. Whether the organization is part of a campus, community network, corporate setting, or school, its needs will vary depending on what other resources are available for their patrons. Context matters.

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Today’s library “maker programming” is as likely to focus on STEM as it is to embrace technologies of the past, like letterpress printing, spinning wheels, knitting, and sewing. These forms of making differentiate library-based spaces from community makerspaces, wood shops, and welding studios.³ Matching user wants, needs, or aspirations with library offerings, and creating a cozy environment in which those wants are met with enthusiasm, is key to a successful maker program—not which tools are in the space. Public libraries, in particular, should consider the lessons learned during COVID-19 about take-home craft and exploration kits to guide future thinking.

Makerspace Culture

Experienced maker facilitators know that it takes planning, attunement to community needs and wants, a willingness to think beyond the traditional library programming schedule, and patience to create a sustainable space that supports creative, collaborative practice—even after the novelty of a new 3D printer or tool has faded. This section offers some guidance in planning for long-term success.

When first encountering a makerspace program, it is typical to focus on tools or specific activities. Thriving makerspaces, however, extend beyond stuff or places by offering a culture that prioritizes community wants, needs, and aspirations; mutual support; and a noncompetitive atmosphere.

This collaborative spirit is key to the early successes of makerspaces. It is important to remember that the maker movement did not begin in libraries or information centers. The maker movement started as loosely organized collectives of artists and tinkerers, often seeking a creative place for expression *outside* of traditional organizations, with a blend of traditional and emerging tools. As information organizations mature in their makerspace development, it is easy to lose sight of those intangible elements. The isolation of 2020–2021 stay-at-home orders illuminated how much information users missed the physical space of libraries and the ability to connect with others. Consequently, many patrons will want to make things that match their aesthetics and goals, in welcoming spaces, at their own pace.

Many libraries—particularly public libraries—adopted the maker movement by adding new tools into existing program time slots and modalities, in which someone plans a craft or coding class and then the patrons copy the facilitator’s step-by-step demonstration to create a reasonable facsimile. Events are scheduled far in advance to ensure ample time for promotion, and projects are chosen based on budgetary constraints, the in-house expertise of library staff, or scalability for large groups. For example, programming in information organizations has historically relied on scheduling one activity at a time, such as *Minecraft* on Monday and weaving on Wednesday. Certainly, those activities are still important for mastering safe use of materials and establishing basic skills. But what comes *after that*? That is where the maker magic can happen.

Just as public libraries have a long history of combining both workshops and coaching on how to access the web and use computer software while also providing equipment for independent use, the maker movement in libraries and information centers is increasingly adopting a multifaceted approach, balancing classes and workshops with independent work time (sometimes referred to as “open lab”), improvements to library collections, and circulatable materials. By doing so, they can help patrons take their artistry from mimicry of the instructor to their own creations for pleasure or profit. For example:

- *The Scholars Commons at the Indiana University Commons’s Mini Makerspace* offers a blend of drop-in hours, scheduled workshops, and equipment (e.g., podcasting and other audiovisual equipment) that can meet the increasingly multimedia assignments of their students across disciplines.
- *The Shapiro Design Lab of the University of Michigan Library* offers intensive support to help campus constituents launch their own podcasts, with the goal being to help onboard interested parties on the process but not assume long-term production responsibilities.
- *The Ann Arbor (Michigan) District Library* circulates a variety of music-making and hobby tools alongside their workshops and how-to collections. Some might even categorize seed libraries, which provide free seeds patrons can have to start their own gardens with the hope that they will

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donate the seeds from what they have grown to next year's library, as contributions to creation culture.

- *Michigan's Commerce Township Community Library* realized that while pandemic restrictions limited in-library gatherings, they opened new doors to innovation. For example, the library could hire virtual instructors from around the world, and patrons could cook alongside their virtual instructors in the comfort of their own kitchens, transforming an in-library demonstration into a community cook-along. Something that was once passive became active!

Following the isolation patrons felt during the COVID-19 pandemic, libraries have new opportunities to reemphasize another early value of the maker movement: the power of relationships and a collaborative culture. Collaboration can occur not only among library staff, instructors, and patrons but also patron-to-patron. Examples abound of libraries hosting knitting groups, for example, that cost the library nothing except the square footage they carve out, as patrons bring their own projects along. Canton Public Library in suburban Detroit takes a high-tech approach to this with a closed-off quiet workspace where local coders come together to work on independent projects on a drop-in basis.

