



Redesigning Fashion's Future Through Discovery Learning : A Community Circular Textile Pilot and Community Partnership with Goodwill.

Kelly Cobb, Kendall Keough, Huantian Cao, Brenda Shaffer, and Shameeka M. Jelenewicz, University of Delaware, USA

Keywords: teaching, sustainable, circular, textile, discovery learning

Introduction. The Ellen MacArthur Foundation (2017) report “A new textiles economy Redesigning fashion’s future” offers a vision of a fashion system that is circular, ideally creating no waste by design, while strategically capturing value from recycled content. Goal three of the report findings suggest the radical improvement of recycling by transforming clothing design, collection and reprocessing. The **purpose** of this project is to integrate sustainable textile and apparel concepts into college curricula for fashion and apparel studies. This project intended to meet the apparel industry's needs for knowledgeable professionals through innovative sustainability education in college (Cao, et. al 2017) through an applied learning module called “Re/Fashion Studio.” This project represents the ongoing efforts of faculty to mainstream sustainable education and practices throughout the college curriculum for apparel design and merchandising majors through innovative and participatory discovery learning experiences.

Teaching Strategy and Implementation: The aim of discovery learning is to extend learning beyond the classroom and provide students with opportunities to solve complex problems in the context of real-world situations. Students apply critical thinking skills and academic knowledge and ideally, develop effective responses to, and make informed decisions about, problems or situations encountered in the course of the learning experience. As part of a discovery learning experience (DLE) course exploring sustainable lifecycle models, students were introduced to garment lifecycle, longevity, upcycle and zero waste concepts. The design of this discovery learning experience was a collective venture between University of Delaware and Goodwill. The framework was co-created during initial meetings. Researchers developed several one-week-long modules consisting of lecture, lab, and applied activity. A five-week module applied learning via an open-kitchen style re/production textile studio. Re/Fashion Studio was sited within a Goodwill retail store, offering open studio, sustainability talks and demonstrations of sustainable textile techniques (tufting, weaving, felting, and sewing.) The community partner, Goodwill offered space and materials for Re/Fashion Studio in kind. The partner working closely with faculty and students daily to learn together.

Method. Applying IDEO design thinking methodology, student groups conducted discovery, creative research and design prototyping of engagement models: products, systems, interactions focusing on reconnecting consumers to the way they make, use and dispose of clothing.



Figure 1: Re/Fashion Studio activities; (a) lab (b) workshop (c) design process (d) open studio

Results. Student teams envisioned new hyper-local models, inspiring tangible changes in the public’s awareness or education on the consumption, used and disposal of textiles. Student-generated design concepts included a re/fashioned clothing collection, various take-back programs, clothes washing collective and mending services. Concepts were prototyped at the Re/Fashion Studio. This pilot allowed collaborators to test what might happen toward a more dedicated future project. Assessment methods placed prior to launch include student reflection writing and qualitative feedback was gathered from Goodwill and the research team during debrief meeting.

Effectiveness of the Strategy: The DLE or discovery learning charge to students was to implement an applied project that addressed a problem with no knowledge or widely-accepted answers. To assess learning, all students engaged in both personal and group reflection. Students responded via reflections embedded in weekly activities as well as post-module reflections. At the end of the semester, 14 students (out of a total 29 students) who took part in the DLE completed the survey on the effect of participation on their skills/abilities improvement in 12 areas. Most students (93%) indicated they believe the DLE was relevant to their future work/career. At least 85% of students indicated they *Strongly Agreed/Somewhat Agreed* they improved skills/abilities regarding working collaboratively with others; sustainability issues; oral communication; written communication; critical thinking; organizing; communicating concepts of sustainability to consumers; and communicating concepts of up-cycling to consumers. Students’ learning was evident in responses to reflection opportunities embedded in class activities. One student reflects; *“Throughout the many conversations we had, packaging seemed to be the one issue that kept coming up. The excess amount of packaging for each retailer was shocking to our group. With that being said, in the ideation phase below we discussed how we discovered our sustainable solution.”* A student group reflects on learning that they must *“listen to what consumers problems are, design based off of that.”* In reporting, they suggest *“the right solution isn’t always what you think it may be, you need direction from consumers”* learning is evidenced in the narrative offered *“Our first visit to Goodwill with our prototype was unsuccessful. We recorded zero clothing drop-offs, but the feedback we received*

from a customer was crucial 'If you guys didn't tell me it was for fabric, I wouldn't know what it was for. You should make it look more natural and give it a name.'"

Recommendations and Future Plans: This project represents the ongoing efforts of faculty to mainstream sustainable education and practices throughout the college curriculum for apparel design and merchandising majors through innovative and participatory discovery learning experiences. Given the success of this pilot, our broader aims are feasible. Findings from this applied study are being used to fundraise. The broader goal is to pilot a re/manufacturing factory and learning lab, to capturing value from recycled content by radically recycling, by upskilling workers, by educating students and consumers and transforming clothing design, collection and reprocessing.

References

Ellen MacArthur Foundation (2017), A new textiles economy: Redesigning fashion's future.

Accessed at <http://www.ellenmacarthurfoundation.org/publications>.

Cao, H., Cobb, K., Dickson, M., Shaffer, B., Jelenewicz, S. (2019, October). Textile and

apparel curriculum development for sustainability education. Oral presentation at the 2019 annual conference of International Textile and Apparel Association, Las Vegas, NV.