



Co-Design Visual Merchandising in a 3D Virtual Store with Target: A Facet Theory Approach

Juanjuan Wu, Angella Kim, Jayoung Koo
University of Minnesota, St. Paul, MN 55108

Keywords: Co-Design, Merchandising, Virtual, Store

Introduction. In today's technologically advanced, networked world, the popularity and criticality of user participation in various aspects of our lives calls for a redefinition of the boundaries between designers and users, sellers and buyers, and visual merchandisers and shoppers. Co-design is defined in the design discipline as a process that involves consumers in co-creating a product (Piller, Moeslein & Stotko, 2004), thus transforming ordinary consumers into co-designers. Traditionally, retailers primarily rely on their internal expertise for visual merchandising directives and innovations. However, exploitation of internal expertise can result in both decreased output in innovation (Katila and Ahuja, 2002) and less innovative outcomes (Kristensson, Gustafsson, & Archer, 2004). Thus, the purpose of this research is to directly involve consumers to collaborate with Target Corporation to co-design visual merchandising (VM) in a virtual store with an aim to discover user-generated VM directives and innovations.

Theoretical Framework. Davies and Ward (2005) argued that the range of pertinent factors in VM and display is multivariate in nature and thus suggested Facet Theory to understand the complexity and interconnections of the various factors that constitute VM. We followed the procedures outlined by them, including 1) define area of interest (domain); 2) identify the main facets of the domain; 3) define types of facets, i.e., background facets, domain facets, and range facets; 4) define elements each facet contains; 5) articulate the "mapping sentence;" 6) express the combinations of elements; 7) collect data; 8) analyze the relationships between subjects. From a literature review, we defined our domain facets and elements as: A. Merchandise presentation (fixturing, product density, manner of presentation, and product adjacency), B. In-store environment (layout and interior), and C. In-store promotion (signage).

Method. Using Target's pre-selected merchandise in three product categories (i.e., women's ready-to-wear, boy's Cherokee, and men's swimwear) and pre-designed fixtures (including 2 ways, 4 ways, tables, convertibles, & components of wall fixtures), 145 participants from four VM classes formed teams and co-designed 67 virtual stores (30 by 25 feet) within a period of six weeks. These virtual stores were analyzed and coded by two independent coders using the coding scheme we developed from the literature and a preliminary analysis of five virtual stores. Preliminary data analysis showed that our data had substantial to outstanding reliability with Kappa's $k > .61$, $p < .001$ (used for categorical data) and Pearson's $r > .80$, $p < .001$ (used for numerical data).

Findings and Implications. For merchandise presentation, fixture grouping features a low-to-high, layered arrangement, which provides a good sightline into the entire shop. Table fixtures showed the highest product density across all three shops. In Women's RTW and Men's Swim Shop, hanging techniques were used more than folding. Hanging was generally considered as giving easy access to the merchandise, efficient space usage, generating "less upkeep," and easier for the shop to maintain a neat and orderly appearance. Product adjacency was characterized by outfitting (see Figure 1), brand, and color. Grid layout was the most frequently used compared to racetrack and freeform. And the most often used wall color was red, which connects with Target's signature color. Lifestyle signage was most frequently used compared to all other types, indicating an emerging trend in in-store promotion. Practical implications include 1) design an ecological retail environment; 2) establish section identity and foster a sense of ownership; 3) present a lifestyle solution instead of a merchandise selection. Overall, this research contributes both original creations of VM directives and a methodical framework that moves the subject of VM from the physical to the virtual environment and shifts the traditional in-house function of VM to an open innovation in which consumers themselves participate.



Figure 1. An outfitting example

References

- Davies, B.J. & Ward, P. (2005). Exploring the connections between visual merchandising and retail branding: An application of facet theory. *International Journal of Retail & Distribution Management*, 33(7). 505-513.
- Piller, F. T., Moeslein, K., & Stotko, C.M. (2004). Does mass customization pay? An economic approach to evaluate customer integration. *Production Planning and Control*, 15(4), 435-444.
- Katila, R., and Ahuja, G. (2002). Something old, something new: A longitudinal study of search behavior and new product introduction. *Academy of Management Journal* 45 (6): 1183–94.
- Kristensson, P., Gustafsson, A. and Archer, T. (2004). Harnessing the creative potential among users. *Journal of Product Innovation Management*, 21, 4–14.