LIBRARY MAKERSPACES **RESEARCH** SHOWCASE

FEBRUARY 2026

NATIONAL FORUM TO CONNECT AND ADVANCE LIBRARY MAKERSPACES

ACKNOWLEDGEMENT

This project was made possible in part by the Institute of Museum and Library Services. LG-256680-OLS-24.

The *Library Makerspaces Research Showcase* was a free, one-day virtual event held on February 28, 2025. It highlighted the growing body of research and scholarship on library makerspaces and brought together researchers and practitioners from across the country.

The Showcase explored key findings from recent studies, fostered dialogue about emerging questions, and continued building a vibrant, interdisciplinary community committed to advancing the field.

Event highlights:

- 845 registrations
- 30 presenters
- 23 presentations
- 1 interactive closing session

The closing session focused on reflecting and synthesizing key insights from the day's discussions about library makerspaces. Participants engaged in a collaborative activity to identify strengths, gaps, and future opportunities in the current body of research.

The Forum created an open access archive of the research presentations and materials shared during the Showcase.

As part of the archive, each presenter was invited to highlight three practical applications to advance library makerspaces. Drawing on session abstracts, practical applications submitted by presenters, and the interactive closing session, the Forum synthesized the following research insights.

The body of knowledge generated by research can be used to demonstrate and advocate for the value and impact of library makerspaces (Koh, 2025a).

The field continues to develop shared definitions of what constitutes makerspaces or making in library settings. The varying meanings attached to these concepts pose challenges for conducting research, disseminating findings, and leveraging findings to take action.

Researchers are employing a wide variety of research methods to study library makerspaces, including:

- Interviews (e.g., Anderson & Phillips, 2025)
- Focus groups (e.g., Koh, 2025a; Teasdale, 2025)
- Observation (e.g., Millerjohn & Holcomb, 2025)
- Surveys (e.g., Anderson & Phillips, 2025)
- Educational assessment (e.g., Chivers, 2025; Trkay & Peery, 2025)
- Design-based research, including the use of virtual reality (e.g., Koh & Seo, 2025; Melo, 2025)
- Photo-based methods (e.g., Moreno, 2025)
- Action research (e.g., Markman, 2025; Sewell, 2025)

These findings largely appear in journal articles and conference presentations. There is a need for more creative, visual, and interactive methods of dissemination that can convey the rich findings these methods yield.

In addition, library makerspaces would benefit from robust, reciprocal partnerships between researchers and makerspace practitioners to identify meaningful research topics, recruit a wide range of research sites and participants, align research expectations and timelines, share resources meaningfully across research and practice contexts, and ensure application of findings to shape practice.

Research has addressed foundational concepts for makerspaces, including professional values (Koh, 2025a), community values (Teasdale, 2025), belonging and welcome (Melo, 2025), and empowerment (Crawford Barniskis, 2025). Findings can clarify and strengthen claims

about the purpose and benefits of library makerspaces, surface and test assumptions, and inform makerspace design and implementation. Additional research is needed to deepen understanding of these and other foundational concepts and strengthen the evidence base that underpins libraries' goals and claims.

Studies have illuminated how the design of makerspaces influences the social and emotional experience of making, and can convey a sense of belonging and welcome – or disconnection and unwelcome – to first-time visitors (Melo, 2025). This includes relatively small details that support equitable engagement, such as offering noise-cancelling headphones, to more significant details, like the overall room arrangement that can help visitors feel welcome (Moreno, 2025). Findings have also revealed how scheduling, spatial arrangements, and rules can differentially support makers who have varying priorities and aims (Teasdale, 2025). Further research is needed to examine additional aspects of makerspace design to provide evidence-based guidance libraries can draw on as they develop and operate makerspaces.

A strength of recent research is the growing focus on accessibility in library makerspaces. Findings reveal that inclusive practices should be built into all makerspace activities to foster community, rather than providing "disability-friendly" options (Anderson & Phillips, 2025). This includes locating makerspaces in easy-to-reach areas within libraries that have accessible parking, as well as providing information and instructions in multiple formats in advance whenever possible (Anderson & Phillips, 2025). More specifically, staff are encouraged to recognize the diverse needs of blind and visually impaired makers and offer personalized support (Koh & Seo, 2025). This can include using tactile materials to minimize audio/verbal overload and providing detailed, specific verbal descriptions with tactile cues (Koh & Seo, 2025).

