



The Evolving Role of Designers in the Digital Transformation Process of the Apparel Industry

Jia Wu, University of Missouri; Li Zhao, University of Missouri; Caroline Kopot, University of Missouri

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Introduction. Digital innovations have become the main driver of the growth of the global fashion industry (Stangl, 2021). The COVID-19 crisis has clearly been an accelerator for fashion companies to embrace all opportunities in the digital world. Digital transformation is about adopting disruptive technologies to increase productivity, create more value, and improve social welfare (Ebert and Duarte, 2018). It integrates digital processes and strengthens digital innovation within the industry to capture market share and enhance business competitiveness (Stangl, 2021). However, many fashion companies are still looking for ways they can embrace digital transformation moving forward. Throughout all the steps along the lifecycle of a product, this study focuses on how to design function plays a role in digital transformation. A fashion company that has adopted an end-to-end digital transformation was used as the main case in this study. By employing in-depth interviews with this digital leader, this study aims to (1) redefine the role of designers in a leading technology-driven company, (2) explore key resources for a design department to gain competitive advantages through digital transformation, and (3) discuss the difficulties and challenges design functions face in the digital transformation process.

Literature Review. This study uses resource advantage (RA) theory. Resource advantage theory argues that competitive advantage is gained by leveraging its unique resources, both tangible and sustained competitive advantage and better organizational growth, sales, and profits. Hunt and Arnett (2003) call “renewal capability” the heart of proactive innovation. In the apparel industry, RA theory provides insights for corporate strategies (Carter and Ellram, 2003), organizational competencies, intelligence information, and human skills and knowledge (Hunt and Davis, 2008). For example, 3D designs toolsets, professional talents, and cloud-based platforms systems all become competitive resources for apparel companies (Larocheski, n.d.). Apparel companies can enhance their corporate competitiveness, increase the value of the supply chain, and implement corporate social responsibility through these innovative and competitive resources (Khurana and Ricchetti, 2015).

Method. To achieve the objectives of this study, a case study approach was employed. A digital leader (Company A) was chosen because it has built a cutting-edge custom smart factory and platform system to integrate an end-to-end solution for their digital transformation. Company A, a public company with 3,000 employees, has been exploring best practices in digital transformation for 20 years. We conducted an extensive content analysis from Company A’s website and other materials and semi-structured interviews with two participants in the design

department, including a creative director and a designer. Interviews lasted approximately 1.5 hours via Internet phone. For data analysis, we coded the interview data for emergent themes using constant comparative analysis, which allowed similarities and differences between cases to develop and then be interpreted (Creswell and Poth, 2016). A three-cycle data analysis approach was used to check for necessary qualitative reliability by allowing the researcher to reflect on each cycle (Ha-Brookshire and Dyer, 2008). Three themes emerged naturally from these processes: (1) Changes in workflow leading to a competitive advantage for the design department, (2) Redefining the strategic goals of Company A's design department, and (3) The difficulties and challenges faced by the design department in the process of digital transformation.

Results. The findings of this study are noteworthy. First, designers must understand the new collaboration workflow in a leading digital environment. Company A created its own digital platform, XK, to incorporate PLM (Product Lifecycle Management) and PIM (Product Information Management) capabilities to assist customers to-sketch to-sales with one platform.

With real-time data and powerful analytics support, designers can access “customized trend reports, vendor information, and consumption pattern.” This requires designers to “interact with the platform,” “filter the dataset,” and “interpret the key information from various data sources.” The new collaboration workflow also anticipates designers will hold the knowledge of the entire product lifecycle and adopt new changes quickly. When creating a new product, designers must think about “how products will be presented in pictures or videos” and “what would be a good story to tell consumers on social media.” With the standard codes and automated add-on features, “the calendar of a complicated pattern has squeezed to 7 seconds.” Therefore, designers must adopt all changes quickly and “use standard codes to communicate with other departments.” With this collaboration workflow, designers in Company A are more like “product managers”. These designers need to utilize the platform to close the loop from “production to sales to post-sales analysis.”

Second, companies must redefine the function of their design departments. Digital transformation is a long and challenging journey into uncharted territory. Designers are no longer only dealing with “the creative process” and staying in “their own world.” Instead, designers must actively communicate with the IT support team, production teams, and supply team. One small change may end up in creating “a dozen of new codes.” Understanding what support and resources are needed for the design department is extremely important. This also indicates that designers need to equip themselves with strong analytical capabilities, logical thinking skills, and cross-functional soft skills. A digital leader in fashion must view design as a marriage of “art and science.” Meantime, design departments must clearly understand “the strategic goals and priorities” of a company's digital transformation.

Third, there are many difficulties and challenges for designers in the process of digital transformation. Designers need to learn how to apply “traditional design skills” in a “fast-moving” and “digital-driven” environment, such as how to translate design concepts to standard codes in a system. The current design curriculum does not provide enough resources and knowledge to address this issue. More importantly, for most designers, there is “a lack of vision and understanding of the nature of digital transformation in fashion.” While most fashion design courses still focus on crafts and creativity, the fashion industry requires designers to interpret complex data from vendors and consumers and understand the entire product lifecycle.

Discussion. According to the RA theory, Company A has “achieved milestones” in its digital transformation process because of its self-developed platform, real-time data resources, workflow redesign, and the development of designer capabilities. It is worth noting that the most prominent skills for the designer role are integrative skills in digital apparel companies. This means that the industry now needs design talents with expertise in, data thinking, and platform interaction skills to address industry, business, and technology challenges more effectively. This study is one of the few that examines the evolving role of design function in the digital transformation of the apparel industry. The findings of this study could help apparel design professionals, educators, students, and job seekers better understand what design function needs to be developed to overcome the digital age challenges.

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