Part of the excitement and innovation that makerspaces can create comes from putting people of diverse backgrounds and skill sets together at the same time and in the same place (see also Chapter 4: Information Communities). Partnering on two or more activities at once can result in new cross-disciplinary creations. For example, kids who like to sew stuffed animals plus programmers who love to control sensors with an Arduino discover that, by merging their skills, they could end up with a cuddly object that automatically illuminates when it gets dark or a stuffed animal that senses the temperature of a sick child. Whether these events are called "open lab," "studio time," or even a cheekily titled "maker happy hour," these events can help patrons enjoy personal creative time surrounded by others. They can turn solo making into a community event.

Consider the image shown in Figure 20.1, a sixteenth-century depiction of the artist Jan Van Eyck's workshop, as potential inspiration. Notice that everyone is working industriously on their own projects at their own level: the novice is sketching the sculpture; the intermediate painter is creating a portrait similar to those that have been created before; and the leader of the workshop is doing the most innovative art of all. Learning is occurring naturally through observation and mini-lessons and not just from formal instruction. Novices can draw on the expertise of those around them. Similarly, one could envision a maker program in which patrons feel they are working at what educator John Dewey calls their "center of gravity"⁴—pursuing individual interests and curiosities in a safe environment. Safety to explore new tools and methods, envision new creations, and persevere when early prototypes and attempts do not succeed are key to aligning the information organization with the goals of creation culture. If a library's core function from the twentieth century onward has been to connect patrons to the materials that fit the patron's preference and purpose (and not impose the information professional's favorite reads on them), the makerspace should honor patron interests similarly.

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Developing Dynamic Makerspaces in the Information Environment

Experienced makers know that it takes planning, attunement to community needs and wants and patience to create a sustainable space that supports creative, collaborative practice. Makerspace staff are often the vanguards in their institutions, up on the latest trends and technology; their knowledge helps keep a maker program fresh and exciting. However, it is critical to remember that if a program is not solving a real problem or providing authentic delight for at least a core group of users, the insti-



Figure 20.1. The Workshop of Jan Van Eyck by Jan van der Straet
 Source: Jan van der Straet (known as Giovannia Stradano), as engraved by Philippe Galle, sixteenth century.

tution will end up on an endless and expensive hamster wheel where novelty—and not creation—will become the mission. Information professionals need to invite input and demonstrate responsivity to patron requests to build a sustainable space. Perhaps patrons want particular tools or programs, but they may also come to the information organization with unexpected responses. For example, patrons may want a place where they can be creative without paying entrance fees, an opportunity to socialize in an alcohol-free zone while doing a hobby, a large table or bulletin board to lay out personal projects, or even a place to slip away while children are being engaged by youth librarians!

Identify Makerspace Goals and Expectations

When information professionals purchase books, multimedia, or online resources, they rely on their collection development policy (see also Chapter 27: Managing Collections) to guide their selections. When planning to buy maker tools, set up maker programs, or establish space for making, similar guidelines help to unify expectations and desired outcomes. Key questions to ask include:

- What is the purpose for having a makerspace in the organization? What are the desired outcomes? How will the organization know it has been successful?
- What other creative activities are going on in the community, and how does the information organization’s program complement existing projects?
- Is the mission to provide a series of entertaining hands-on activities, an educational sequence of skills development, an enhancement or enrichment of school curricula, or something else?
- Is the information organization the only creative outlet in town, or does it serve, as Mark Anderson⁵ has noted, as an “on-ramp,” a place to explore a variety of activities before moving on to formal education or a professional makerspace?

The answers to these questions help define the goals and expectations of the makerspace and need to be documented in a charter or other planning document.⁶ Not only is this a useful reference

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for sharing plans with supervisors and board members, but it also provides essential talking points for employees, marketing staff, and potential donors. Clarity up front can avoid a scenario in which some patrons expect CNC routers and laser cutters when your goal is, perhaps, STEM kits for youth.