In addition to future research that continues to address the needs and experiences of makers with disabilities, there is a need for research that explores the experiences of other minoritized groups to inform makerspace planning, implementation, and evaluation.

Research has also addressed making and makerspace assessment (Abramovich & Wardrip, 2025). Open-source curricula and assessment rubrics have been created to support the development and assessment of technology-agnostic transferable skills through experiential maker learning projects (Chivers, 2025). In addition, a freely available checklist can help libraries assess the success of their makerspaces from a systematic and community-centered perspective that is often missing in library makerspace assessment practices (Crawford Barniskis, 2025). Researchers have also developed observation tools (Millerjohn & Holcomb, 2025) and photo-based methods that can be used in library makerspace assessment (Moreno, 2025).

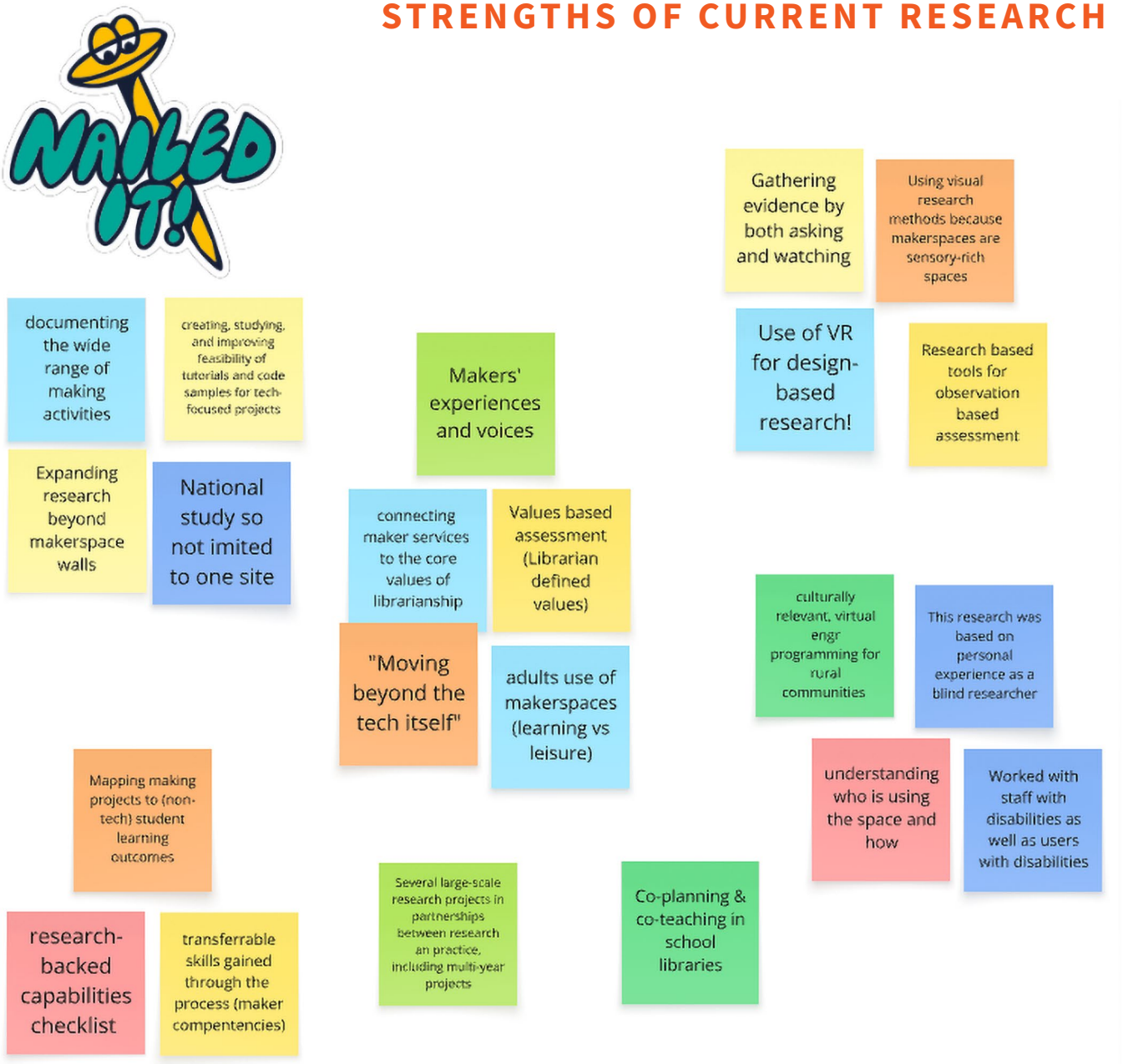
The Showcase spotlighted innovative practices from library makerspaces. Specifically, presentations highlighted how integrating vintage technologies into makerspaces can enhance experiential learning, increase accessibility and inclusivity, and foster sustainability (Paul, 2025). In addition, hosting game jams can provide opportunities for patrons to engage in creativity, game design, and community building (Sewell, 2025). In school libraries, co-teaching — a specific form of instructional collaboration between school librarians and classroom teachers — can help librarians develop expertise in maker learning and enhance learner-centered instruction (Koh, 2025b). Further, a technological toolkit and design framework can connect middle and high school learners interested in fabrication and making to others in distant locations (Tissenbaum & Holbert, 2025). Finally, gaps in librarians' and caregivers' knowledge and confidence in engineering can be addressed by leveraging engineering-related funds of knowledge and expanding our understanding of what counts as engineering in designing library-based making and engineering programs (Kim, 2025). These examples point to the need for enhanced infrastructure, such as open, collaborative networks, clearinghouses, and repositories, to disseminate innovative practices.

