

WESTPORT LIBRARY ON THE COVER

MAKER SPACE
at the Westport
Library in
Westport, CT



The Makings of Maker Spaces, Part 1: Space for Creation, Not Just Consumption FROM LIBRARY JOURNAL

Maker spaces in libraries are the latest step in the evolving debate over what public libraries' core mission is or should be. From collecting in an era of scarce resources to curation in an era of overabundant ones, some libraries are moving to incorporate cocreation: providing the tools to help patrons produce their own works of art or information and sometimes also collecting the results to share with other members of the community.

Maker spaces promote learning through play; have the potential to demystify science, math, technology, and engineering; and encourage women and underrepresented minorities to seek careers in those fields.

They also tie in to the growing trend of indie artists in every medium—including books—who are bypassing traditional gate-keepers, taking advantage of new tools to produce professionally polished products, and going direct to the web to seek an audience.

Maker spaces also acknowledge green concerns by reconnecting consumers to the labor involved in producing what they use. While 3-D printers are perhaps the signature offering of Maker spaces, libraries find that low-tech and low-cost opportunities are just as popular.

Making Space for Creation, Not Just Consumption

Libraries around the United States offer tools for patrons to learn by doing

By Lauren Britton

On a Saturday afternoon last winter, two young boys came into the Fayetteville Free Library, NY, with their design of the “public library of the future.” I had the opportunity to watch how delighted they were as their model took physical form on our MakerBot 3-D printer, a tangible example of knowledge creation now possible in libraries thanks to Maker spaces.

A Maker space refers to people coming together to create and share resources, knowledge, and “stuff.” There are a number of freestanding and school-based Maker spaces nationwide, and several forward-thinking libraries have started developing them for their communities.

Incorporating Maker spaces into library service can have a life-altering impact on community members, who then have the tools, access, and training necessary to tinker with and remake their world. Just as libraries are reflections of their patrons, Maker spaces can reflect the needs and desires of the local residents. Typically, the spaces will:

- Foster play and exploration
- Facilitate informal learning opportunities
- Nurture peer-to-peer training
- Work with community members as true partners, not as users or patrons
- Develop a culture of creating as opposed to consuming.

No tools required

The beauty of the Maker movement, particularly in the library, is that there is no set list of equipment or programming required to make a space successful. There are some tools and technology typically associated with Maker spaces, like 3-D printers, but they are not required. However, the list of equipment and materials will naturally grow as specific projects and programs generate new needs. For example, a library Maker experience might

be based on costume-making that would require sewing machines, whereas a graphic design workshop would benefit from access to a vinyl cutter.

Maker spaces support learning in an informal, play-focused environment that can cultivate an interest in science, technology, and design. Scott Nicholson, associate professor in the School of Information Studies at Syracuse University, NY, writes in *Strategies for Meaningful Gamification: Concepts Behind Transformative Play and Participatory Museums* (a presentation at the Meaningful Play conference in Lansing, MI):

Someone who wants to do something because it is fun is more likely to find an activity to be meaningful than someone who is doing something for a reward or to learn something. When someone is engaged in a playful space, that person will learn more easily. Creating playful information-based spaces allows the learner to explore and engage with content on the learner’s terms instead of on the instructor’s terms.

Maker spaces can also empower youth through the peer-to-peer training opportunities that organically develop in these play-based spaces. Neil Gershenfeld, director of MIT’s Center for Bits and Atoms and author of *Fab: The Coming Revolution on Your Desktop— from Personal Computers to Personal Fabrication*, discovered that learning in these spaces is often driven by the demand for knowledge, as opposed to the supply of knowledge.

“The biggest impediment to personal fabrication is not technical; it’s already possible to effectively do it,” Gershenfeld writes. “And it’s not training; the just-in-time peer-to-peer model works as well in the field as at MIT. Rather, the biggest limitation is simply the lack of knowledge that this is even –possible.”

Role of the community

Community members are at the heart of any Maker space, regardless of its location. Incorporating Maker spaces into library service can create transformative experiences for those individuals. For example, someone can learn how to fix a blender by designing and then 3-D printing the broken part. Another

person may learn to write code or build a robot. People learn from one another by sharing knowledge and tools.

Maker space—or, more specifically, the act of making—encourages and gives people permission to tinker, hack, remake, and perhaps even change society.

“Making anything for yourself is a political act,” says Zeke Leonard, assistant professor, Syracuse University School of Design. “The further we get from the creation of an object, the less we have a connection with the people, resources, and process. This limits how we assign value to objects. If we can all start to make more and consume less, then we can be more thoughtful about the resources used to create the objects and food and garments that we fill our lives with,” Leonard says.

“Maybe the urge to make manifests in putting a patch on a worn pair of jeans instead of buying new ones. Maybe it manifests in having friends over for a ‘pot-luck’ instead of meeting at a restaurant, as sharing food you have made is an immediate joy that is a long-standing tradition,” Leonard says. “These seemingly trivial actions are actually making activism, they are a way in the modern world that we can have some control over our own

surroundings that is not dictated by the limit on our credit card.”

So what does it mean for libraries to give our communities the tools, access, training, and permission to make, hack, and tinker instead of simply consume? MIT’s Gershenfeld expresses it best: “Instead of trying to interest kids in science as received knowledge, it’s possible to equip them to do science, giving them both the knowledge and the tools to discover it. Instead of building better bombs, emerging technology can help build better communities.” Library Maker spaces give everyone the opportunity to see the world around them differently, to explore and imagine new possibilities for a future they help create.

Westport’s Makers in residence

There are several libraries across the United States experimenting with Maker spaces, each library using different ideas and concepts to manage them. The Westport Public Library (WPL), CT, launched its Maker space in July. Maxine Bleiweis, the library’s director, said when the Maker space opened that while early adoption is a risk, she believes that the Westport community is usually ahead of the



Photos by Kevin Henegan



A CENTER OF PRODUCTION Westport Library Director Maxine Bleiweis (l.) confers with Maker-in-Residence Joseph Schott (c.) and Assistant Director for Innovation and User Experience Bill Derry on fabric choices for one of two wooden model planes that are being produced in the library’s Maker Space (rt. photo)

curve. The library's one-day Mini Maker Faire in April attracted 2200 visitors who came to see exhibits including a demonstration of a Body Sound Suit, how-to instructional sessions on topics such as using Google SketchUp to create a 3-D model, and presentations like the talk by *New York Times* tech writer David Pogue.

"No longer is it normal to go to college, graduate, interview, and be taken on by a big company. We are instead looking to ourselves and saying, What can we think of? What can we create?" Bleiweis says, explaining that part of the goal of the new space will be to foster a spirit of entrepreneurship within the community.

"We want the library to be a space where you can invent. You can learn at every stage of your life," says Bleiweis. WPL now has a Maker-in-

Residence who was interested in building large, wooden model airplanes. The library used these airplanes and the concept of flight as a metaphor for imagination.

WPL also purchased a MakerBot Replicator, which is a 3-D printer. A few excited teenagers became the curators of the bot and help patrons design and print projects. Bleiweis says that, in true Maker fashion, the library doesn't know where it's going next with its Maker space. They are allowing the space to evolve naturally. When people ask her what she is doing next, her response is, "What do you think we should do next?" Then the library works with the community to make it happen. Bleiweis says the library is there to provide the framework, not to be in charge. She says there is a shift from a librarian being the person who had all of the answers to the person who has questions and the ability to find the answers.