

Intention in Your Makerspace: Making Your Maker Learning Space Accessible

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Many makerspace definitions are available in the field of library science—even more if you look in the fields of engineering, architecture, and design. My personal favorite definition of a makerspace comes from Laura Fleming (2016) who defines a makerspace as “a metaphor for a unique learning environment that encourages tinkering, play, and open-ended exploration for all.” The most important two words in this definition being “for all.” Nothing in this definition mentions a particular type of technology like a 3-D printer or laser cutter. Nothing in the definition points out a particular space or location. A makerspace is meant to be a place for exploring, experimenting, and thinking. It’s also a spot for exploration and experimentation in learning where everyone should be welcome and know that they have access.

Most makerspaces are not designed with accessibility in mind. School librarians rarely get to build their library or makerspace from the ground up. Schools can be created to be accessible, but libraries have shelves, tables, doorways, and so many more factors not always geared toward those students with special needs or designed with them in mind. Older libraries can have heavy furniture and tall shelves, items that are decades old and not accessible nor adaptable. Maneuvering within these

spaces and around the obstacles they contain can be difficult, and when a school librarian wants to implement a makerspace their library’s layout and furnishings can add another level of challenge (Anderson and Phillips 2022).

Our Research

My coauthor Ana Dubnjakovic and I wanted to look at accessibility in school library makerspaces (Moorefield-Lang and Dubnjakovic 2020). The data collection for this study took place right before the Covid-19 pandemic, and the writing of the full research piece occurred during the pandemic. Early in the decision-making process, we decided to focus on the motivation behind creating and operating makerspaces in school library settings. When running school library makerspaces, school librarians need drive and considerable time and financial investment to keep them going. We wanted to find out why school librarians are interested in doing so while also investing the extra work to make makerspaces accessible. For our full research piece, Icek Ajzen’s Theory of Planned Behavior (TPB) seemed like a logical theoretical perspective.

In our study, we used TPB to gauge how school librarians’ attitudes toward accessible makerspaces, their thoughts about the attitudes of others (such as administrators or

parents), and their own perceived control over the project/space affected their motivation to create accessible makerspaces. Ana and I found that all those listed items are important motivators. It was a little surprising that control over the project/space was by far the most important predictor that accounted for accessibility planning in a makerspace. Having control over the library and makerspace was the biggest predictor for successfully making the school library maker area accessible for the community.

We also found it interesting that the thoughts of others had a negative impact on motivation. In other words, considering what administrators or parents might think about the accessibility of the makerspace had a negative impact on librarians’ drive to invest energy into these projects. This finding is not too surprising when we look at recent situations with book banning, intellectual freedom issues, and, in some cases, lack of administrative/parent support.

Ana and I were also very interested in how school librarians made their maker learning spaces accessible. We are aware that accessibility might not be attainable to all learners in all spaces, and we wanted to know what kinds of accessible activities took place in those spaces. After all, school librarians are amazing, and it is possible some were able to modify spaces and introduce accessible

activities even if the makerspace was not yet fully accessible.

To create an inclusive environment for the students, school librarians used a wide range of low-tech tools and ideas, such as building blocks and board games, as well as high-tech tools like green screens, coding exercises, 3-D printing, and engineering competitions. For further accessibility, librarians altered signage in their makerspaces, labeling on their supplies, and language in maker directions. Librarians sought out adaptable furniture, opened space up for easy navigation, and made their library and maker areas easier to traverse.

Control over the makerspace was extremely important in the drive toward accessibility. That finding made Ana and me wonder what would make school librarians feel more empowered? If negative opinions or influences from parents or administrators existed, what would be good methods for countering those perspectives? Should conversations about makerspaces and accessibility happen in a more-structured way? Should they happen earlier in the planning or implementation of a maker learning space? Should an effort to outline responsibilities and expectations be made? Currently, for us, these are questions that remain unanswered. We hope to pursue them further in future research. We hope that more researchers will join us and provide some of their own answers, too.

Implications for Practice

You may have a school that already has a makerspace. You may be moving into a new school and planning to start a maker program. Regardless of where you might be in this maker journey, the following is a list of ideas to use in your makerspace wherever it may be.

- Have you considered online maker options available to students and other patrons from the comfort of their homes if Internet access is available? Options could include creation tools in music, video, storytelling, presentation, visual art, and so much more.
- Are all areas of your library/ makerspace available and accessible to your students and other patrons?
- Is your furniture adaptable (as described by Anderson and Phillips 2022)?
- Do you have signage and instructions available in a variety of formats? If not, some ideas might be video instructions, Braille signage, images beside the names of your supplies, verbiage in a variety of languages.
- Is your makerspace walker- and wheelchair-friendly? You might not have full control of the layout of your entire library but look at where items are placed on shelves, if tables come in a variety of heights, and if plugs are easy to access for technology.
- Are aisles wide and clear of obstruction? You may have only so much control of your space if shelves are tall or if tables are heavy, but do what you can to make the area accessible for all.
- Can light and sound triggers be reduced or eliminated for those on the spectrum?
- Is it possible to have open or unlimited makerspace time for your patrons, so making is less stressful and anxiety is minimized (Anderson and Phillips 2022)?

These are just a few ideas to ponder as you create or modify a makerspace. Share your accessibility successes and challenges with your peers. Get feedback from your librarian and educator networks about what works well in their libraries, classrooms, and maker learning areas. How will you move forward intentionally and offer a maker learning space that addresses the needs of all your learners and other stakeholders?



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Works Cited:

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