

4 Strategies to Find Your Makerspace “Why” and 3 Reasons You Should

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I want to start a makerspace. Where do I begin?

Ask any experienced maker educator this question, and you'll get a variation of the same response — it depends.

A makerspace is not like a reading program or remedial math software where each school gets the same supplies and curriculum regardless of its student population. A makerspace is a response to a need, and each school has different needs. So even though you may see schools with the same products, they may have purchased them for very different reasons. They may use them in very different ways, with very different intentions.

From the outside looking in, it can be complicated to see the “why” behind each school’s makerspace. From blogs, tweets, and Instagram stories, we get a snapshot into what’s in their makerspace and how they run it, but what we don’t see is *why* they chose to add so many 3D printers or *why* their makerspace is dominated by low-tech materials.

Building a makerspace is a journey, and like any journey, you need to know your destination in order to plan your route. In this case, your destination is your “why.”

VISION		
<p>hey Middle School Learning Commons & Makerspace is both a place and a culture. As a flexible space, it serves as both an classroom instructional space, an environment to grow academically and socially, and a space for students to participate in opportunities. The Makerspace aims to provide all students and staff an equal opportunity to <i>apply</i> both the skills and kned through the Derry Township curriculum, as well as develop problem-solving skills, social skills, and confidence. The Lear is & Makerspace is a place where all students and teachers can collaborate through participatory, personalized learning an effective creators and consumers of information.</p>		
GOALS	EXPECTATIONS	EVALUATION
<p>de students an onment that promotes ry by providing up-to-date, ant print and electronic rials.</p> <p>de ALL students the rtunity to build upon their ledge, skills, and interests dicating a space in the y where students can e.</p> <p>borate with core and re teachers to co-teach nation literacy skills and de enrichment and sion lessons through r Monday sessions : from a teacher-led rspace to a student-led rspace.</p>	<ul style="list-style-type: none"> Teachers will view the Library Learning Commons and the Makerspace as extensions of their classrooms and will have open access to utilize the space and resources within them. Students will have the opportunity to create and pursue interests without fear of judgment. It is an expectation that students will encounter many failures. 	<ul style="list-style-type: none"> The Library Learning Commons and Mak will be evaluated by participate and usaj the facility. Statistic be gathered on the following: <ul style="list-style-type: none"> Student usage Library Learnin Commons Student usage Makerspace Teacher usage instructional sp Teacher and st participation in Monday Circulation stat print materials Usage statisti: electronic reso Surveys will be implem to both staff and stud gather their feedback facility.
	OPPORTUNITIES	
	<ul style="list-style-type: none"> Students will have the opportunity to engage in various components of STEAM education beyond that of which is provided in the classroom. Students will have the opportunity to learn from their teachers outside the context of the written curriculum. Teachers will have the opportunity to assign projects and/or assignments that require creation components provided that now all students have access to these materials. Students will have the opportunity to pursue online/blended course opportunities in an academic environment, rich with resources to support their learning. 	

All right, but how do I find my “why”?

If someone asked you why you’re embarking on this makerspace journey, how would you respond? Whatever that answer is — that’s your vision. It’s that 50,000-foot, warm-fuzzy-feeling, impassioned explanation of why kids need this.

When I first began our makerspace in 2015, I worked with my director of instructional technology, director of infrastructure technology, and assistant superintendent to create a vision plan. Was it perfect? No. Did I meet every goal? No. But even though

we veered from the original route a few times, we still had a clear destination in mind and were able to reroute accordingly.

Strategies to Help You Find Your “Why”

If you’re uncertain of how to identify your own makerspace goals, here are a few strategies to explore.

1. Look Closely at What the Data Tells You

While standardized assessments can make teachers cringe, it is likely that no matter where you teach, you have access to this type of information about your students. It’s also likely that you have this type of data from multiple tests that gather different measures of student growth. For better or worse, we are living in a time where standardized assessment scores are the motivator behind funding, staffing, and a lot of other changes.