Partner Rather Than Compete

There is an aphorism that says: “The rising tide lifts all boats.” Makers feel the same, realizing that it is by helping fellow makers and maker-interested organizations grow that the entire ecosystem for making improves. As a corollary, a maker program in a library should not be limited by the staff’s skill set but by patrons’ imaginations. As information professionals consider beginning or expanding the maker work in their organizations, seeking out maker partners can produce valuable results. For example, who in the community designs video games, comics, or yarn-bombing campaigns and would be willing to mentor others? These makers may be interested in partnering to expand outreach, promotion, learning, and community engagement. Information organizations may have assets (e.g., heat, staff, space, evening access, the community’s ear) that, when partnered with an academic department, community organization, or school’s skills, make a great combination. Partnering to seek funding and swap expertise and resources is another smart move. Often, information organizations have space and makers have skills; by trading, both institutions grow. Similarly, information organizations have access to grants that for-profit makerspaces do not. There are opportunities and advantages in seeing community makerspaces as colleagues and not as competition. Being connected to community colleagues helps maximize the potential instead of duplicating offerings. Even better, strategic partnerships can connect information organizations to niche populations who may be underserved by the organization.

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Start Small and Expand Based on Patron Wants and Needs

A quick look through some large libraries’ social media can make smaller libraries feel: “If only we could have all that stuff . . . and all that space . . . imagine what we could do!” The implicit undercurrent for that is: “We don’t have that stuff . . . or that space . . . so we can’t do anything.” It is tempting to think big or, as some libraries say, “to just have things that we expose our community to”; however, it is just as important to start small and test out some potential tools and projects to see how they resonate with patrons. Again, the predominant goal should be on sustainability; the emphasis should be on efforts, events, and activities that will bring satisfaction to patrons and not merely chasing the insatiable monster of novelty.

One way to start small is to ask questions in a survey or focus group or through informal conversations with patrons. Another approach is to work with a few neighboring institutions or library branches and have each one fund a project kit that is deployed and evaluated in each library, and then rotate; this offers the opportunity to invest less money while providing patrons more access. By testing someone else’s projects, information professionals are able to hold onto more objectivity to see what resonates with the organization’s patrons rather than having the idea or experience overshadowed by their own enthusiasm. The big idea here is that it is more important to try to discern what people want, not what they should want. There are a lot of 3D printers in library storage rooms that were bought because of those big dreams—only to realize that patrons were less interested in learning new skills than in printing tchotchkes.

An effective strategy for exploring what patrons want is to group them together around activities, interests, or new ideas. Take time to think about how you arrange your space during formal workshops. Is everyone looking in the same direction, facing the instructor? Or are they gathered around tables,

where conversation can flow and patron-to-patron relationships can build? Finger knitting, mending, simple embroidery or woodworking kits, origami, scrapbooking, photo editing, simple graphic design tools like Canva, and more can be well-suited to table-based work. Table-based teaching is cozier than the lecture-style approach needed for larger groups, and it helps connect patrons to one another. Appendix 20.2 offers suggestions for using table-based activities as a way to involve and engage patrons in a safe, interactive, and explorative manner to engage and learn.

Another way to get started is with one-off events that require only a single visit to complete a challenge or creation. Design challenges, in which participants are asked to solve a problem or put unusual materials to work, offer a short-term involvement for both familiar and new faces in all settings, particularly academic libraries. Similarly, hackathon challenges focus on using computer programming to solve a problem. There are also emerging trends in developing challenges around low-cost prosthetics design and other world-changing maker practices. One example of a one-off event is a cardboard challenge, in which discarded boxes (e.g., from the recycling center or appliance store) are used as raw materials for people so they can build the tallest or widest building, animal, or robot. For kids, Rachele Doorley of Tinkerlab has an archive of challenges⁷ for one-off events, such as creating something new from cupcake liners.

Starting small helps organization leaders be more intentional about training and professional growth for the staff involved in the initiative. It is also helpful to identify what skills staff already bring to the table. Many libraries discovered during the COVID-19 pandemic that staff members had a wealth of previously “hidden” skills to share. For example, if the community wants to engage with new technology, are there staff with those skills (or the funds to hire or contract with someone who does)? If training staff for new skills is needed, it is also important to not underestimate how much time it takes to learn a new skill well enough to be able to explain it to others.

