

The impact and application of material innovation on clothing design

Guo Hui, Asliza Aris, Rose Dahlina Rusli

College of Crative, Universiti Teknologi MARA, Shah Alam, 40450, Malaysia

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Abstract: With the continuous development and innovation of technology, materials science is also playing an increasingly important role in the field of clothing design. The emergence and application of new materials not only provide designers with more creative space, but also bring consumers a more comfortable, environmentally friendly, and personalized wearing experience. Materials are one of the main elements in fashion design. The innovative application of materials can enrich the connotation of clothing and highlight the artistry of clothing design. Its innovative applications not only include the positioning and theme of clothing design, the design transformation of raw materials, but also the application of non-traditional new materials and the use of material technology. Material innovation has become an indispensable part of contemporary clothing design. It has driven a comprehensive transformation in design concepts, manufacturing technology, and business models, and will continue to lead the fashion industry towards more creative, diverse, and sustainable development. On this basis, the purpose and significance of applying material innovation to clothing design are elaborated, and the characteristics of material innovation application are analyzed, and specific application methods of material innovation are proposed.

1. Introduction

Design is a process of creation, and the process of creation is also a process of continuous innovation. The most prominent performance in clothing innovation design is the innovation of clothing materials[1]. The innovation of clothing materials has two aspects, one is the development of new clothing materials, and the other is the re-design of existing clothing materials.

Design is about how to better meet our needs, more respect for humanity, and more respect for the environment around us. George Beylerian of Material Connexion, the world's materials research institute, has said that "the world seems to want an endless supply of new materials." The development of design requires the emergence of a steady stream of new materials, and the emergence of new materials promotes the innovation of design. The characteristics of the material itself affect the designer's choice of materials to varying degrees, and also directly affect the designer's expression of the design concept[2]. Accurate material selection makes the expression of the design concept more appropriate, and makes the "created things" more attractive. The main content of modern innovative design is the innovation of materials[3]. The designer's emphasis on material selection and the innovation and application of materials are a mutually promoting process.

2. Introduction to clothing materials

2.1 Content composition of clothing materials

Clothing materials can be divided into fabric and non-fabric two kinds, and the fabric can be divided into organic fabric, knitted fabric and nonwoven fabric three types. With the continuous progress of science and technology, there are now new textile fibers, such as natural colored cotton, Lycel, tencel and bamboo carbon fiber; Such new materials; Nonwoven materials mainly include leather products and other metals, plastics and other materials[4]. In addition, clothing materials also include accessories, such as lining, lining, padding and so on.

2.2 Properties of clothing materials

Generally speaking, clothing materials mainly include the following basic properties: (1) hygroscopic properties. Good hygroscopic performance can make people feel comfortable when wearing, absorb the sweat discharged by the human body in time, and regulate body temperature. (2) Thermal insulation performance. The more still air contained in the textile, the stronger the insulation performance. (3) Elasticity and strength. Usually, the elasticity of natural fibers is better, but the ability to recover is weak. And synthetic fibers have a very strong ability to recover. (4) Breathability. The strength of air permeability depends on the density, thickness and surface shape of the material. (5) Soft performance. The softness property is directly related to the thickness of the fiber and the hardness of the texture.

2.3 Development trend of clothing materials

With the development of science and technology and the increasing frequency of international exchanges, the art of clothing materials has become international, diversified and personalized, and the clothing materials show a trend of re-creation, and will develop in the direction of composite functions, and the materials will develop towards the trend of nature and environmental protection[5]. The renewal of clothing materials continues to promote the new process of clothing, and the clothing industry has entered the era of people to win.

When consumers buy clothing, the evaluation of clothing should be considered from the following factors: (1) the appearance of clothing aesthetic; (2) Safety and comfort of clothing; (3) the manageability of clothing; (4) durability and economy of clothing; (5) The popularity of clothing.

