

COMMUNITY ENGAGEMENT: EXPLORING COMMERCIAL AND NONPROFIT OPTIONS

INTRODUCTION

This paper describes some of the community engagement projects in both commercial and nonprofit arenas completed by Industrial Design students at an urban university during the 2012-14 academic years. Each project has resulted in an abundance of positive results for all the participants. By discussing the benefits and challenges inherent in conducting community projects, and by exploring the differences in learning opportunities between commercial and nonprofit projects, design educators will be able to make more informed decisions on which type of project is most appropriate for the educational objectives of their classes.

For institutions of higher learning, it is seldom questioned that there is great value in engaging the community and local industries in learning activities with the student body (Maass, 2011). This is especially true of an industrial design program in an urban metropolitan setting where such activities are clearly expressed in the university's mission statement: quality teaching and learning, high professional standards, respect for the dignity of others, and **collaboration and cooperation with the community**. To fulfill its mission, the university's diverse faculty and student body engage the community at large in scholarly inquiry, creative activity and the application of knowledge.

Students, university programs, and local organizations receive benefits from their involvement in collaborative projects, including enhanced learning, broadened perspectives, and a natural increase in motivation by all participants. Students gain real-world experience that might be missing from purely academic projects. They are exposed to networking opportunities leading to potential future jobs/internships as they learn project management skills, ultimately strengthening their portfolio and resume (Thompson, 2013). Programs typically gain a monetary award for their involvement and faculty can use the projects to help fulfill their service and scholarly activity requirements. Sponsoring organizations benefit by connecting to a large number of talented minds with training and access to state-of-the-art technology. This level of assistance might otherwise be very costly if provided by a private consulting firm. The design community also benefits as these projects often result in products that positively impact the human condition and contribute to an increased awareness and advancement of the industrial design field.

SELECTION OF PROJECTS

The type of community engagement projects that are appropriate for a particular class, teacher, or program depends on what students are expected to learn. Synthesizing the experiential learning component with educational goals and learning outcomes is key to reaching the ultimate goals of a well-rounded industrial design education and professional career. A logical starting point in the project selection process is to take inventory of the local commercial and nonprofit organizations in close proximity to the university. Before approaching these organizations, there are several factors worth noting: the size and type of organization/company, the potential of job and learning opportunities for students, the specific product or service, the project timeline, the commitment level of the organization,

and even the personalities of the management team. These are all important considerations when choosing a project to engage in (Dekker, 1997). Additionally, it is best when the teachers and clients have a shared vision for project goals and educational outcomes and get along on a personal level.

While the profitability and excitement of a commercial project with a large, well-known company like Oakley, Motorola, or Black and Decker is very attractive, such projects are not always within the reach of smaller programs in more geographically isolated areas. An alternative is to seek out projects with smaller startups, local inventors, or community nonprofit organizations. Projects that focus on activities or industries for which there is a high level of local interest (like camping, cycling, drinking coffee, etc.) are another viable alternative. They provide additional research opportunities, local experts for consultation, plentiful participants for focus groups, and links to related industries that can support the project.

THE COMMERCIAL OPTION

By participating in a collaborative project with university students, commercial clients can affordably employ a high number of creative students who are guided by their instructors to patiently consider the widest range of design factors and possibilities. This results in innovative ideas from unique perspectives that might normally be outside of the clients' field of vision. A commercially viable product that compliments their current line and brand is ultimately one of the most important benefits that a commercial client can hope for. This, however, is occasionally difficult to achieve, so instructors need to prepare commercial clients for this fact. Their expectations should be realistic.

Students participating in these projects gain a better understanding of how rigid commercial product design can be, as the projects are often grounded in a clear set of criteria in an actual design brief. Through personal interaction, clients provide students with direct feedback about market demand, materials and manufacturing, budget constraints, branding, and verbal and visual communication. Clients can also serve as mentors, guiding students in their career path, sharing examples of their own successes and failures, and relating their experiences navigating a career in industrial design. As part of the course structure, students have the opportunity to be included as an inventor on a utility patent and rewarded monetarily. Students also have the opportunity to present their concepts to a real client. For this, students are expected to dress appropriately and execute clear verbal and visual communication to convince the company how their idea is the best solution, including: market demand, appropriate use of materials and manufacturing methods, function, aesthetics, and profitability. When students present to a real client, they tend to invest more in the visual and verbal content and appearance. This helps to strengthen teacher-student relationships by emphasizing the supportive role of the teacher as a helper rather than a critic with a grade book in hand. Another important benefit for students and faculty is the opportunity for networking. Industry contacts are developed and can lead to future internships, full-time employment, and possibilities for additional experiential educational opportunities for the students.