I am currently a senior maker fellow at an educational makerspace that partners with schools to develop maker education and project-based learning programs. One of our partner schools has decided to focus their maker programming around the sciences, based on their results from the Pennsylvania System of School Assessment exams. For this particular elementary school, their growth in the sciences was not on par with improvement levels in other tested subjects. Therefore, they wanted to offer different types of learning opportunities in the sciences — this was their “why.”

Odds are that certain departments, grade levels, or individual teachers in your school are choosing to focus on a particular topic or unit in response to data from standardized assessments. Focusing your makerspace goals around the curricular needs in the classroom can be a great way to help others see the educational benefit of a school makerspace.

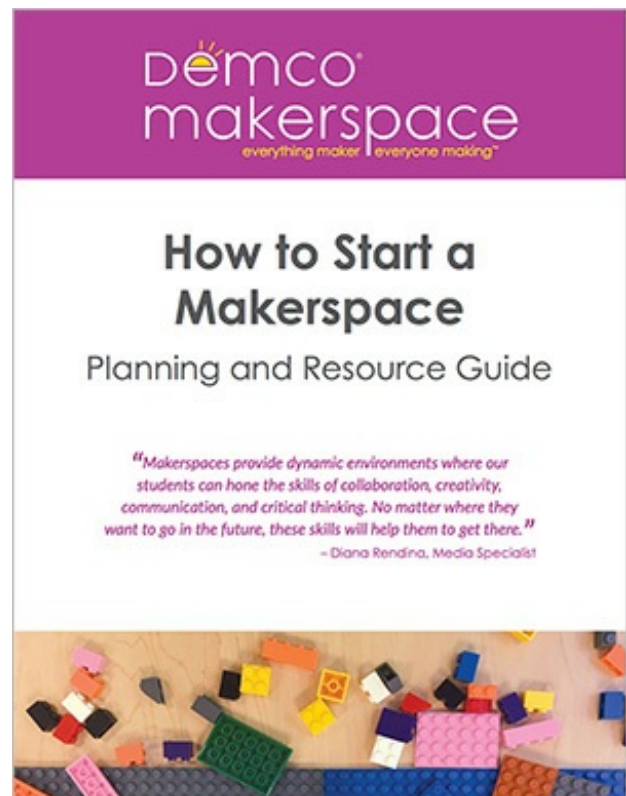
Keep in mind that standardized assessment data isn’t the only type of data available. I’m a big fan of [Victoria Bernhardt’s Multiple Measures of Data](#), which includes looking at demographic, perceptual, school process, and student learning data. I would encourage you to explore all of these.

2. Think About How You Can Support State and National Initiatives

You know the drill. The state or federal government releases a new initiative or measure that impacts schools, and schools immediately scramble in response. In 2016, President Obama announced the Computer Science for All initiative. Many of my colleagues were excited about this initiative, but we also realized we didn't currently offer any computer science instruction beyond a handful of teachers participating in Hour of Code each year. In response to this, I began purchasing more products that incorporated computer science and offered more programs that exposed students to various types of coding.

More recently, Pennsylvania adopted the Curriculum Framework for Global Competence. This framework calls on students to "share ideas, problem-solve, communicate, and interact across cultures." A makerspace could absolutely respond to that call to action, and the global competence framework could ultimately be your focus.

I'm not encouraging you to jump on every bandwagon that comes (and goes). However, by aligning your makerspace goals with goals or other priorities in your school or district, you can not only gain focus, but also some leverage.



Need Help Getting Started?

Download Demco's *How to Start a Makerspace Guide* for tips on funding, getting buy-in, low-tech and high-tech tools and more.

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3. Look for the Gaps

Identifying the gaps that exist in your school is somewhat related to the first two strategies. However, beyond just academic and initiative gaps are gaps in fulfilling students' interests and skills, as well as gaps in community needs.

Many schools have cut programs such as music, art, industrial arts, and family and consumer science. But that doesn't mean kids don't need those subjects! When we purchased our first sewing machine for our makerspace, I wasn't surprised when no one knew how to thread it. However, I was shocked when I realized that no one even knew how to properly thread a *needle*. I also had several students who didn't know the difference between a Phillips and a flathead screwdriver.

Consider identifying these skills that are not often explicitly taught in schools anymore. These are the gaps that your makerspace can address to bring equitable access to your students.

