

Designing Academic Library Makerspaces: Bridging Technology and Community Engagement

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Abstract:

Recognizing the need to connect disparate entrepreneurs and innovators for collaboration, Ohio University embarked on a mission to create a university-industry collective. The objective was to join siloed resources to bring expertise, technology, space, and equipment together to support entrepreneurship on campus and in the community, creating an ecosystem of innovation that spans the entire region. With a long-standing reputation as an inclusive and interdisciplinary space, the Ohio University Libraries proved to be the ideal hub to connect the network of resources. The university redesigned an underutilized library space intended for faculty use to host a central innovation hub. Dimly-lit, small offices and cramped common space were re-envisioned as a bright, collaborative space open to all. Dubbed CoLab, the center provides space for ideation, tinkering, and incubation. CoLab serves as a connector by hosting community speakers and events and maintaining a directory of technology and equipment across campus and the community. Ultimately, the goal is to leverage ideas and resources in support of the business-generating and poverty-alleviating activity vital to the continued success of the University and southeast Ohio. This paper explores the hub and spoke model employed by Ohio University and Athens County as well as the spaces, equipment, and technology contained within the growing innovation ecosystem. The paper also highlights the programming and partnerships that have ignited the spark of community engagement on campus.

Keywords: academic library makerspaces, design, community engagement, library space, making

INTRODUCTION

Located in the central Appalachian region of the United States, Ohio University serves students, faculty, staff, and community members from diverse socio-economic backgrounds. Ohio University was chartered in 1787 and approved by the Ohio General Assembly as a public university in 1804 (History, n.d.). Today, with approximately 34,400 students enrolled at the main campus in Athens, Ohio and 5 regional campuses dispersed throughout central and southeast Ohio, the university is a center of employment, education, innovation, culture, and support as the surrounding communities grapple with poverty, economic disinvestment, and wellness. The university and the community, however, are challenged by academic and administrative silos that inhibit collaboration and resource-sharing to successfully mobilize desires to support innovation on campus and in the surrounding community. Indeed, the area experiences a 30.2% poverty rate and a 14.5% rate of food insecurity, some of the highest figures in the state (Beard, 2019; Report, 2019).

The Ohio University Libraries (OUL) stands at the intersection of campus and community. The first official library was opened in 1818. The collection was housed in one room of the central, multi-purpose building on campus. Initially, the library was only open to students and faculty for one hour per week. As library collections and campus needs changed, the library saw major changes in the 20th century. With the support of funds from Andrew Carnegie, the library was relocated to a dedicated building in 1905. Funding academic libraries was not the norm for Carnegie, who preferred supporting public library systems. However, Carnegie's commitment to access is evident in a condition upon which the money was awarded to Ohio University. Carnegie urged that the university's library must also be open to the public. Though the university library moved two more times over the next century, the commitment to connect the campus with the surrounding community remains (Bicentennial, 2014).

Currently, OUL is a member of the Association of Research Libraries, the Center for Research Libraries, and is a founding member of OhioLINK, a statewide consortium. OUL includes the Vernon R. Alden Library, the Music and Dance Library, and the Southeast Ohio Regional Library Depository. OUL curates approximately 3.5 million print books and over 1 million electronic books. Alden Library is one of the most-visited buildings on campus with nearly 1.5 million visits per year, a number that has seen robust growth in recent years. Library staff provide over 8,000 reference transactions per year and circulate over 100,000 items. As a major hub of academic and creative activity, then, OUL is poised to continue the legacy of supporting scholarly activity on campus as well as serving as a bridge for innovation and collaboration in the community.

MAKING AND INNOVATION ON CAMPUS AND IN THE COMMUNITY

The University recognized the promise of innovative thinking and entrepreneurship that had long been the spirit of both campus and community. Early efforts were undertaken by the University to support this and, in 1983, one of the country's first formal business incubators was founded as the Innovation Center. Designed to support business start-ups and product ideation, manufacturing, and distribution, the Innovation Center provided resources not otherwise readily available in the rural setting of southeastern Ohio. At 36,000 square feet, the Innovation Center includes office space, conference rooms, lab space and equipment, and a range of tools for making and prototyping. Located remotely from campus proper, the Innovation Center supports campus initiatives, but is also accessible to community innovators and entrepreneurs. This strategic placement serves to bridge the gap between town and gown to foster a welcoming environment to all (Innovation Center, n.d.).

In addition to the Innovation Center, individual colleges at Ohio University have also established their own makerspaces unique to their disciplinary needs and research desires. Included in this cadre of resources is the CREATE_space (formerly @lab) which supports creative research across the range of visual and performance arts in the College of Fine Arts (Create_space, n.d.), the GRID lab which engages individuals in game research and immersive design in the Scripps College of Communication (GRID, n.d.), The Patton College of Education's Culinary Studio, an experimental food lab and demonstration kitchen (Culinary Studio, n.d.), and the Russ College of Engineering's ARC (Academic and Research Center) which provides a range of tools and spaces for prototyping and production (ARC, n.d.). Individually, each space was funded and grew as a reflection of the parent college's needs and faculty and students' research endeavors.

