



Re-Birth Product Development for Sustainable Apparel Design Practice in a Design Studio Class

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Keywords: Re-Birth, Education, Problem Solving, Apparel Design Process

**Introduction** The term “Re-Birth design”, as a sustainable fashion practice, refers to the redesign of stocked products, originally released through the distribution route to be sold to consumers but returned to the headquarters due to lack of use, and subsequently supplemented and redeveloped by designers as new products (Lee & DeLong, 2015). In other words, these products have already been through the sales process, but failed to sell as they were not chosen by consumers and were re-collected and ended up in landfills and detritus. As a massive amount of clothing is newly produced and dumped annually, the number of garments that have never been to a store and yet are incinerated is growing. The objectives of this study are for students: (1) to understand the process of fashion product manufacture and analyze issues around the stocked products; (2) to develop rebirth products as a sustainable design practice from stocked products of a fashion company.

### **Literature Review**

**(1) Sustainable Fashion Product and Re-Birth Design** Jonathan Chapman has explained appropriateness as a function of a product existence, evolution, and improvement, with regard to sustainable fashion product development. He stated that it is not sufficient for a product to simply trigger emotion in consumer desire, but instead to involve continuous and repetitive interaction (Chapman, 2005). A relationship must be established between the user and the product to extend the product’s life, for example, by reproducing withdrawn stock as Re-Birth designs. However, a problem with sustainable design in fashion and apparel thus far has been that the creative methodology used in accordance with the designers’ experience was extended only to an abstract range that could not connect with business design practices and processes (Chapman, 2005).

**(2) Creative Idea and Problem Solving Process at Five Re-Birth Levels** Lee and DeLong (2015) have built five levels for Re-Birth design. Re-Birth level 1 involves changes in subsidiary materials or the addition or removal of embellishments. On level 2, changes in pattern issues or material characteristics are applied to the stocked products. On level 3, part of an existing design is combined with a different material to create a new design, simultaneously enhancing practicality and brand image. Level 4 involves taking the product apart completely and recreating it with a new design, recreating stocked products of different brands using recombined designs to

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fit the design concept. On level 5, products are completely taken apart and become the raw material for fashion items other than clothes.

**Methods** Five senior apparel students of a major fashion school in Seoul, Korea, participated in the project from March to August 2015. The concept of Re-Birth was introduced to the students, followed by a design exercise in which students selected from stocked products. A fashion company in Seoul provided 200 styles of stocked product from 14 brands. Students selected 10 stocked items from two brands—SE men's wear and LC women's wear—and five items from each brand. There were 50 designs in development and one stocked item was developed in five different Re-Birth designs. Finally, three Re-Birth designs—D1 and D2 in two SE items, and D3 in one LC item—from among the 50 developed designs in the two brands were selected and produced as one Re-Birth product by the company's brand designers. Three Re-Birth products were evaluated on a seven-point Likert scale by 40 consumers of the brands' target age on the creative product analysis matrix (CPAM; O'Quin & Besemer, 1989).

**Results and Discussion** All three Re-Birth designs were developed in level 1, involving changes in subsidiary materials or the addition or removal of embellishments. In the CPAM, the D1 Re-Birth product had higher scores than the stocked product (D1 stock:  $M = 3.1450$ ,  $SD = .77722$ ; D1 Re-Birth:  $M = 3.2225$ ,  $SD = .77244$ ) and the judges noted an impressive colored pocket and a unique collar. D2 showed a significant difference ( $t = -4.627$ ,  $p < .001$ ) and the D2 Re-Birth product ( $M = 3.5350$ ,  $SD = .83407$ ) scored .5300 higher than D2 stock ( $M = 3.0050$ ,  $SD = .94840$ ). The D3 Re-Birth product ( $M = 3.3275$ ,  $SD = 1.02306$ ) also had higher scores than the D3 stocked product ( $M = 3.3850$ ,  $SD = .99783$ ); the judges liked its colored neckline decoration.

**Conclusion** This study helps us to understand and design Re-Birth products through company collaborations as a sustainable concept for students in a studio class. Students can experience an industrial design procedure and can relate it to sustainable design practice. Through the analysis of stocked products, we can better understand a user's product evaluation and the brand's inveterate issues, which can be reflected in the Re-Birth design.

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