



Making Maker Spaces Work for Youth – Key Takeaways

Two hours north of Silicon Valley, there's a community college leading a groundbreaking partnership to bring more youth into contact with the tools and skills that make California one of the world's strongest innovation economies. It's called Sierra College, and two and a half years ago they partnered with a private maker space in Sacramento called HackerLab to share resources and offer students discounted membership rates. With over 600 members and upwards of 6,000 individuals served every year, the HackerLab/Sierra College effort is a shining example of how maker communities can partner with education institutions to expand the demographic of makers. It exposes students to hands-on maker experiences that fortify their STEM education, and teaches them skills like CNC, laser cutting and supply chain development. In this webinar, staff from both organizations explained how they're creating the next generation of urban manufacturers in the Sacramento area — and why the California Community Colleges system put them in charge of a \$17 million grant to inspire similar programs throughout the state.

The community you build is more important than the machines you keep. With no philanthropic funds, investors or loans, HackerLab was created by passionate individuals who built their space to fulfill what they saw as a need in the region. They started off by pulling resources from Craigslist, like cheap construction tools, and collecting donated paint and donated furniture. They worked daily to put the space together, and saved up their own funds overtime to buy equipment like their first laser cutter. To keep expanding that initial community — and to make sure the maker space floor represents the demographic of the Sacramento area — they commonly invite outside groups that might not have a direct connection with the tech or manufacturing space, like youth groups and art clubs in the area. Gina Lujan, one of HackerLab's founders, extolled the importance of events like barbecues as a fun way to get people together and build ties off of the shop floor.

Academic institutions can take advantage of the diversity of maker spaces by finding creative ways to weave them into the curricula. Carol Pepper-Kittredge, the statewide Program Director of the CCC Maker Initiative and Director of the Center for Applied Competitive Technologies at Sierra College, says their partnership with HackerLab helps the college's faculty steer free of academic silos. "We want to integrate the process of making into all academics," she says. Professors in fields like entrepreneurship, manufacturing, and making are expanding the spectrum of their work to make sure students get a cross-section of education that dips into various fields. "As a metal worker, you might have never thought of sitting down at a sewing machine, but my gosh you should," says Pepper-Kittredge, noting that the process of making is "not about just one material. This space gives you the opportunity to do that."

You don't need to build a new space on campus to give students access to the maker experience. Sierra College and HackerLab found a perfect partnership that serves their institutional interests while also improving innovation and technology access in the community. The college provides funding to cover HackerLabs' rent and programming fees, while in return it



can now claim an offsite laboratory to its ranks by linking students and faculty with the spaces' tools and administrator expertise. Sierra College students benefit from the model because they get discounted membership rates to HackerLab.

The more outside partnerships you have, the better. Gina Lujan also points to their approach to partnering throughout the community, and how it's helped create workforce pipelines for local businesses whose needs may correspond with maker talent. That's what keeps people coming back to the space. "Utilize talents for the community and be a connector," she says. "So many members stayed with us for years because we connected them with resources and jobs," and now they're seeing self-sustaining entrepreneurs making a living through the lab space.