OPEN PORTFOLIOS AT DIGITAL HARBOR FOUNDATION

Kylie Peppler, Indiana University
Anna Keune, Indiana University
Stephanie Chang, Maker Ed

In collaboration with National Working Group members: **Daragh Byrne**, **Shelley Goldman**, and **Jessica Ross**

Maker Ed

Open Portfolio Project

This is the first of three cases of makerspaces using open portfolios. By makerspaces, we mean maker-centered, youth-oriented settings that focus on educational programming. The cases are deeper dives into the key sites of Open Portfolio Project (OPP) Phase 2 work and how each of the sites develops and maintains their portfolio assessment systems.
These briefs also examine how each site balances tensions between assumptions about traditional and open portfolios.

This research brief focuses on the use of portfolios in an out-of-school makerspace and the ways that it showcases high-quality projects online. Further, this case illustrates how an out-of-school space can help promote consistent documentation of youth projects, even within an environment where participation is non-compulsory. Here we highlight the history of this site's portfolio system and practice, the challenges they faced to ensure that capturing and sharing of youth work is an authentic and meaningful activity, and the important role that its youth steering committee played in guiding the space's decisions around portfolio tools and practices.

Site Overview

Located in a former parks and recreation center, the Digital Harbor Foundation (DHF) is an out-of-school makerspace located in the Inner Harbor of Baltimore, Maryland. Opened in fall of 2013, DHF offers hands-on maker programs for youth of all ages. Apart from semester-long entry-level foundational programs (Figure 1) and more advanced and open-ended courses, DHF also offers youth summer camps to explore digital filmmaking or 3D printing. Over the summer, some of the youth are employed at the makerspace, staffing the 3D printer workstation or designing projects.

At the time of this research, DHF's programs engaged 66 youth participants from grades 6 to 11. Of these, 35% were female and 65% were male. Among the youth, 54.5% were Black, 35% were White, 4.5% were Latino(a), 3% were Asian, and 3% were of other racial or ethnic backgrounds. The physical space layout and arrangement of the out-of-school setting is in constant movement, whether this means rearranging mobile tables and tool libraries to meet the needs of diverse workshops and audiences or iteratively designing customizable furniture and workstations to suit emergent youth projects and to provide one-to-one experiences with new fabrication technologies.

Maker Ed

Figure 1: Youth working on their digital filmmaking project during a Maker Foundation program at Digital Harbor Foundation.

DHF began facilitating makerspace-wide digital youth portfolios in early 2014, iteratively refining their process and use of tools to accommodate emergent challenges and youth needs. Moving from Evernote, an online journaling tool for creating and sharing notes, to Tackk (no longer functional), an online platform with drag-and-drop, auto-saving, and social media commenting features, DHF most recently moved to a WordPress-based custom portfolio system. This exploration of available tools across three years made it possible for DHF to pilot a range of tools and practices and to build rich experiences for youth. To capture and draw on these youth experiences, the space implemented a youth steering committee that helped align iterations of the portfolio practices to youth interests and needs.

Refining the Out-of-School Portfolio Approach

The WordPress portfolio system includes an individual portfolio page (Figure 2, left) with a separate URL for every young maker at DHF. Because the websites can be viewed publicly, youth are able to use their portfolios beyond the makerspace, sharing their URLs with anyone they choose, including colleges, prospective employers, and high schools (some of which require portfolios for admissions). Further, the portfolio system includes an umbrella page as a launching site to the youth individual pages (Figure 2, right). Here, the posts of every youth portfolio are displayed in a grid-like layout, with up to 12 portfolios per page, in reverse chronological order (the most recently updated portfolios are featured first). To help scaffold portfolio documentation, DHF's portfolio system utilizes an elaborate backend platform that features page templates, tips for effective portfolio reflections, and links to adult portfolios for youth to use as inspiration.

