

Upcycle Guidebook: A Study of Production Through Post-Consumer Waste

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The purpose of this study was to develop an upcycle guidebook that could provide consistent instructions for production of upcycled garments. The guidebook could potentially be used by local makers to large scale fashion production teams. As many researchers have stated, fast and mass fashion has created an overwhelming amount of consumption and waste in our world today (Bianchi and Britwistle, 2011; Niinimä, 2012; Fletcher, 2008). One way to reduce the amount of textile waste is to take garments that would otherwise be thrown away and upcycle. “The fashion upcycling process (also termed refashioning or remanufacturing) has been defined by academics and practitioners as an upward reprocessing of waste, recovering intrinsic value through recycling, recutting, refashioning and closing the loop of the manufacturing system” (Han et al., 2016). A challenge, however, with upcycling is that it is hard to produce duplicates on a mass scale (Farrer, 2011; Gwilt & Rissanen, 2011). This guidebook is an effort to help address this issue.

Otto von Busch authored what he called “Cookbooks” for upcycling, essentially guidebooks to provide short recycling manuals with different garment types exploring the basics for the women’s contemporary of fashion hacktivism (Busch, 2005; Busch, 2007). In order to provide more detailed instructions market, the researchers focused on upcycling one kind of garment, men’s dress shirts, for developing the guidebook. Men’s dress shirts are fairly similar in construction regardless of brand and price point allowing for consistency in producing upcycled garments as well as creating a cohesive look within the guidebook.

The researchers first studied different methods of upcycling in the industry, particularly with men’s dress shirts. They then designed and constructed a capsule collection of five different garments for the guidebook (Figure 1); (1) The Oxford Skirt, (2) Polly’s Pocket’s, (3) Not Bow-ring, (4) All Ruffled Up, and (5) Knot My Shirts. The garments are numbered 1-5 in a range of difficulty for construction starting with (1) The Oxford Skirt as the easiest and ending with (5) Knot My Shirts, being the most difficult. The construction process was documented as step by



Figure 1. Garment designs from left to right (1) The Oxford Skirt, (2) Polly’s Pocket’s, (3) Not Bow-ring, (4) All Ruffled Up, and (5) Knot My Shirts.

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step instructions. To address sizing, the garments were created using mostly large or x-large shirts in conjunction with individual's measurements in order to fit a variety of sizes. Each garment has between 4 to 10 pages of instructions with images. The design and format of the guidebook was kept simple and clean for easy reading. To test out the first draft of the guidebook, the researchers worked with two undergraduate textile and apparel design classes in a midwestern university to receive feedback. All students have had sewing training but at different levels to represent the levels of future target productions. Upon receiving IRB approval, the students were asked to complete at least one garment from the guidebook and participate in a qualitative survey to address their experiences by following the guidebook and any feedback they had.

The results of the survey were helpful in understanding what would make the guidebook easier to follow, especially for new sewers or individuals new to upcycling. There were twenty-two participants, twelve from an upper-level sewing and production class and ten from a freshman basic sewing class. All participants responded positively to the guidebook and appreciated the idea of upcycling. Most participants chose somewhat easy as the difficulty level of the upcycled garment (eight participants) followed by somewhat difficult, five participants, then extremely easy, neither easy nor difficult, and extremely difficult at three participants each. When asked about the effectiveness of the images, twenty participants commented the images were understandable or were somewhat understandable but could use improvements while two participants mentioned that the images were not understandable. When asked about the improvement for the instructions, participants wanted longer steps separated to make them more understandable. For example, one participant who constructed Polly's Pocket's commented that "I think the steps could go a little more in-depth because I was a little confused at some points based on vague instructions." Similar suggestions were made by participants who completed Not Bow-ring when they had some issues with using single-fold bias tape on the armholes. In terms of the final garments, 54% of the participants said they would wear or maybe wear their garments to events such as picnics, vacation, or even class. Finally, the participants had a few suggestions to improve the guidebook design. One participant said, "adding a troubleshooting section just in case," and "It would be helpful if there was a different color to separate between pinning and sewing, and just to clarify." Another participant also suggested to "include amounts and width of scrap fabric and other trims needed."

To address select issues the participants were having with the guidebook, the researchers added a legend for different processes (sewing, pinning, ripping, etc.) as suggested. They also decided to add a glossary and demos for key construction techniques that were used in the garments so that individuals could practice before beginning their garment. The demos included single-fold bias tape, gathering, and creating an elastic casing and inserting. The researchers believe that this will help solve some of the issues the participants have had with the instructions without making the instructions lengthier.

With increasing textile waste in the fashion industry, it is increasingly important for the industry to explore more efficient ways of upcycling. Research on this upcycle guidebook developed a method for garment upcycling that will expand possibilities for reproduction, while

also testing the effectiveness of the book through working with fashion design students. To further develop this concept of upcycle guidebooks, one could further address sizing, or do the same concept with different garment types beside men's dress shirts. The researchers will also test out the success of the guidebook with local makers and/or fashion production teams. This research could be useful for fashion companies to conduct take-back programs of their own products from customers to develop a standard production for their own line of upcycled garments.

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