Consider Activities that Both Echo and Expand Current Patron Interests

Embrace the concept of “windows and mirrors” when planning formal maker programming. Formal programming is a great introduction to making, but so is “open lab” time in which people put their new skills into practice on their own timeline and in their own way. Open lab time exposes people to new materials or tools and broadens their sense of possibilities. Mirrors are makerspace activities that reflect existing or known patron interests. These draw in people with existing interests. For example, the community may have an existing group of drop-spindle aficionados, woodcarvers, or weavers; early programming that welcomes and recognizes those activities brings early engagement. Window activities, on the other hand, introduce less familiar, less-established, or newly launched activities. 3D modeling, the process of designing objects that can be represented in multiple dimensions by a 3D printer, is an example of a window in most communities. So are activities that add unfamiliar elements to familiar objects, such as pasting circuits into paper books or digitizing images for use on electronic embroidery machines.

As success and interests grow, makers may become more willing to take on new challenges that take longer to accomplish, such as learning to code in Python, building a robot, or tackling alterations. Additionally, some people are more comfortable in formal learning settings than others. Some like to putter independently while watching others out of the corner of their eye, so having some activities that require no instruction at all, or for which videos or instructional sheets are provided, is an effective strategy for makerspaces.

Check This Out

Explore options for incorporating table-based maker activities in Appendix 20.2 Table-Based Activities to Engage Patrons in Part VI: Chapter 20 of the Online Supplement.

TEXTBOX 20.1

Discussion Question

Good information centers keep tabs on what community members—both current and potential patrons—want and need. Planning around those wants and needs can help limited budgets be spent more wisely. What needs and wants do you see in your community? What systems are in place at the organizational level to find out this information in an ongoing way?

Cast a Wide Net: Welcome All Kinds of Makers

An information organization has a responsibility to serve all. The first tenet of the American Library Association Code of Ethics states: “We provide the highest level of service to *all* library users through appropriate and usefully organized resources; equitable service policies; equitable access”⁸ (see also Chapter 6: Equity of Access, Diversity, and Inclusion; Chapter 7: Social Justice; and Chapter 33: Information Ethics).

Therefore, consider broadening the range of activities to welcome a broader swath of the population. In some communities, STEM activities might be a big draw; in others, low-cost do-it-yourself home improvement may take hold. Seeing something familiar reassures people that it is safe to enter the room to try something new. Once they are in the room, they may migrate to something new that would have been off-putting from the outside. A philosophy of having “something for everyone”⁹ promotes inclusion. Often, a tool predicted to interest one gender may interest both. For example, in Michigan Makers, sewing machines were more popular among boys than girls!

Another way to welcome all makers is to balance short- and long-term projects for skills acquisition. Especially in under-resourced communities, some patrons may feel intimidated by novel or high-tech tools or uncertain about their ability to achieve success. Activities that can be completed in a single visit can help minimize frustration, work around unpredictable schedules, and eliminate the challenge of returning multiple times to create a product. Some short-term tasks—like learning to fold an origami cup or creating a simple circuit on a greeting card—can be accomplished in a single sitting. These can boost confidence and demonstrate to novices that they are capable of success in new arenas. Activities like the origami cup might just be set out on a table in the information organization with a clear set of instructions for drop-in, casual making without a formal spot on the schedule.

Information professionals should further keep in mind that it is not enough to merely say: “All are welcome here.” It is just as important to show it and act it. A female, Black, Indigenous, and People of Color (BIPOC), disabled, or older patron should be able to see something of themselves echoed in a space because some makers may not feel the library is a welcoming space to them as equitable contributors. And although many librarians choose the profession because a library is one of the spaces in which they feel most comfortable, it is risky to assume that all community members share that same level of comfort. It is the responsibility of the makerspace staff to create both tacit and explicit signals of welcome. Thus, it is important to go beyond assigning “diversity themes”—such as adding Kwanzaa crafts or a Chinese New Year-themed coding project—and move toward inclusive culture. Some questions to consider when evaluating how welcoming makerspaces are include:

- Can the organization partner with other community organizations whose patrons are more diverse than who are walking through their own doors?
- Do the facilitators encourage female or Black voices with the same generosity shown to white male participants?

- Are there accommodations for senior citizens or children with fine motor impediments to use the library's camera or other technological equipment?
- Are there chairs for the weary or ill?
- Is a wheelchair-accessible table provided?
- Is there a microphone so facilitators can be heard easily throughout the room when needed?
- Is everyone greeted warmly as they enter the space?
- Are instructions available in large print?