A commercial project that provides an example of the considerations above was recently completed with a company based in China with local representation in the university's metropolitan area. The project involved designing cold brew coffee systems for residential and commercial use. In exchange for new concepts the company provided a small sum of money to the Department, and some prize money to students for the top designs.



Above: -Coffee roasting research. Photo by Jessica Taves 2014.



Above: Prototype testing. Photo by Jessica Taves 2014.



Above: Brainstorming concepts. Photo by Trevor Davis 2014.



Above: Initial presentation with sponsor.

A potential negative aspect of commercial projects is that they might not provide the equivalent educational value of purely academic projects strategically designed by an experienced teacher. Just because a project is for a real-world client, and brings in money or donations, does not mean that it always will be a beneficial learning experience for the students. Additionally, commercial clients might not always provide the nurturing and detailed feedback that millennial students have come to expect. It is important to interview the company representatives who will be interacting with your class and clarify a standard protocol for providing feedback to students at critiques. It is preferred that the client provide quality verbal feedback at each of the meetings and each student presentation. In the case of the cold-brew coffee project, feedback was reaffirmed and recorded on detailed comment sheets by company representatives. These were returned to the students later in the week after the client obtained more feedback from their colleagues.

THE NONPROFIT OPTION

While offering many similar benefits and challenges as projects with commercial entities, projects with nonprofit organizations have a number of differences worth discussing. Through nonprofit projects students learn that design thinking applies to more than just consumer products; they are also a good option for design programs that lack access to commercial clients. At minimum, they provide students with insightful research opportunities and the chance to work with an off-campus entity on a real problem/focus. Without the budget, market, and manufacturing constraints that accompany typical commercial projects, students can explore more 'blue sky' concepts that might challenge the status quo and/or bring attention to a problem without having to actually solve it. Students also seem to have more fun with these projects, which is a key component to creative thinking. Tom Kelly of IDEO reminds us, "Don't forget the true spirit of innovation...Have some serious fun." When the projects are grounded in research, born from enthusiasm, and culminate in elegant solutions, they result in strong portfolio pieces that emphasize creative ideas and community activism. They serve to compliment the sometimes more rigorous and 'real' commercial or academic projects.