Looking to the future, presenters identified gaps in current makerspace research and practice. These included the need for inquiry into the sustainability of library makerspaces (Koh, 2025a) and exploration of the impact of generative artificial intelligence on makerspace practices, services, and technologies. Researchers urged libraries to consider how

makerspaces are framed — as learning spaces, production spaces, and/or social spaces — and how this may resonate with different groups based on their varying values (Teasdale, 2025) and highlighted the need for more robust training in formal LIS education and informal networks and communities of practice to address the professional development needs of makerspace staff (Koh, 2025a). These point to the need for continued research funding and opportunities for researchers and practitioners to interact to identify research priorities, share findings, and support action.

*Figures (Actual artifacts from the showcase): Closing Session Collaborative Board

STRENGTHS OF CURRENT RESEARCH



GAPS IN CURRENT RESEARCH

How to make this work on a restricted budget

extending first nations & tribal arts and heritage into makerspaces

research reporting that is visual, rather than text-based

common defintion of the term makerspace

Clarifying our terms!

makerspace specific research about disability access

dispositions of a maker - how to make it part of the academic convo

participatory research--what do communities want to know? how issues do they want to address?

Lack of research on practical and actual experiences with youth with disabilities

sustainability

how libraries work with other institutions (schools, community orgs)

assessment literacy

This is nature of research, but research presentations offered guidelines and principles but limited in answering questions from practitioners about how to make specific maker tools accessible

more case studies of how projects/ideas can be shared and replicated across contexts

research about AI and making in libraries

Research about collaborations between library makerspaces and community partners

Critical evaluation of makerspaces in libraries - is it working?

more research about LIS education for makerspace services

reserach about staffing patterns and staff training

PRACTICAL TIPS & RESOURCES

CT assessment tools: https://impact.ischool.umd.edu/

tip for offsetting the sensory fatigue for staff in very noisy spaces: buy them Loop ear plugs.

Implement air filtration to limit odors.

Make all events inclusive and accessible not just special programs

Individual accommodations must be made for those with disabilities, disclosure is an issue though

Be intentional to gather community values

How to modify your space to be more welcoming for 1st time users

https://eitm.unc.edu/

Accessibility is in important to the space as well as in the space

It is important to proactively reach out to your related community organizations and have a set contact person on staff.

accessible parking, easy to reach area w/i library, room for multiple wheelchairs, be aware of sensory concerns, supportive tech, multiple formats when presenting information, community building!

Balance use of the word "learning" since not all adults come for that reason

Small details make a big difference. Signage is important!

Hall of failures, signage, bright colors, cultural cues, art tools, platns

Touchscreens are more accessible than mice to many.