These types of questions should be revisited frequently.

Another way to promote inclusivity is by embracing peer mentorship and leadership (see also Chapter 40: Leadership Skills for Today's Global Information Landscape). Rather than avoiding certain maker activities because staff are not experts, look to the community of makers and tap them for expertise. Teens with parental permission can teach *Minecraft*, for example. In a makerspace, experience, and not age, determines expertise. And the more sharing of expertise that is developed among the participants, the more sustainable the makerspace will be. Peer mentorship is key in developing a community of learners in the information organization.

TEXTBOX 20.2

Discussion Question

What is the advantage of focusing a makerspace on STEM tools, digital tools, or a wide variety of tools and materials? What could unintended consequences be of limiting the range of maker activities offered?

Celebrate Progress

Along with the collective enthusiasm for making among makers, celebrating the patron's achievements along the way promotes your organization's services and provides openings for newcomers to join in. Establish a formal sharing time both during workshops and in showcase events. Each community is different in this regard, and the desire to share publicly can vary, so choose a sharing pathway that feels right to patrons and is designed with their input. Some groups enjoy taking the last few minutes of a workshop to see how everyone else interpreted a new task. Completed projects can be placed on a table or participants can sit in a circle to admire what has been made, depending on the size of the creation. Other recommendations include:

- Keeping a physical photo album, bulletin board, or video monitor slideshow of inspiring works in progress or completed objects;
- Taking advantage of social sharing platforms like the organization's Facebook page, Flickr site, blog, or Instagram feed; and
- Setting up a semiannual maker celebration, like a MakerFest, that welcomes the display of creations made both within and beyond the institutional space.

These efforts can attract new potential users, showcase what the library has to offer, and help makers feel the power and value of their creations (see Textbox 20.3).

TEXTBOX 20.3

Think into the Future

Information professionals should consider these questions as they think about the next phase of their maker programs:

- Who remains underserved in the maker programs your organization offers? How could information professionals explicitly welcome them in or establish partnerships with organizations that serve that group well?
- What is the potential for entrepreneurship around making in the community served so there is an economic impact in addition to personal satisfaction?
- What keeps the maker work centered on a broad group of creators in the community?
- How can information professionals be more intentional about showing how their programs change patrons?

Conclusion

Information organizations have a long tradition of supporting their community's intellectual and personal interests through rich collections available for checkout and interactive activities online and in the physical space. Libraries and information organizations are now also starting to reconceptualize makerspaces as people-first, not tool-first, spaces and to solve real problems for patrons. This chapter explored creation culture and the maker movement in information organizations as pathways to expand on those traditional activities. It considered the questions and issues that boost makerspace success. By unifying the how-to collections of the information organization with the let's-do energy of the community, information organizations can create maker learning communities and opportunities that delight, motivate, and inspire communities.

Melvil Dewey said: "The new library is active, an aggressive, educating force in the community."¹⁰ School libraries have always fulfilled this role, as have academic libraries (see also Chapter 8: Literacy and Media Centers: School Libraries and Chapter 9: Learning and Research Institutions: Academic Libraries). Public libraries also build on long traditions as learning institutions via story times, book clubs, informational lectures, film showings, concerts, knitting circles, quilt guilds, digital literacy initiatives, and more (see also Chapter 10: Community Anchors for Lifelong Learning: Public Libraries). Makerspaces do not replace these activities; they build on them and provide an overarching narrative that all making—from robots to running stitches—has value in satisfying the personal need to create and, perhaps, jumpstart new economic opportunities. In many cases, achieving the open-ended, individually driven activities of a makerspace simply means adding *additional* events to the kinds of beginner how-to events that information centers already host. It is an extension from introductory exploration into interdependent invention.

Check This Out

Access resources and examples for creating innovative makerspaces by checking out Appendix 20.3 Innovative Makerspaces and Resources in Part IV: Chapter 20 of the Online Supplement.

Appendixes

For additional information about the content of this chapter, visit Part IV: Chapter 20 of the Online Supplement.

- Appendix 20.1 What's in Your Patron's Dream Makerspace?
- Appendix 20.2 Table-Based Activities to Engage Patrons
- Appendix 20.3 Innovative Makerspaces and Resources

Notes

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