3. Characteristics of clothing material innovation

3.1 Artistry

In the process of clothing material innovation, designers should highlight the artistic characteristics of material innovation. In order to show a unique artistic effect, the designer should have a certain aesthetic and taste in the application of materials, and provide people with a feeling of beauty in clothing. In a way, fashion design is a form of artistic expression[6]. In the actual design, we should adhere to the innovative principle, implement the formal beauty design concept, and create a personal style of clothing. The innovation principle mentioned here is to endow materials with new connotations and artistic forms on the basis of respecting raw materials. In addition, it is necessary to ensure the contrast and balance between beauty and rhythm, and integrate these contents into the material combination work to make clothing design innovative and

unique.

3.2 Diversity

The diversity of clothing material design is mainly the diversity of methods and effects. It is necessary to use different means and expressions to design works when innovating clothing materials, which not only gives the connotation of the work, but also brings more choices to consumers to ensure that everyone can choose clothes that they are satisfied with[7]. Because the different materials and fabrics of clothing also produce different characteristics and functions, they play a crucial role in the formation of clothing style, and further make the clothing design towards a rich and colorful and harmonious and unified direction, only after in-depth understanding of some materials, can carry out regular creation. This requires a comprehensive integration of innovative thinking and technical means, and continuous processing of materials, so as to form a very comfortable and beautiful new material[8]. The quantity of clothing materials in China is huge, and each designer has different design concepts and means, and the works designed will also present diversified characteristics.

3.3 Ecology

In recent years, China's environmental protection industry has developed rapidly, and the concept of ecological environmental protection has gradually penetrated into various industries. For clothing design, material innovation is also needed to highlight the ecological characteristics. When making innovation, designers should consider the identity and status of the wearer, coordinate various factors, and perfect design products should be able to resonate with the environment, integrate into the surrounding environment, have unique connotations, and show a new artistic conception[9]. In the innovative application of materials, it is necessary to respect nature, avoid damaging and polluting the surrounding environment, so that clothing design has the ecological concept, and promote the sustainable development of the clothing design industry.

4. Innovative application of materials in fashion design

4.1 Vigorously develop new clothing materials

In modern society, people's demand for clothing is no longer satisfied with the function of keeping warm. At the same time, they need to highlight their identity and status through clothing and show the beauty of various kinds of clothing. Therefore, clothing designers should keep pace with the development of The Times and improve and innovate according to people's thoughts and needs. It is impossible to improve clothing design only by relying on traditional materials, which requires designers to give full play to their creativity and devote themselves to the development of new clothing materials to better achieve the purpose of innovation.

Clothing made of new materials can bring strong visual impact to people, and consumers may have emotional resonance with designers when buying and wearing this type of clothing. For the new clothing materials developed by modern cloth production technology, designers often take vision as a breakthrough point, and integrate modern art concepts such as exaggeration and abstraction into clothing design, so that materials with different properties can show unique artistic value. The fabrics used in the clothing are artificial fur, ultra-light yarn and memory yarn. Adhering to the consistent concept of environmental protection, the purposeful selection and selection of materials create a new dressing state, create a special situational effect, give full play to the plasticity of materials, and highlight the special form texture and details through the fabric material,

making the clothing show a different side from the past.

4.2 Use of high-tech materials

The development process of clothing materials is very long, from ancient animal skins and leaves to modern society's silk and hair to chemical fibers, as well as high-tech clothing materials that are currently being developed. Clothing materials are closely related to productivity, science and technology, for example, ancient clothes are usually made of linen and silk, and most clothing materials in today's society are fiber, which is because the development of modern social productivity, the use of fiber is more convenient and affordable than the use of linen and silk, reducing the cost of clothing design[10]. In addition, the current popular space cotton refers to the temperature-reducing characteristic material, space cotton has many advantages, and the fluffy feeling of the material gives the clothing another sense of beauty to a certain extent. Fashion designers should pay attention to the development of science and technology, apply newly emerging materials to clothing design, integrate technological progress with clothing innovation, and promote the reform and innovation of clothing design.

