

Learn to Code: It's a Life Skill

By Jessica Klein

I often talk about how the Web is a handcrafted community that can only represent the world that we live in when individuals build webpages. In January 2012 I gave a workshop on hacking the Web to YALSA members at the ALA Midwinter Meeting in Dallas. There I talked about Mozilla Webmaker (<https://webmaker.org/>), gave an introduction to HTML and CSS and advocated for learning how to understand, contribute, and code the Web in order to protect it. Through creation of content and pages on the Web, you can make your mark and be part of the growing global conversation that happens in this space. I was prepared to write this article in the same mind-set—but I feel compelled to tell you a personal story instead and how it changed both my views on coding and life.

Hurricane Sandy

In November 2012, Hurricane Sandy hit New York and devastated—and in many ways destroyed—the community that I grew up in, Rockaway Beach, New York. The day after the storm, I went to my neighborhood and saw that people could not communicate with each other or the world outside Rockaway. Imagine no cell phone usage, no Internet, no power. When I returned home I built a small website, rockawayhelp.com, to give people the information they needed and to create a web of support for families who could not get in touch with their families who were in one way or the other trapped in Rockaway due to the storm. It was this act of webmaking that launched my participation in protecting and rebuilding my physical community. It opened my eyes to how webmaking and understanding what's "under the hood" of the Web can help build and strengthen community.

The work that I do in the open source community and the open educational resource community as a software designer

prepared me to take on this small bit of leadership. [Rockawayhelp.com](http://rockawayhelp.com) allowed me and my team to coordinate and mobilize volunteers as well as give up-to-date, hyperlocal information on how the people and places in Rockaway were doing after the hurricane. Rockaway Help (this group of volunteers and locals that formed via the website) had an active presence on the physical streets of our community: going into houses, cleaning out basements, connecting people who didn't know where their family members were, working with the veterans at Team Rubicon (An organization of military veterans who deploy as first responders in natural disasters—<http://teamrubiconusa.org/>) and the software developers at Palantir. Along with some friends I made via Twitter during the night of the hurricane (who, like

me, were all extremely worried about our parents who had decided to not evacuate), we created multiple social media channels. To this day we continue to have active conversations on Facebook and Twitter.

Some of the lessons we learned during the hurricane are the same lessons that you learn *every day at libraries* or in the open educational resource community. We learned that when you work in the open (more about that in a moment) you can create community. When I was sitting at home worrying if my parents survived the hurricane, I went online and connected with friends and other Rockaway residents. They too were watching the local news and having panic attacks about their homes and families. We shared information, brainstormed ideas, and gave each other the confidence to venture

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back into our community when the storm ended. I was scared, but knew that I had an online community to support me.

This is something that I learned while working at Mozilla: *if you work in the open, you can share information and connect to a like-minded community.* We do this daily with our webmaker activities, starting with Hackasaurus two years ago.

The Power of Webmaking

Hackasaurus is a suite of tools and curriculum that make it easy for anyone to learn webmaking through remixing HTML and CSS in places that you are already inhabiting on the Web. You can currently explore these offerings by visiting webmaker.org. Hackasaurus was initially launched by two radical librarians, Atul Varma and myself, and then expanded into this massive OER (Open Education Resource) that people immediately responded to. (Now this content is hosted on webmaker.org.) Why did they respond to it? Because we blogged, shared free resources, and created content as a group—failing, iterating, and improving publicly.

How does this connect to libraries? Many youth have their only out-of-school exposure to the Internet at the library, so instead of having a consumption-level relationship with content on the Web, libraries have the opportunity to help youth become makers and have agency in shaping this powerful platform.

In a disaster situation like Rockaway, a lot of things needed to be done and I quickly realized that I was not able to do it all. For the website effort, we leveraged the digital strategy agency Blue State Digital who kindly volunteered with us and helped us to set up a database, an effort led by Matt Kelley. Additionally, we had some good bloggers and other volunteers who were on the ground and could give us up-to-the-minute info

to communicate out. And when we got those volunteers, we quickly learned that it was going to be very difficult to efficiently organize 1000-plus people in one day, so we partnered with Team Rubicon who had systems in place and an established plan. This is common in media making and coding: you start a project and then get a collaborator (or collaborators) to take on parts to take your work up a level.