Tactile sensory tools are helpful for sight impaired users

Use photo surveys to understand what equity "looks like"

Rubrics for maker competencies https://libraries.uta.edu/makerliteracies/home

expand the notion of what we mean by engineering to engage kids & their caregivers

Connected Spaces

REACH projector - live collaboration worldwide on projects

Library Makers.org

Family Makers https://www.familymakers.net/

Repository of maker literacies curriculum and assessment rubrics

Observation Deck https://odeck.org/about/the-research.php

framework domains that can help guide assessment of programming

https://www.webjunction.org/news/webjunction/transforming-school-library-practice/school-library-makerspaces.html

Play Make Learn Conference

Maker educator Certificate Program

Properties of Success Analysis Tool

Facilitating Computational Tinkering https://www.facilitatingcomputationaltinkering.org/

Public Library Innovation Exchange

Makers in the Library Toolkit https://www.makersinthelibrary.org/

Teacher Studio https://sites.google.com/wisc.edu/teacher-studio/

"Maker Skill Trees" from Steph Piper: https://github.com/sjpiper145/MakerSkillTree

https://www.fulcrum.org/concern/monographs/7d278w05c#stats

Association of Creative Technologies in Academic Libraries https://actalibraries.org

FUTURE OPPORTUNITIES

References

Abramovich, S., & Wardrip, P. (2025, February 28). *Values-based assessment: Designing assessment for learning in library makerspaces* [Recorded conference presentation]. The Library Makerspaces Research Showcase (virtual).

Anderson, A., & Phillips, A. (2025, February 28). *Accessibility in making: Perspectives from disability self-advocates* [Recorded conference presentation]. The Library Makerspaces Research Showcase (virtual).

Chivers, M. (2025, February 28). *Maker literacies* [Conference presentation]. The Library Makerspaces Research Showcase (virtual).

Crawford Barniskis, S. (2025, February 28). *Empowering what?: Using an evidence-based assessment checklist to ensure makerspace success* [Conference presentation]. The Library Makerspaces Research Showcase (virtual).

Kim, S. H. (2025, February 28). *Family makers: Promoting engineering learning for children and caregivers through online making programs at rural libraries* [Conference presentation]. The Library Makerspaces Research Showcase (virtual).

Koh, K. (2025a, February 28). *The impact and value of makerspaces in public libraries* [Conference presentation]. The Library Makerspaces Research Showcase (virtual).

Koh, K. (2025b, February 28). *Co-teaching and the role of school librarians in facilitating maker learning in schools* [Recorded conference presentation]. The Library Makerspaces Research Showcase (virtual).

Koh, K., & Seo, J. (2025, February 28). *Promoting computational thinking skills for blind and visually impaired learners through accessible library makerspace* [Conference presentation]. The Library Makerspaces Research Showcase (virtual).

Markman, C. (2025, February 28). *Rebooting digital literacy: Transforming a Palo Alto City Library computer lab* [Recorded conference presentation]. The Library Makerspaces Research Showcase (virtual).

Melo, M. (2025, February 28). *What first-time users can teach us about makerspace design and experience* [Conference presentation]. The Library Makerspaces Research Showcase (virtual).

Millerjohn, R., & Holcomb, A. (2025, February 28). *The observation deck: Digital tools for observation, assessment, and analysis* [Conference presentation]. The Library Makerspaces Research Showcase (virtual).

Moreno, C. (2025, February 28). *What does it look like to design makerspaces with equity in mind? Sharing results from photo-based surveys of library makerspaces* [Recorded conference presentation]. The Library Makerspaces Research Showcase (virtual).

Paul, Y. (2025, February 28). *Re-emerging technologies in academic libraries* [Conference presentation]. The Library Makerspaces Research Showcase (virtual).

Sewell, A. (2025, February 28). *Game jamming in academic libraries* [Conference presentation]. The Library Makerspaces Research Showcase (virtual).

Teasdale, R. (2025, February 28). *Whose values? Navigating key tensions in makerspace design, use, and evaluation* [Conference presentation]. The Library Makerspaces Research Showcase (virtual).

Tissenbaum, M., & Holbert, N. (2025, February 28). *Connected spaces: A technological framework for fostering collaboration by linking novice makers with mentors and peers* [Conference presentation]. The Library Makerspaces Research Showcase (virtual).

Trkay, G., & Peery, K. M. (2025, February 28). *Maker immersion: Developing curriculum design and assessment skills for academic makerspace course integration* [Conference presentation]. The Library Makerspaces Research Showcase (virtual).