Maker Ed

Figure 2: Portfolio of a youth (left) and the youth. digitalharbor.org landing page (right), in September 2016.
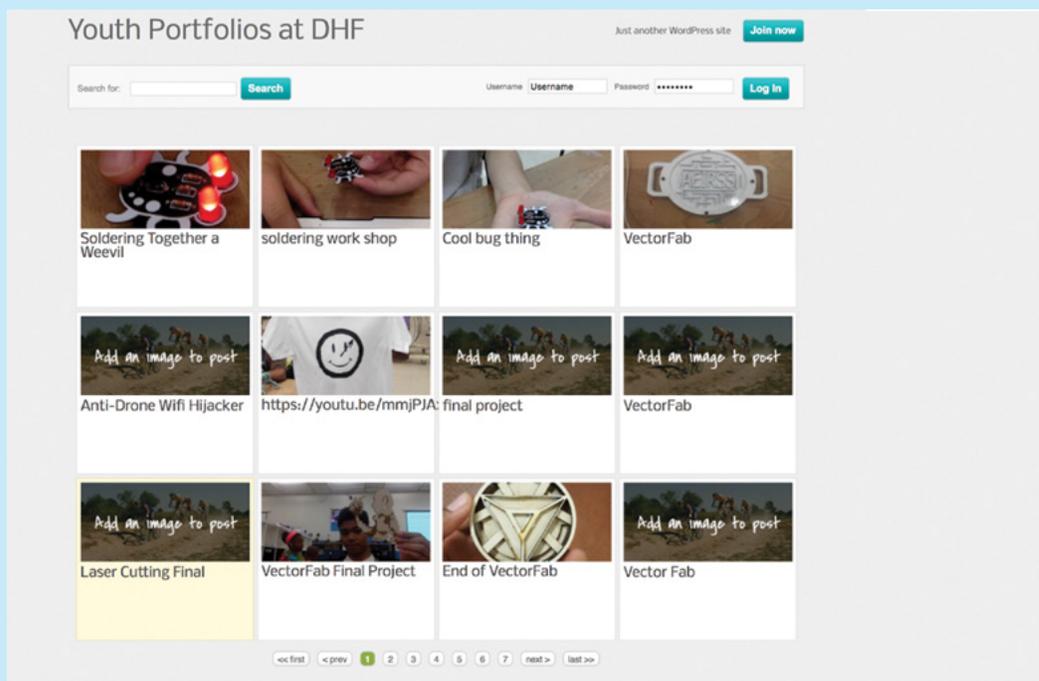
A youth steering committee plays an integral part in the iterations of DHF's portfolio design. Consisting of 11 youth who meet once a month, the committee discusses programs and practices at the space with DHF staff. This fosters leadership by making youth part of decision-making processes. At the time of this writing, the youth who were part of the committee were experienced in past and present portfolio iterations and could comment on the usefulness and value of the various practices and tools.

Maker Ed

Three Considerations for Successful Portfolio Implementation

In the following paragraphs, we highlight three aspects that makerspace staff and youth highlighted as particularly important for successful portfolio implementation in an out-of-school makerspace: balancing community building with individual portfolio practice, incorporating material design into portfolio practice, and motivating youth to engage in consistent documentation over time.

1. BALANCE INDIVIDUAL DOCUMENTATION WITH COMMUNITY BUILDING.

Where traditional portfolios are focused on presenting the knowledge and skills of individuals, within out-of-school learning environments, it's important to foster a community where participants are aware of each other's projects and can draw on a shared pool of skills and interests. The creation of the shared WordPress website, one that highlights work done by all in the space, as well as providing opportunities to customize one's own areas of the site, is one of the first attempts to balance these needs.

To de-emphasize competition about whose work is pictured on the landing page and how often, the main page of the WordPress site features thumbnails of projects and titles but leaves off the names of the youth and the dates of the posts. The thumbnails together show a snapshot of the organizational growth of the makerspace and invite visitors and participants to click through entries and be inspired by the youth projects. Youth in the space are also encouraged by staff to comment and provide feedback on other members' posts.

Combined with individual portfolios, this method represents one way of starting to address tensions of portfolios that focus only on individuals and instead allows the space to situate the individual's role within the wider DHF community. Youth mentioned that the compilation allowed them to get new project ideas: "[It's] pretty nice because you can look through and see what other people have done and get a lot of inspiration." This indicated to the educators that the combined representation of youth portfolios was a practice that should be continued.

2. INCORPORATE MATERIAL AND SPATIAL DESIGN INTO PORTFOLIO PRACTICES.

Capturing maker projects can take time and attention away from the process and flow of making itself, exemplifying the real challenge of capturing work-in-progress. To help facilitate consistent documentation during work, DHF integrates digital with spatial presentation of youth projects to make capturing processes and projects meaningful and fluid. This includes three aspects: (1) integrating documentation through choice of tools and visual documentation, (2) connecting portfolios with showcase preparation, and (3) displaying youth projects in the space for visitors to photograph and share.

Maker Ed

First, while working on their portfolio entries, youth use nearby laptops or tablet computers (owned by DHF) to take pictures, grab screenshots, and write posts. We also observed youth using their own phones to capture videos and images for subsequent uploading. Based on youth suggestions, DHF also started integrating documentation stations into their spatial design by asking youth participants to build these stations. In a subsequent brief, we'll discuss documentation stations.