Doing software design, I usually throw out an idea, test it with various users, figure out what parts of it work and what parts don't work, and then build on the idea to make a new prototype. It's messy, but it works because you get your concept out there in the hands of real users. We were constantly doing this at Rockawayhelp. We really had never dealt with disaster relief before, so we had to be comfortable with trying things out, failing a little, and building more efficient ways of doing things.

An example of this was that we first found ourselves standing in front of the local church, collecting addresses for people who needed help and then assigning them to crews of volunteers. We quickly learned that this wasn't the most efficient way to organize our efforts, because we were too few people to get everything done—so we streamlined the system by creating forms through the website.

We found that maintaining involvement from volunteers was a challenge, so we designed a badge system using the Mozilla Open Badges—openbadges.org—infrastructure. Badges allowed us to recognize those who were already involved and acknowledge expertise. Expertise during this emergency response could be anything from being a documentarian to really knowing how to shovel muck out of a garage. Also, creating a system for motivation, tracking progress and expertise is simply practical in that it helps match volunteers with a certain

skill or expertise with those that need it the most.

More recently, we hosted a bunch of hack jams in conjunction with the National Day of Civic Hacking, where these were sessions not run by engineers, but rather by designers and technology-minded folks and local community members. The goal of these events was to crowdsource community during the rebuilding process. Initially community members came up with a few distinct areas to focus their work: emergency response and prep, rebuilding, maintaining community integrity, and web literacy.

A Handcrafted Community

The Web is known as being a powerful resource and search tool, but unlike traditional sources, the Web is designed as a handcrafted community—by users for users. So if you aren't making your mark on the Web for your community, someone else is going to do it for you. Here is your opportunity to inform the thinking, literature, and research on your world.

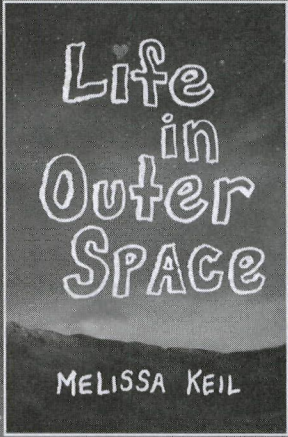
With very little movement, you could literally become an activist—it's powerful. One way to maintain your community integrity is to create content and websites for your community. Rockaway is not just a community that was devastated by a hurricane, but rather a kickass, fun-loving beach town. We can use the Web to show this and not just through social media, but through collaborative webmaking. Many locals wanted to learn how to do just that. In essence they were interested in "rebranding" their community. Given their passion and a specific goal in mind, learning to code was the necessary step to do what they felt that they needed to do. We used the Mozilla X-Ray Goggles, a bookmarklet that enables you to remix

webpages and more advanced users dabbled with Thimble, which is a web-based code editor that is kind of like bumper bowling for people learning to code.

Coding is a life skill. Kind of like swimming, you might not learn it in the classroom, but it's one of those things that you are learning out of school, in libraries, at home, with your friends—it's personal and informative. You can easily get started by tinkering with sites like Mozilla Webmaker or, for more formal instruction, check out www.codeschool.com. Think about places in your library where technology can help to build community or change the way that your community is looked at and encourage blended learning. One way to do this is to hold a thematic hack jam or learn to code club. For example, in the New York

Public Library, teens used the X-Ray Goggles to remix their branch webpage to make it more personal and reflect local interests. Finally, think about ways to maintain community through technology by instituting a badge system through Open Badges.

Creating an online community through code and design can help support communities offline in surprising ways. Learning can start in community spaces like libraries or in the middle of the night of a hurricane. Webmaking is personal—it's handcrafted and provides you with a canvas to share your very local story with a global community. Learning to code is a very small action that you can take that will ultimately transform your relationship with the Web from consumption to civic engagement. **YALS**



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