

Gradable Zero Waste Skirt and Blouse

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This outfit represents a unique way to achieve multiple sizes within zero waste garments without using traditional grading methods. Instead, the pattern shapes remain constant across the size range while different garment sizes are achieved by varying the width of narrow trims inserted at strategic points. This works builds on my previous research focusing on zero waste pattern cutting.

While some fashion designers use zero waste pattern cutting to integrate sustainability into their work, the majority of apparel sold today is not made with zero waste patterns. Few designers have bridged the gap between creating a single zero waste garment (as shown in an exhibition) and marketing multiple designs in the ready-to-wear market. One obstacle to integration of zero waste designs into mainstream fashion is executing the designs in a range of sizes (Carrico & Kim, 2014; Rissanen, 2014; Saeidi & Wimberley, 2018). This design illustrates a method for sizing zero waste garments that is not found in current literature. During the practice and analysis stages of my research through practice (Bye, 2010) while creating a zero waste blouse (Carrico, 2016), I discovered a size without altering the pattern shapes.

Working in Browzwear's VStitcher, I drafted a zero waste skirt that uses two geometric shapes, a right triangle and a right trapezoid, repeated four times each. Strips of white eyelet trim were inserted between the shapes for all sizes. Because the trims are only cut in length, they remain zero waste as well. The larger the skirt size, the wider the strips of trim. Figure 1 shows two virtual skirts; the skirt on the left is a size small and the skirt on the right is a size large. The submitted skirt is a size medium. All skirts used the same size trapezoid and triangle pieces. The small skirt used one-inch wide (finished) strips throughout including the waistband. The medium skirt used 1.5 inch finished width strips of embroidered eyelet fabric all over. The large



Figure 1. *Size small on the left and size large on the right*

used 2.5 inch finished width strips on the lower part and 2.75 inch finished width strips on the upper part and waistband.

If traditional methods of grading (Moore, Mullet, & Young, 2001) were used, all pieces would grow proportionately instead of only the strips growing. Indeed, the visual difference would be much less obvious if a traditional method of grading was used. The patterns, however, would no longer fit within the width of the fabric, allowing for zero waste. An alternative, then, to using contrasting materials for the inset strips would be to use self-fabric strips (the same fabric as the rest of the garment). Figure 2 shows the skirt rendered in all self-fabric. The seams practically disappear within the print fabric. The blouse that accompanies the submitted skirt was made in that manner. The basic blouse pattern (Figure 3) pieces interlock, and it could be zero waste if cut from a different width of fabric than the skirt. The blouse has four fabric strips inserted that are 1.5 inches wide and two strips measuring 2.5 inches wide.



Figure 2. *Size medium with all strips cut from self-fabric*

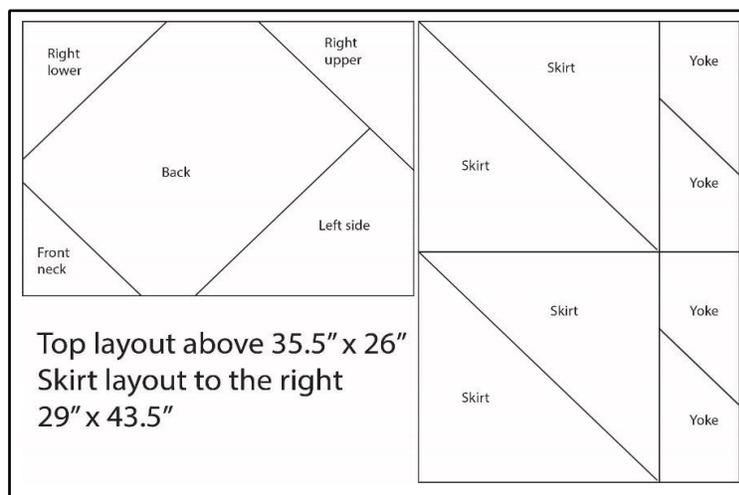


Figure 3. *Pattern layouts for skirt and blouse*

In addition to exploring ways of sizing zero waste garments, I endeavor to create garments that are typical in appearance. Michaelson and Chattaranman (2017) found that consumers preferred zero waste dresses that were aesthetically typical to those that were

atypical. Hence for zero waste fashion to be more prevalent in ready-to-wear fashion, the garments need to be styled in a way that is familiar to consumers.

The blouse and skirt presented offer a possible solution to grading zero waste patterns. I have also successfully tested this method on a straight skirt, bias cut pants, and a fitted sleeveless top. This is significant because designing zero waste garment patterns can be labor-intensive (Rissanen, 2014). By having a means of producing zero waste garments in a range of sizes, hopefully more designers will invest the time in creating zero waste patterns so that fewer materials are wasted.

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