Second, participation at DHF includes presenting work at showcases that are often open to the public, including potential funders. Before a presentation, a showcase, or other public speaking event, youth revisit their portfolios. Their portfolios spark memories, recalling details to bring up during showcases. Sandra, age 16, recalled: "They prepare you with the portfolio. They are going through with you about what the problems are, already knowing them and having the answer in your brain, the steps, and things like that…. Now I'm just so used to presenting that I can normally just think of [things] on the spot." Remembering details about a project can be challenging, especially when working on several projects at once.

Third, in addition to portfolios, DHF provides youth with opportunities and physical space to share their work, inside and beyond the walls of the makerspace, thus supporting youth in the design of personally meaningful projects over a longer duration. Displaying projects inside the makerspace in predominant locations allowed visitors to photograph and share on social media, accompanied by hashtags that link back to the makerspace (e.g., sharing photographs of events with projects in background, creating collages of snapshots that show projects and spaces, sharing selfies with the projects in the background).

At DHF, public-facing opportunities for sharing youth work include personal portfolios, local news media venues, and even nationwide panels. Some of these opportunities reach social media channels, and the information take on a mobility beyond the individual simply capturing and sharing his or her work. Combined, the diversity of possible documentation avenues through available tools, integrating documentation with presentations and public showcase events, and displaying projects in the space decentered portfolio creation from being a discrete practice that is performed at particular and predetermined moments by the project designer alone to instead integrated documentation as something that has new immediate use (e.g., for a showcase).

3. IDENTIFY YOUTH MOTIVATIONS FOR CAPTURING AND SHARING IN AN OUT-OF-SCHOOL SETTING.

Part of the inherent aspects of portfolios is that the value of capturing work in progress can often only be seen much later (e.g., when a portfolio is needed for a job or college application). To anticipate this, DHF staff originally asked youth to document and reflect after every session, introducing an administratively driven process that foregrounded consistency across individuals in terms of the amount of posts and content in relation to course progress. Staff intended to give feedback to each youth member but quickly realized that individualized feedback was too time consuming to be feasible.

Maker Ed

In evolving their practices, the staff has created a spreadsheet that graphs upcoming blog posts and allows them to track entries from every youth. Staff then connect with individual youth when they notice that someone is falling far behind on documenting their work in progress. "Catch-Up Friday," a time set aside for pulling together fragments of documentation (e.g., screenshots, photographs, etc.) into a process narrative, helps communicate to members that documentation practices are of community value for the space. At the time of this writing, 66 youth have a mean of 10.35 posts (median 11), and there's a large variation in the number of posts per youth (minimum of 0 and maximum of 33 posts).

Further, DHF recognizes the need for administrators to seek and voice youth goals and purposes for creating and facilitating portfolio creation throughout the process of implementation. Without clearly articulated purposes and motivation, a makerspace cannot effectively communicate the value of a portfolio process to its members. To assist in this process, DHF regularly seeks the input of its youth steering committee by discussing challenges around consistently capturing work.

Some of the youth have suggested that it's motivating to receive comments as well as track statistics about how their posts perform (e.g., number of views, number of likes, and who has viewed the page). DHF has implemented some of these practices, suggesting that visitors to the makerspace peruse the online portfolios. This has led to the educators observing a piqued youth interest around portfolios, leading to a spike in the sharing of posts. DHF is currently evaluating ways to further integrate statistics data without compromising youth online safety.

To encourage more polished portfolio posts, DHF now encourages its members to collect pieces of documentation (i.e., videos, sketches, images) throughout the week and then draft a longer project post at the end of the week. Despite their experience working with portfolios and refining their process over the years, DHF considers their approach as a practice on training wheels, steadily progressing through ongoing iteration. Moving forward, plans include taking a deeper dive into the motivations of youth to capture their processes of making and learning, including how to balance long-term values and the goals of portfolios (e.g., reflecting on their personal maker practice or supplementing a college, job, or high school application) with short-term values for capturing and sharing work-in-progress (e.g., acknowledging each other's work through comments and customization).

Summary

Digital Harbor Foundation's portfolio system and practice demonstrate iterative and persistent integration of portfolios within an out-of-school makerspace. In developing the implementation of a portfolio system and practice that captures high-quality maker projects by individual youth participants, as well as their role within the developing makerspace community, DHF encountered challenges that led the staff to continue refining and improving portfolio practices to better align with youth interests and needs. These challenges ranged from identifying a portfolio tool and balancing levels of customization to grappling with how to scaffold open portfolio creation as an integrated practice for its community of members. Giving youth an official and active voice in the decision-making process is helping DHF identify portfolio practices that its youth find authentic and meaningful in the long-term.

Maker Ed