When I was a school librarian, I remember meeting with teachers each year to get an idea of the areas I should target when developing or refreshing the collection. Projects changed from year to year, and sometimes the curriculum had been completely overhauled. Since the library was a resource for the entire school community, the collection needed to be reflective of the needs of that community. If my science department told me they added a unit on climate change into their earth science class, I would use my librarian powers to scour the many new resources on that topic that were age and reading level appropriate.

So, while there might not be a gap in the curriculum, there may be a gap in the instructional resources your school has to support that curriculum. Consider your makerspace an instructional resource that can be designed to be supportive of the curriculum.



4. Consider Student Voice

Last but not least is student input. This seems so simple, but getting student input on your makerspace goals can actually be complex. Why? Because students don't know what they don't know. It's going to be next to impossible for a student to indicate interest in sewing or coding if they've never done either of those. If it's possible, hold a "playground" or "petting zoo" type of event where students can experience lots of different technologies and tools. This will give them some context when voicing their preferences for the makerspace.

You'll also want to survey students on topics beyond just products. Simply knowing the things they like to do on the weekends can help drive your makerspace goals. For example, while the market is still pretty small, the number of game design products being released is growing. While you may not have thought to list that as a makerspace item to provide feedback on, simply knowing that many of your students play games can steer you in another direction.

But why do I need a "why"? Aren't makerspaces flexible?

Of course makerspaces are flexible. In fact, your “why” might change as the needs of your school change. Here are some reasons why having a clearly identified “why” can help you in your makerspace journey.

1. Purchasing

If you’ve ever gone grocery shopping without a list or a menu for the week, you know it can be disastrous. You can come home with all the staples and none of the spices, which leaves you with flavorless dinners. Or you can come home with the base of a meal, but nothing to prepare as a side. The product offerings for school makerspaces are continually growing, and without some direction you can find yourself wandering the digital aisles adding shiny new things to your cart. When your order arrives, you might realize you have eight different robots that support block-based coding. This is great if robotics and coding are your makerspace goals, but if you were hoping for a more comprehensive approach, you may have missed the mark.

2. Helping Others “Get It”

Having clear makerspace goals will help others understand the purpose of your space. While you may be sold on the idea of constructivist learning, your colleagues may not see the merit if they don’t see how it connects to other learning goals.

“Because lots of other schools are doing it” isn’t a good answer. Being able to articulate why you are dedicating time, funds, and energy into this new environment is going to be critical when discussing the makerspace with teachers, parents, administrators, and other stakeholders.

3. Measuring Success

No, I’m not saying you should subject your students to a test! There are many ways to measure growth and impact without bubble sheets. Once you determine your focus, you can also create goals for your makerspace. They can (but don’t have to) be related to each other. For example, they may look like this:

Focus: Coding and robotics

Goal: Do more collaborative lessons with the math/computer science department

You may also have goals unrelated to your focus, such as increasing student usage of the library. Without a clear destination, it’s hard to know if you’re making progress in getting there. Developing goals helps define that destination.

When developing your goals, make sure they're SMART: specific, measurable, attainable, relevant, and time-based. Clear goals will help you show your stakeholders that the makerspace is making an impact, and they will also help you measure whether you're on the right track to achieving your vision.

Once you've identified your focus, talk about it! In some ways, this focus becomes your brand. You want teachers, parents, administrators, and community members to know that this is why your makerspace exists. This way, if and when you need their support (financially or with staffing, scheduling, or volunteering), they already know why the space exists and how it's impacting student learning.

So, what's your why?

Author

Heather Lister is an international speaker and author on the topics of makerspaces, school librarianship, and project-based learning. With credentials in school librarianship, mathematics, instructional technology, and school administration, Heather brings a unique and practical perspective to the world of maker education. Heather is the owner of [Construct Learning](#) and is currently serving as a senior maker fellow with the [Foundry Makerspace](#) in Harrisburg, Pennsylvania. Heather is the president-elect of the ISTE Librarians Network. Follow her [@heathermlister](#) or check out her blog at www.heatherlister.com.