4.3 In-depth study of traditional materials and re-creation of them

Clothing is a necessity in human life, the designer's creative concept, technical means directly affect the visual effect of clothing, if the designer in the design process does not carry out reasonable creation and research of materials, not only will affect their own design results, and can not bring good visual feelings to the public. This requires designers to find more creative inspiration when innovating clothing materials, and achieve more ideal innovation in the shortest time. Designers should strengthen the study of traditional materials in the design process, on this basis, the traditional materials are created twice, fully reflect the artistic characteristics of traditional materials, integrate with the characteristics of the development of The Times, and inherit and carry forward the traditional materials.

Secondary creation is manifested in changing the original external second of the material, integrating modern elements with static materials, highlighting the three-dimensional and dynamic nature of the material, and effectively improving the overall design effect. In the process of creating and innovating traditional materials, designers need to transform the composition of materials in the process of material production. It should be noted that in the design of clothing materials, hollowed-out and superposition methods can be properly incorporated to show the three-dimensional characteristics of clothing materials, so as to enhance the beauty of the entire design. In addition, the secondary design of traditional materials can highlight the clothing design culture. Relevant designers integrate the elements of traditional materials into the clothing design, fully highlighting the charm of traditional culture, making the clothing works more artistic, meeting people's requirements for clothing design, and aiming at reasonable innovation and reconstruction of clothing materials.

4.4 Use unconventional materials

Designers correctly use anti-traditional materials in the design process, based on the concept of modern art, emphasize the unique artistic value of clothing, can give people a unique feeling, and achieve the purpose of material reuse. It is difficult to design clothes that fully meet people's needs using existing materials, so clothing designers need to pay attention to the development of materials and carry out reform and innovation in this field. In addition to the in-depth exploration of traditional materials, secondary innovation and creative reuse of traditional materials, fashion

designers should also actively study and apply anti-traditional materials, carry out innovative applications of anti-traditional materials in the process of clothing creation, and achieve aesthetic breakthroughs based on the innovative use of anti-traditional materials, so as to provide different aesthetic feelings to the audience. Designers should integrate a variety of ideas into clothing, so as to improve the development level of clothing art and the creative level of clothing design.

Designers should explore and develop anti-traditional materials from different artistic concepts and materials, enhance the artistic value of clothing in the design process, and make clothing design more distinctive. Fashion designers should understand the characteristics and connotation of fashion design, pay attention to their own personality and inner feelings, in order to play a good visual effect. Compared with developed countries, China's garment industry still has a certain space for development. Injecting green concepts and traditional cultural elements into the material innovation process not only has the significance of The Times, but also can improve the level of design materials. Therefore, designers should actively develop anti-traditional materials and integrate them with traditional cultural elements.

5. Conclusion

With the development of social economy and the integration of diverse cultures, contemporary clothing design must be consumer centered, and clothing materials have become the focus of attention for clothing consumers, naturally attracting high attention from designers. Innovation in clothing materials must take a new perspective, adopt new ideas, and unleash their unique charm. Researching new materials, filling gaps in existing materials, and transforming thinking patterns, secondary design of existing materials, exploring the other side of existing materials to achieve sustainability and multi-dimensional design, transforming new materials from nothingness into reality, boldly and fully interpreting the future direction and trend of fashion design art.

In the process of clothing design, the innovative application of materials is mainly to get rid of the application restrictions of traditional clothing materials and broaden the scope and methods of use of materials. Traditional materials can be designed and reformed, and new anti-traditional clothing materials can be used, and a variety of design techniques and elements can be integrated into clothing design to better integrate materials. The innovative use of materials can not only enrich the forms of clothing creation, but also make clothing design more diversified and novel, and provide designers with more free space for creation, so that the designed clothing products have a higher sense of hierarchy and aesthetic sense, and can meet the personalized needs of different consumers.

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