



What's The Angle?

Dawn Michaelson, Auburn University, AL, USA

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Bust 36", Waist 26", Hip 38", Length 52"

Zero waste design (ZWD) challenges designers to draft apparel more creatively by eliminating fabric waste in both the design and manufacturing phase (Rissanen, 2011). For centuries garments were made to utilize all (or nearly all) fabric, as hand woven textiles were a time consuming endeavor. Recently though, zero waste design has been spotlighted as a means for implementing sustainability in our industry through the development of patternmaking skills to utilize 100% of the fabric (Aakko & Niinimaki, 2012; Rissanen, 2011). This design process can have impacts on the apparel aesthetics due to the fabric restrictions, unusual construction techniques, and the overall style of the apparel (Aakko & Niinimaki, 2012). ZWD is gaining in popularity with a recently published ZWD fashion book (Rissanen & McQuillan, 2016), workshops, zero waste/sustainable apparel exhibits, along with research articles that focus on zero waste design processes (Aakko & Niinimaki, 2012; Carrico & Kim, 2014; Rissanen, 2011). As there is limited to no research on production time of ZWD versus non-ZWD apparel, the purpose of this project was to make a zero waste ensemble and then compare the time differences for production.

The coat was initially drafted in half-scale using flat pattern drafting techniques that helped manage time and fabric until 100% utilization was achieved. A total of four half-scale versions were made before full utilization was achieved. Each version was constructed in muslin so the remaining pieces could be examined. The half-scale coat, excess fabric, and pattern were investigated to see where adjustments could be made to incorporate the excess. In the final version of the coat, I used both sides of the fabric thereby allowing for manipulation of the pattern pieces' differing edge lengths to obtain better fit. Additionally, an applique was made and applied to the center back along with a pleated collar with a neckline facing that added attention to the collar and provided comfort for the wearer. The multiple pattern angles in the coat pattern resulted in the shoulders having eight intercepting pieces. This posed a challenge with both construction and bulk but provide a unique design detail. Once full utilization was accomplished, the pattern was enlarged to full-scale, printed, and constructed. A vintage piece of double-sided silk lame brocade, 54" wide by 52" length, was used to construct the coat. An analysis of this coat's production time versus a normal coat of similar style showed that construction of the zero waste coat would result in an approximate 180% increase in production time due to the number of seams in the ZWD coat.

The dress was draped and utilized a 44" wide by 49" length piece of peach silk jersey. Rectangular squares with a total of twelve darts (six in front, six in back) of varying lengths contoured the torso for a flattering fit. Styling created a slight cowl neckline in both front and back along with relaxed shoulders. The dress has side slits to allow for ease of walking and could easily be belted if a shorter hemline was desired. The style of the dress was kept purposefully more simplistic due to the complexity of the coat. An analysis of this dress's production time versus a normal knit dress of similar style showed that there was an approximate 57.5% increase in production time which was from the use of darts in the ZWD dress.

Overall, zero waste was achieved for this ensemble, thereby making it a more sustainable option, but the increases in production time would conceivably contribute to an increase in overall garment cost. The creative design practice necessary to achieve this ZWD ensemble along with incorporating the

advantage of using double-sided fabric to aid in ZWD contributes to the existing sustainable design literature. Additionally, it is conceivable that variances in production times for zero waste apparel versus standard apparel may add to the ZWD garment which is rarely considered in sustainable research.

References

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