Meanwhile, the surrounding Athens area has developed a robust network of spaces for making, innovation, and collaboration. The Athens Food Ventures Center, hosted by ACEnet, offers a central kitchen, thermal processing room, and a warehouse to support small business growth. Over 65 food entrepreneurs use the facility each year to support their business workflows. The facility removes barriers such as the costs related to purchasing property and equipment and gaining licensure (Athens Food Ventures, n.d.). Passion Works Studio hosts "makers of all abilities to work and thrive within partnerships celebrating the power of creativity, connection, and purpose." Passion Works hosts artists in residence who work with creators with developmental differences in a thriving art gallery. The artists of Passion Works collaborate with students and faculty at Ohio University on projects including hosting meetings and providing artwork for campus events (Passion Works, n.d.). Similarly, The Dairy Barn Arts Center provides open hours where community members have access to sewing and ceramics studios and workshops (Dairy Barn, n.d.). The Athens Makerspace, a constituent of ReUse Industries, is a community-based model that offers equipment and workshop space to support making, innovation, and creativity in the Athens area. The space includes equipment for woodworking, fiber arts, metalwork, electronics, and 3D printing. Athens Makerspace also includes a tool lending library and a retail store of donated items (Athens Makerspace, n.d.). Finally, Athensworks is an open and collaborative space that serves anyone who needs a space to work or connect with others. The space is often used by small business owners to focus on their own work or to collaborate with others in the community (Athensworks, n.d.).

Desiring to further leverage the gains taking place as a result of the campus and community entrepreneurship and innovative thinking, Ohio University recognized the need to more formally connect disparate entrepreneurs and innovators across disciplines and with those in the community. A university-community collective was established and began with three primary objectives: (1) to support entrepreneurship on campus; (2) to bridge entrepreneurship happening on campus and in the surrounding region; and (3) to leverage siloed resources and expertise on campus and in the surrounding region.

As a result of meetings of this collective, a healthy and robust spirit of entrepreneurship and innovative thinking was apparent. As a first step, interested university and community-based innovators were identified as were the various spaces and equipment resources available in support of ideation. This list of human and physical resources was shared across the university and with the surrounding community but it was quickly apparent that the existing structures did not support needed cross-pollination of ideas or projects. Participants of the collective witnessed the duplication of resources, the lack of communication between and across various makerspaces, and ultimately the siloing that resulted from these realities which inevitably hinder innovation. The missing component was a central, unifying resource to connect

entrepreneurs and to network resources. With “spokes” already in existence, various locations and spaces were considered as a potential “hub” intended to connect those independent sites of entrepreneurial activities. Ultimately OUL helped connect these disparate spaces by welcoming CoLab into Alden Library, centrally and symbolically situated at the heart of campus.

COLAB

Initially imagined by a group of student innovators, CoLab was established as a physical and philosophical hub between the various spokes on campus and in the surrounding community (CoLab, n.d.). Made possible through a \$1 million allocation approved by the Board of Trustees, CoLab officially opened in October of 2018, following the hiring of a program manager and a soft opening happening earlier in 2018. Various open houses and receptions were used to promote the new space and to introduce students, faculty, university administration, and community members to the space and the overarching innovation strategy from which CoLab was borne. As a result of much fanfare, the actual demand for access to the space far outweighed anticipated demand and CoLab hours of operation were extended in November of 2018.

CoLab offers open collaborative spaces and a series of meeting rooms designed to respond to the various stages of the innovation process. Space for tinkering, prototyping, ideation, and collaboration and feedback are provided. To raise awareness of the new space and promote use, CoLab Project Manager Matt Thomson has hosted a full slate of events and programs during its first year of operation. The CoLab Speaker Series has served as the backbone to support campus and community interaction. Occurring every Thursday during fall and spring semester, the one-hour lecture introduces attendees to campus faculty and staff and community movers and shakers such as representatives of the Chamber of Commerce, business owners, and corporate CEOs. Topics have included social entrepreneurship, marketing, a product development, and collaborative creativity, among others. Other events have included a student trade show event, making opportunities during special campus events, and activities during finals week. For example, CoLab invited Passion Works Studio artists to develop a maker event in which campus participants could make their own Passion Flower, the signature colorful metal flower that serves as the symbol of the organization. The event provided an opportunity for the campus community to directly connect with members of Passion Works which may foster stronger future bonds.

Central to its mission, the goal of CoLab was to help entrepreneurs identify and access the various makerspaces in existence but to also tap into the rich resources available in the centralized academic library setting. CoLab acts as the hub, or center, of activity for entrepreneurship with a number of spokes, reaching across campus and into the community to connect dispersed making, prototyping, and manufacturing resources. Ultimately, the hope is to reach beyond the boundaries of the University to the broader regional entrepreneurial partners in support of the business-generating activity vital to the continued success of southeast Ohio.

FUTURE DIRECTIONS

Using the collaboration as a launching point, CoLab has the opportunity to develop additional community partnerships with organizations such as those mentioned in this paper. A collaboration with Athensworks, for example, could help provide alternative meeting space to

help integrate campus and community innovators and entrepreneurs so that ideas can grow into start-up businesses that may support the local economy. Users could branch out from the meeting hubs to making spaces on campus, Athens Makerspace, or Athens Food Ventures to fabricate, build, and create products. Further, collaborations with Athens Food Ventures, ACEnet, and Reuse Industries could support important work to alleviate the challenges of poverty, such as the demonstrated incidence of food insecurity in the area. Partnerships with the Dairy Barn Arts Center and Passion Works Studio can help promote mental health by providing a creative outlet for students and community members alike.

As the heart of the university, the academic library can serve as the ideal hub for making and innovation while also serving as a connector between campus and community. In particular, library makerspaces can support community engagement as students collaborate and learn from community entrepreneurs and business owners and work to alleviate the effects of poverty in partnership with community organizations. Perhaps the most valuable effect of this work is the opportunity to help students develop into responsible, thoughtful, and productive citizens who think globally and act locally.

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