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“Adapting Lindqvist’s Kinetic Garment Method for an Upcycled, Zero-Waste Childrenswear Romper”

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Keywords: Experimental patternmaking, upcycling, and childrenswear

Background. A current upcycling trend is to create little girls’ garments from menswear. This trend exemplifies some tenets of sustainability. Namely, reusing resources, instead of discarding them by converting used products into new ones (Hawley, 2008). An analysis of current offerings demonstrated that these types of garments consist only of dresses and only portions of the original garment are salvaged, resulting in leftover fabric waste (e.g., Ayala, n.d.; Dana, 2008; Dunne, 2014; Tyau, 2014). Therefore, a gap was revealed in the market regarding bifurcated, zero-waste designs for little girls’ garments upcycled from menswear items.

Research Purpose. The purpose was to research methods for creating a sustainable little girls’ garment by upcycling menswear (e.g., button-down shirt and ties). Specific elements of sustainability focused on include zero-waste and garment adjustability to increase useful lifespan. The market analysis invoked a secondary goal: a bifurcated design. Lindqvist’s (2013) experimental patternmaking technique of kinetic garment construction was chosen for experimentation in conjunction with upcycled textiles as his cutting and wrapping methods may be adaptable for creating upcycled and zero-waste garments. The kinetic garment construction method involves (a) cutting fabric to specific dimensions based on the human body, (b) pinning the fabric to a dress form, and (c) then cutting and arranging that fabric into a garment design while on the form (Lindqvist, 2013).

The following questions were to be addressed through this design research:
1. Can Lindqvist’s (2013) experimental patternmaking method of kinetic garment construction be combined with upcycling to create a zero-waste, original childrenswear romper from a menswear garment?
2. Can adjustability for the purpose of accommodating multiple sizes be incorporated into the romper design in conjunction with these other concepts (e.g., upcycling from menswear items, zero-waste design, kinetic garment construction) to create a successful children’s garment?

Methods. Two main methods were used to upcycle a man’s size large button-down shirt into a little girl’s romper. These techniques consisted of (a) applying Lindqvist’s (2013) kinetic garment construction method of cutting fabric to fit the body and (b) adapting Lindqvist’s (2013) method through the creation of ribbon casings, which eliminated the need for cutting. To prep the shirt for the kinetic method, the sleeves were removed and set aside. Hem tape was sewn around the neck at the inside base of the collar (see Figure 1), the underside of

Figure 1
each shoulder seam, and around the inside of the bias-bound armholes. Ribbon drawstrings were threaded through the hem tape areas, no longer than 3” when extended. Then shirt was placed on a children’s dress form. The casing in the neck and shoulder areas was drawn up to fit the child’s measurements. As the drawing up of the casing impacted sizing, Lindqvist’s (2013) method of cutting was applied afterwards to form the bifurcation of the romper. A cut was made in the center back of the shirt from the hem up toward the crotch of the dress form (see Figure 2). The shirt front was unbuttoned to this same crotch point to allow for the legs/crotch area of the jumpsuit to be formed. A V-shaped gusset was cut from each sleeve to add additional room on the insides of the legs and form the crotch. The remaining portions of the sleeves were converted into pockets. Two men’s ties formed an upcycled headband. One tie was used to form the band. The other tie was folded accordion-style, then twisted to create an origami flower (see Figure 3), and attached to the band.

Results. Adapting Lindqvist’s (2013) method of kinetic garment construction by using the original cutting technique along with ribbon casings resulted in a successful, upcycled romper for a little girl. Lindqvist’s (2013) original cutting method allowed the formation of bifurcated legs in the garment while the adaption of the concept through ribbon casings provided fit without necessitating cutting. Together, the cutting and casings techniques permitted all portions of the original menswear apparel items to be used to construct a new garment, eliminating all waste. Adjustability was also implemented successfully in the romper, permitting longer wear time for the garment. This adjustability was incorporated through the addition of multiple ribbon casings constructed on the insides of the romper at the neck and armscyes. Strategically placing these casings inside the garment prevented the ribbons from being a safety issue for the small wearer. The outcome was a romper accommodating multi-sizes for children of approximately 3T – 5X.

The headband constructed of men’s ties coordinated with the romper and reinforced the concept of zero-waste upcycling as the entire items were utilized for the design.

Conclusions and Implications. These methods could be replicated in the future to examine the impacts of original apparel item sizes on the final outcomes of upcycled garments. These processes could also be applied to garments other than men’s button-down shirts and ties to test the viability of the techniques for creating upcycled, zero-waste garments. This research has implications regarding sustainability and experimental patternmaking for childrenswear apparel design courses and the children’s clothing market.
References