

## **Core Intelligences for Interaction Fashion Design -Fashion Design Involves Hard-to-Automate Human Natures and Skills-**

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In the apparel and textile industry, globalization has sent labor-intensive design works from developed countries to developing countries. Technology has automated know-how work as well as labor-intensive work by transferring it into machine and/or electronically powered system (Samson, 2004). This transitional situation leads to a question of what competency should be encouraged to accentuate to reflect the changes within fashion design field. For the purpose, this paper attempts to examine the core intelligences that the fashion design should promote to prepare for the future. The exploration of the attributes of apparel products, as the content that the fashion design promotes, provides the foundation for the discussion. The natures of design process and fashion design study are also discussed to draw conclusions.

Clothes are appreciated at the level of their formal, expressive, and symbolic qualities by different agents in different manners. Formal qualities of clothes are recognized mainly through visual and tactual sensations and perceived as the concrete reality. The emotion conveyed through clothing is developed to symbolic meaning to the clothing. A concrete reality of clothing as a physical representation of an idea becomes an abstract reality what it is intended to represent. This abstract reality of clothing often comes to be comprehended as essential, that is, more real than the physical reality of the cloth itself. Assigning and interpreting the meaning requires cognitive processes of the participants being involved in the use context. A designer's creativity facilitates design possibility in forming clothes by allowing him/her to utilize the formal, expressive, and symbolic elements found in the surrounding world with sensitivity, to absorb impressions from every experience, and to bring these impressions to the subconscious mind where he/she creates form for a new entity seeing a new relationship.

Once a designer takes their inspirations to the next design process, critical thinking is essential for an effective interaction for application in selecting materials, forming a prototype, analyzing the relations for solving, verifying the solutions with rationales, judging, and finalizing the

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prototype for production. Critical thinking helps designers to examine underlying assumptions and to infer their effects. Heuristic, reflective, and holistic approaches are encouraged in deciding for the use-oriented qualities of product. The needs for active interaction between different areas of the design process have arisen as the economical, social, and technological changes have greatly affected over the ways that the apparel and textile industry works. This interaction requires fashion designers to utilize the advantages of human natures and skills where machines are not be superior to human abilities such as subjective decision-making, valuing, judging, and/or social skills.

In 1995, the International Textiles and Apparel Association (ITAA) offered a framework of competency for students in the apparel and textile discipline. It includes problem solving, analytical thinking, policy and ethics, communication, human behavior, aesthetics, merchandising, cultural diversity, global interdependence, and professional development. The key clusters of intellectual competency required for a fashion designer includes a good aesthetic, ideation ability, verbal/visual communication skills, fabric/trim sourcing skills, technical knowledge, business sense, etc (Tam, 2003). Cho (2005) emphasized the importance of understanding human phenomena generated within a society for a designer to enhance his/her design competency. She viewed a fashion designer as an active agent who both interprets and conveys the social subjects generated within the society through fashion design. In forming the practical ends of apparel products, a designer's intellectual interests should be centered on the human being. This inquiry focus on human is necessary for a designer to develop professional responsibility, which can be nurtured on the bases of good ethics. Design aims ultimately to improve the quality of human life through the excellence of design (Cho, 2004).

In summary, creativity, critical thinking, and cognition are critical for developing of intellectual inquiries in interaction fashion design. A heuristic, reflective, and holistic approach helps designers to cultivate a love for intellectual inquiry, to synthesize available resources and to evaluate the design outcome. As such, designing is a process requiring designers' human nature of conscious perception to add value to a thing and/or a phenomenon, to sense and to imbue a meaning to it. Despite the revolutions driven by the technology, it is hard to automate the whole design process in a machinery system because it requires human conscious perceptions of creativity, critical thinking, cognition, ethics, subjective decision making, valuing, judging, social skills, etc. These human abilities are critical factors that lead a fashion designer to a success and should be valued within the future fashion design world. Designing involves human natures and skills that are hard-to-automate.

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