

Forming design ideas for printed clothing mechanisms in light of the design thinking approach

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Abstract:

Introduction: The design process is considered "the creation of a plan to achieve a goal, system, or human interaction." In general, printed garment design is a creative activity that draws on stated needs and existing knowledge to create a product that meets those needs. It represents innovative visions on the part of the textile designer. By creating multiple design ideas that have the ability to meet the human and technological needs required for products to express relationships and surrounding conditions within an innovative design framework that combines art and science. In art (and design), the original creator is not just a talented person, but a person who is successful in arranging a number of activities to achieve specific goals, and art is the result of these activities. As Van Gogh noted, "It is not enough for an artist to have a particular skill; it is the long contemplation of things that matures him and gives him the deepest understanding". Therefore, the innovative process in designing clothing-printing products in particular is an important fundamental point, as the design must stem from its aesthetic aspect. This aesthetic function cannot be achieved unless the designer is a talented artist with a distinct creative vision and thought. This makes the conversation turn towards the aspect of imagination, which Albert Einstein said is more important than knowledge, and Clarence Darrow said about thought, "To think is to be different." This confirms that imagination... thinking... an active mind... staying away from stereotypes... a person must always think and try to innovate in every new work, as John A. Arnold says, "All people are born with a full capacity for creative activity." For a textile print designer to come up with creative vision for design thinking, As a link that coordinates and takes the role of a leader in linking all the objectives of the printed clothing product through the ideas and methods used, represented in the form, materials and colors, and combining them to reach the aesthetic, social and economic needs, creativity is achieved in the design thinking of textile printing with the presence of uniqueness in one of the intellectual, artistic or scientific aspects or all aspects. It is necessary for design to keep pace with the available and constantly renewed means so that the outputs keep pace with technological progress in the various fields that interact with design.

Research Problem: 1. How can design thinking be systematically applied throughout the design stages of garment printing to ensure competitiveness? 2. How can analytical studies of consumer behavior be employed to keep pace with the rapid pace of cultural change and develop a garment printing design methodology that meets local and global needs?

Research objectives: The research aims to: 1. Establish a conceptual framework for design thinking terms as a creative approach that focuses on people as the focus of innovation. 2. The feasibility of applying the creative thinking approach to innovative design ideas, including the aesthetic and economic values of textile printing products. 3. Develop an interactive design model in partnership and a design methodology for clothing designed to meet future competitive requirements.

Significance of the Research: The importance of the research lies in: 1. The need to update a model for the design innovation process in the textile industry to keep pace with contemporary challenges and ensure the success of printed clothing products locally and globally. 2. Formulating a new vision for print design based on design thinking to enhance the innovative value of textile printing design output, adapting to diverse consumer tastes. 3. The importance of scientific evaluation along with the use of modern technology to leverage knowledge and skills to generate new design solutions in the field of garment printing design.

Research hypotheses: The researcher hypothesizes that: 1. Adopting a design thinking methodology in

formulating design solutions for garment printing contributes to a qualitative improvement in the product through flexibility in responding to modern societal and digital changes and achieving technical and economic design efficiency 2. Developing a unified design system that links textile and garment printing, which can provide innovative solutions to textile industry challenges, achieving the highest quality standards at the lowest possible cost. 3. The experimental approach of textile printing designers using modern design techniques represents an effective mechanism for renewing printed garment design, a methodological framework for keeping pace with global requirements, and a strategic tool for achieving consumer satisfaction and global competitiveness.

Research Limits: 1. Temporal Limits: The research is limited to contemporary fashion trends for both genders aged 20 to 30. 2. Spatial Limits: The study focuses on application in the Arab Republic of Egypt, by creating printed clothing designs that achieve flexibility for both genders according to local and global consumer tastes. 3. Objective boundaries: Design thinking terms and its applications - A study of fashion trends in clothing print designs - The researcher's practical design ideas.

Research Methodology: The researcher follows the following methods: 1. Descriptive Methodology: A descriptive study aimed at describing and gathering information about the relationship between creativity (as a mental process) and innovation (as a practical application), identifying the differences between design thinking (as a problem-solving approach) and design (as a final product), and applying design thinking as a methodology for the design process of a printed clothing product. 2. Applied Approach: Technical and applied studies explaining how to leverage design thinking as a methodology for garment printing design to develop the final product and generate creative design ideas for printed garments. 3. Analytical Approach: A specialized analytical and scientific study of local and global consumer behavior and design analysis to arrive at the creation of unique design ideas characterized by originality and contemporaneity.

Results: The researcher benefited from applying the design thinking approach to generate (19) proposed employments for print designs through a multidimensional design language that combines the positives of both authenticity and modernity, taking into account the fundamental issues that must be taken into consideration, such as the purpose of use, its uniqueness, its compatibility with public taste or its departure from the norm, and the flexibility of the design for implementation for women's and men's clothing.

Recommendations: 1- Focus on the role of textile designers in creating innovative solutions by fostering a human-centered culture that places the needs of end users in a continuous loop of design, solving collective problems, and engaging the designer closely with them. 2- Focusing on design thinking as a component of artistic creativity in graphic design by focusing on engineering thinking and design with the mechanism of combining consumer desires, technical ability, and what is technically and economically possible by adopting new consumption patterns with multiple uses of the implemented product. 3- Integrating the scientific disciplines of textile printing and clothing by balancing technology and creativity to create unique designs that combine beauty and functionality, thus supporting the industry in general in raising the level of the product using scientific principles and digitization to bridge the gap between local and global manufacturing. 4. Adopting design thinking within textile manufacturing organizations as a human-centered approach to collaboration, innovation, and meeting customer needs, thus achieving a competitive advantage. 5. Educating designers, design firms, and textile printing companies about the importance of an innovative approach to creating products that combine what is desirable from a consumer perspective with what is technically feasible and economically viable.

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