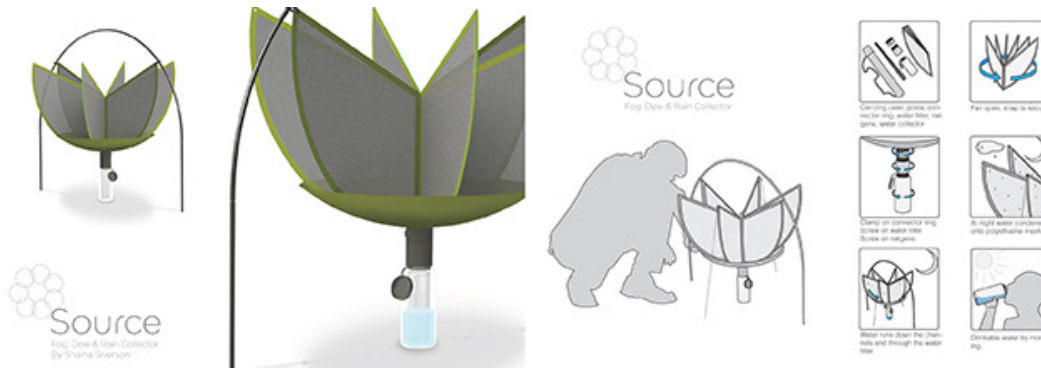


Above: Convert replaced low-efficiency toilets into planters. Bill King, 2012



Above: Water saving washing machine concept. Melissa LeMeiux, 2013

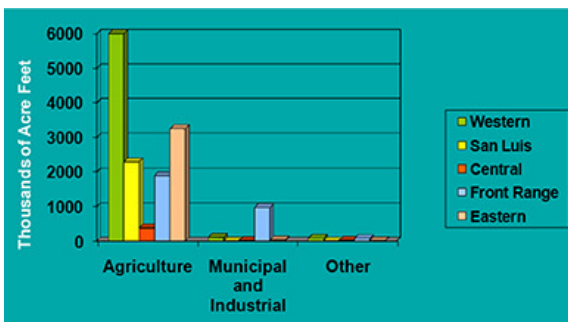
Because nonprofit projects are often focused on underserved populations (elderly, homeless, etc.) or overextended resources (water conservation, deforestation, etc.), they present students with unique opportunities to see the world from different perspectives. The projects highlighted in this paper were completed in cooperation with the One World One Water Center for Urban Water Education and Stewardship, which was created to “prepare an educated, empowered, solution-oriented citizenry to protect and preserve our precious water resources.”



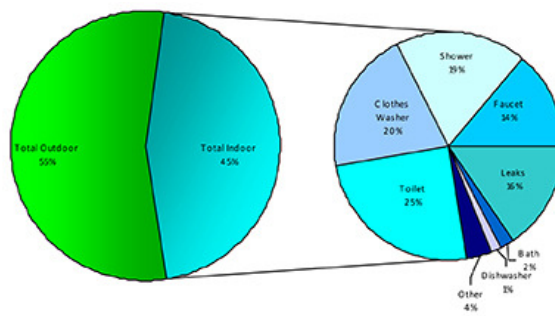
Above: Collect fog for drinking water. Shaina Siverson, 2012

The results of the project were innovative, well-executed design solutions that either helped to conserve water or bring an increased awareness to its value. But perhaps the most valuable aspect of the project was that students learned about our most precious natural resource: water. At a university located in a high-altitude, desert climate, water is often in the news and water restrictions are common. Research included field trips to the local water municipality where students learned about sources of water, how it is used in residential and commercial environments, who controls and monitors its use, and what the future might hold for sustainable water use. The design project functioned as a vehicle for bringing important real-world knowledge to the students, helping them to become better global citizens.

State Water Use Distribution



Household Water Use



Above: Samples of water usage analysis shared by the municipality in the research phase.

A disadvantage to these projects is that students might not receive the same quality of critical analysis and feedback as they would from product development professionals. The leaders and consultants at such organizations are often not familiar with industrial design. Sometimes their feedback is summarized as “everything is great”, so the instructor typically must play an increased role in critiquing student work. For this reason, these projects are recommended for senior students who are already familiar with the design process and are looking for opportunities to create professional level deliverables for their portfolio. A more open, ‘blue sky’ project is also an enjoyable, positive way for them to end their studies.



Above: Leak-tight hose connection concept. Miles Frasca, 2012

These projects might not always result in direct employment opportunities for the students, but they can bring a certain amount of publicity to the program and function as a means of urban impact for the university. If projects are realized and implemented (new public bike racks, improved recycling centers, etc.), they can also have a direct positive impact on the community at large.

CHALLENGES

Community engagement projects present a host of challenges and require extra time and planning from instructors. Learning objectives for the class don't always match the project goals of the organization. Instructors might carefully widen the project scope to include additional activities that are necessary components of the academic design process that sponsors may not require in their project criteria (Allenstein, 2012). For example, creative brainstorming sessions are typical requirements in academic studio classes and are considered to be necessary steps in the design process (Neumeier 2009); they are, however sometimes omitted in organizations that are tight on human resources, time, and budget. Additionally, a client might need to make concessions about unrealistic expectations for deliverables. **The alignment of project goals and deliverables with the desired learning outcomes should be the central topic of initial meetings between the instructor and the client.**

Project schedules present another challenge. Classes meet at set days and times of the week, and most universities require detailed schedules to be included in their course syllabi before classes even begin. This does not allow for the flexibility that some organizations might require in order to accommodate unforeseen travel, meetings, illness, etc. If possible, flexibility in dates must be built into the project deadlines. **Mandatory attendance at key stages of the project needs to be agreed upon at the initial meetings between the instructor and the client.** These might include: project kick-off, first stage sketch review, market research presentation, sketch model review, prototype presentation and testing, and final presentations.

