

Maker Corps Case Studies: Update on 2014 Sites

By Alice Anderson, Science Museum of Minnesota
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Introduction

In 2014 we profiled three Maker Corps sites that represented different settings, audiences and regions around the country, to better understand how Maker Corps helps organizations achieve their goals for maker education. Now, two years later, these organizations continue to explore how making education can help them achieve their institutional and programmatic goals.

All three organizations agreed that participating in Maker Corps helped them to gain skills in effective facilitation, gather ideas for projects, and connect with other maker educators. While they felt they had more or less graduated from the program, they emphasized the program's value for organizations newer to making or without a strong local community of other maker educators.

REM Learning Center, Miami, FL

<http://www.remlearningcenter.com/>

Play Make Share program: <http://www.remlearningcenter.com/playmakeshare/>

Dr. Ryan Moreno, STEM Educator and Dr. Jacqueline Moreno, Administrator/ Developmental Psychologist
Years in Maker Corps: 2013, 2014, 2015

REM Learning Center participated in Maker Corps for three years, in that time giving the opportunity to their teachers as a time to deepen their practice and experiment with new tools and technologies in the Play Make Share room. Ryan reflected, "The majority of what we were able to get out of it is catalyzing this whole idea of making, and showing others examples. Since it's not so widespread, at least in our neck of the woods, it's not like we had a community that we could reach out to and meet. This allowed us to have on a national stage, some other community leaders that we could use as examples and speak to."

Currently, their 2014 Maker Corps Member, Barbara, is the lead Kindergarten/1st Grade teacher. She has been able to consistently bring making projects to her students both in the classroom and the studio, as well as be a strong mentor for other teachers. During the school year, children visit the Play Make Share studio twice a week for an hour (in the summer, they can increase that to three times a week). One change in their practice since 2014 has been to be more intentional about supporting children to plan out their creations. Jacqueline explained, "They're drawing their mental plan in their head and they're trying to put it on paper from the beginning and then they continue that process every single time until the end of the year, you can see that they have these elaborate, wonderful drawings that really capture it better." This fits with their focus on helping children develop their critical and creative thinking skills.

While REM has grown its capacity to support maker education, the city of Miami still has limited opportunities for youth. Ryan and Jacqueline also spoke about the small number of early childhood educators who have invested in maker education, and continue to look for ways to build that community nationally.

Science Museum of Minnesota, St. Paul, MN

<https://www.smm.org/play>

Play. Tinker. Make. program: <http://shimmrglitr.tumblr.com/>

Keith Braafladt, Director of Learning Technologies

Years in Maker Corps: 2013, 2014, 2015

Maker education is embedded in many programs at the Science Museum of Minnesota, but most acutely in the Play. Tinker. Make. program that activates the museum floor every Saturday afternoon.

The PTM program is centered on engagement. PTM activities are facilitated experiences that are fun, experimental and create opportunities for open-ended creative exploration. While all activities have a basis in science, the foundation of the interaction between the visitor and PTM volunteers is the experience, not the science.

Maker Corps was an important program for SMM to participate in because of the national recognition of the type of education Keith has spent most of his career advocating for. It also gave him an opportunity to focus on developing a strong program model for supporting the learning that Maker Corps members do. Keith explained, “Our model was you had practical objectives, you had to work in this program that we had and that was R&D [research and development] work. You just had to do it, you had to be present and you had to do that. You had to develop new ideas for the project. There was no pressure to either succeed or fail in those but we’ll work on them and we already know within our R&D group here how to coach and support and help ideas more forward. We know how to be critical and that was stuff that we shared with the makers, so they were learning a lot in finding and developing ideas. And I helped form the directions that they took.” As part of that model, Keith gave the Maker Corps Members funds to develop an independent project, which gave them practical experience with managing a project budget, sourcing materials, prototyping an activity, and documenting the final iteration.

Keith and his team has continued to prioritize documentation of their activities and facilitation strategies. They regularly post on sites such as Snapguide¹ and Vimeo² and are active in the ASTC Community of Practice on Making and Tinkering³. They have started to work more intentionally with their volunteers to identify learning goals for their activities, learning goals for themselves as facilitators, and select language that feels appropriate for the activity (Keith tends to use the words

¹ <https://snapguide.com/learning-technologies/>

² <https://vimeo.com/learningtech>

³ <http://www.astc.org/professional-development/communities-of-practice/current-communities-of-practice/>

create and *tinker* more than making). Keith plans to participate in Maker Corps in 2017, thanks in part to a donation to the Learning Technologies Center that will help him cover the costs of participating. Keith is proud to say the museum has hired almost all of their former Maker Corps Members on as staff. He continues to work on finding opportunities at the museum for people who are interested in facilitating playful learning experiences, and to find a career path within the museum.

Millvale Community Library, Millvale, PA

<http://millvalelibrary.org/>

Millvale Makers program: <https://www.instagram.com/millvalemakers/>

Nora Peters, Maker Program Director

Years in Maker Corps: 2014, 2015, 2016

In the summer of 2014, the Millvale Community Library had just opened its doors. In the past two years the library has grown in many ways. Maker education has remained a big focus for the library, and recently Nora Peters, one of the 2014 Maker Corps Members, became the library's first Maker Program Director. After her Maker Corps summer, Nora stayed in Pittsburgh working various jobs and returned as the only Maker Corps Member at the library in 2015. During the 2015-16 school year, Nora continued to work on maker programming for one day a week, and then in summer 2016, funding was secured to create a full-time position for her as the Maker Program Director.

Nora was pleased with the programming that she was able to create and offer this summer at the library. She explained, "This summer was a step in the direction towards more in-depth programming. We had smaller groups, we had more focused themes, and we had them register, which was huge, so we knew exactly who was coming every day, for the most part. ...So that allowed me to do more specific planning, we went on field trips that related directly to the projects we were working on, I brought in people in the community to talk to them about how this translates into this job, how this translates into college, how this translates into the future. And that seemed to go over really well."

Nora appreciates the community of other maker educators that Maker Ed facilitates and the resources she had access to as a Maker Corps Member, such as the online hangouts and project ideas. She has especially appreciated meeting other educators in person. The greater Pittsburgh area has several organizations that have participated in Maker Corps and Nora has used that community as a resource for thinking through their programming model.

Securing sustained funding for the library and its programs has been a slow process, but Nora is hopeful that the establishment of her position will lead to more programming, visibility and opportunities. She explained, "... Program sustainability is really difficult, especially in a program, or an organization as small as we are. I don't plan on leaving the library any time soon. I couldn't say that my first summer, I really didn't know what I was going to be doing, but I feel like I've found a little niche of Pittsburgh here that I really connect with. I think that thinking about sustainability, not only in numbers of kids reached or interest of the community, but also just in every way, really. I think the fear with a lot of library programming is that it's not gonna stick." She is considering applying for the Maker VISTA program as a strategy for growing their capacity.