Before a project begins, there are documents that require signatures from all parties involved. Typical paperwork that needs to be drafted and agreed upon before the start of the project includes: non-disclosure agreements, contracts (between the school, sponsor, and student) and written agreements on the project scope (timeline, deliverables, monetary awards), and intellectual property (IP). This can constitute a large time investment as it is imperative that all parties are in agreement with the project terms before the start of the project.

Students are often unfamiliar and uneasy with the topic of IP. It needs to be discussed at the beginning of the project, including the role it plays in the process of bringing a product to market. Everyone must agree on who will have ownership of the intellectual property at the end of the project. It is a good idea to offer an alternative, comparable project to students who do not agree with or refuse to sign the IP agreement.

CONCLUSION

The value to universities in engaging in projects with the community has been widely embraced. "The universities that take the lead in this [participating in community engagement projects] will benefit from what the partnerships bring them and will be ahead in a whole new field of endeavor" (Wiewel 1997). In agreement with this idea, Lawrence Martin (2005) says that the "concept of innovation is both essential and implied in any description of university-community partnerships". An unexpected positive result of these projects has been enlightenment in the community about what industrial design is, and how it can be used. This also happens to be a founding goal of the Industrial Designers Society of America, "Promote the benefits, awareness and value of design in business and society" ("Vision and Mission," 2014). The networking opportunities and relationships developed through these projects provide students with valuable connections for employment and help build the reputation of the industrial design program.

Ultimately, the efficacy of these community projects (how well they benefit students, the university, and the community) depends on project selection and a positive, communicative relationship between the instructor and client. By carefully weighing the pros and cons of commercial or nonprofit projects, instructors can bring a successful real-world learning experience that can enhance an industrial design education. The question should never be "should the class engage in a project with the community", but rather "which community project type should the class engage in."

REFERENCES

- Allenstein, J.T., Whitfield, C.A., Rhoads, B. (2012) From the Industry to the Student: Project Management of an Industry-sponsored Multidisciplinary Capstone Project, *American Society for Engineering Education*, Washington D.C.
- Constantine, Stu. (n.d.) Portfolio Preparation Tips and Suggestions. Retrieved April 2, 2014 from http://www.core77.com/design.edu/portfolio_tips.asp
- Dekker, D. (1997) Issues When Using Company Sponsored Projects to Provide a Design Experience for Students, *Frontiers in Education Conference*, November 5-8, Pittsburgh.
- Kelly, Tom. (2001) *The Art of Innovation*, Random House, New York
- Maass, K., Talley, B. (2011) Sponsored Design Studios: An Absolute Necessity. Best Practices for Intellectual Property and Engaged Scholarship, *Proceedings of IDSA Education Symposium*, September 14-17, New Orleans.
- Martin, L., Smith H., Phillips, W. (2005) Bridging 'Town & Gown' through Innovative University-Community Partnerships, *The Innovation Journal: The Public Sector Innovation Journal*, Vol. 10(2), Orlando.
- Neumeier, M. (2009). *The Designful Company: How to Build a Culture of Nonstop Innovation*. Berkeley, CA, US: New Riders.
- Strategic Planning: Mission, Values, and Vision. (2014). Retrieved March 29, 2014 from <https://www.msudenver.edu/strategicplanning/missionvaluesvision/>
- Thomson, H. (2013) How Industry Benefits from Student Design. 19 August 2013, from <http://www.mddionline.com/article/how-industry-benefits-student-design>.
- Wiewel, W., Broski, D. (1997) University Involvement in the Community: Developing a Partnership Model, *Great Cities Institute Paper*, University of Illinois at Chicago.
- Vision and Mission of Industrial Designers Society of America. (2014). Retrieved March 29, 2014 from <http://www.idsa.org/content/content1/vision-and-mission>