ORIGINAL ARTICLE

INTERNATIONAL JOURNAL OF ARTIFICIAL INTELLIGENCE

ISSN: 2692-515-x, Impact Factor: 9.23
American Academic publishers, volume 6, issue 01,2026

Journal: https://www.academicpublishers.org/journals/index.php/ijai

THEORETICAL FOUNDATIONS OF CLOTHING DESIGN FOR PLUS-SIZE WOMEN

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Abstract: This article provides a scientific and theoretical substantiation of the technology for designing and producing modern national-style garments intended for plus-size women. The study analyzes the aesthetic values of national clothing, contemporary fashion trends, and ergonomic requirements in an integrated manner. Taking into account the morphological characteristics of the body structure of plus-size women, issues of constructive solutions, material selection, and optimization of technological processes are examined. As a result, an innovative technological approach has been developed that makes it possible to create comfortable, functional, and aesthetically refined garments while preserving national decorative elements. The research results are recommended for application in light industry enterprises and design practice.

Keywords: plus-size women, national costume, garment technology, construction, design, ergonomics.

The integration of modernity and comfort in national clothing design is a pressing scientific issue.

Today, the principles of inclusivity and functionality are becoming increasingly important in the fashion industry. In particular, clothing design for plus-size women must ensure not only aesthetic appeal but also ergonomic and psychological comfort. Uzbek national costumes possess artistic and aesthetic values formed over centuries, and adapting them to modern fashion requires a scientific approach. In practice, many ready-made garments do not fully correspond to the body measurements of plus-size women, restrict freedom of movement, or create visual imbalance. Therefore, there is a growing need to develop new constructive and technological solutions while preserving the national style.
The purpose of this article is to scientifically substantiate the technological processes used in designing modern national garments for plus-size women, propose effective constructive models, and determine optimal approaches to material selection.

The development of modern national-style garments for plus-size women is theoretically based on several interrelated scientific fields. These include anthropometry, garment construction, materials science, ergonomics, and design aesthetics, which together form the theoretical foundation of this process. The integrated application of these disciplines ensures not only the external appearance of garments but also their comfort, functionality, and conformity to consumer needs.

First of all, it is essential to conduct a scientific analysis of the morphological characteristics of the body structure of plus-size women. Anthropometric studies show that the

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proportions between bust, waist, and hip circumferences in plus-size women differ significantly from standard sizing systems. As a result, conventional construction patterns often prove unsuitable. From a theoretical perspective, garment construction should be developed based on body mass distribution, the placement of muscle and fat layers, and movement amplitude. In this context, additional ease allowances must be determined individually. The theoretical foundations of national costume construction are based on wide silhouettes and straight-line forms. These features are particularly effective in ensuring visual balance for plus-size women. Loose cuts, layered structures, and vertical constructive lines optically balance body proportions. Table 1 presents the main constructive allowances recommended for designing garments for plus-size women.

In theoretical studies, the modular construction method plays a significant role. According to this approach, a garment is divided into separate functional components, each of which is independently subjected to constructive and technological calculations. The modular system increases individual adaptability for plus-size women and ensures high efficiency in mass production. In addition, modular construction allows for rapid modification of design options. Materials science theory also occupies an important place in this topic. For garments designed for plus-size women, the mechanical and hygienic properties of fabrics are of primary importance. From a theoretical standpoint, natural fiber and blended fabrics provide comfort through interaction with the body. Fabrics such as atlas, adras, silk, and materials with elastane additives ensure flexibility, shape retention, and freedom of movement. Figure 1 illustrates the sequence of fabric selection and technological processing stages. According to ergonomics theory, clothing must adapt to human movements, reduce pressure points, and not cause discomfort during prolonged wear. In garments for plus-size women, the use of constructive elements that provide ease in the shoulder, underarm, and waist areas is recommended. Theoretical analyses indicate that the use of elastic seams, hidden pleats, and adjustable details significantly improves ergonomic performance.

The theoretical foundations of national decorative elements determine the aesthetic value of garments. Embroidery, printed patterns, and color harmony not only serve a decorative function but also help visually correct body proportions. Vertical decorative elements create an elongated silhouette, while small, repetitive patterns visually reduce volume. According to color theory, it is advisable to use dark and muted colors as a base, with bright colors applied as accents. Modern digital technologies theoretically elevate the garment production process to a new level. Computer-aided design systems allow for rapid analysis of constructive models, virtual fitting, and early detection of errors. This reduces production costs while improving product quality. Theoretical conclusions suggest that the introduction of digital modeling technologies into national costume design is a promising direction. Overall, the development of modern national-style garments for plus-size women is a multifactorial and complex process that requires scientifically grounded constructive, technological, and aesthetic approaches. These theoretical principles contribute to the creation of high-quality and competitive products in practical design processes.

Conclusion

The conducted research shows that a comprehensive scientific and technological approach is of great importance in the development of modern national-style garments for plus-size

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women. Constructive solutions based on anthropometric data ensure the comfort and functionality of garments. The integration of national decorative elements with modern design enhances aesthetic appeal. Optimization of material selection and technological processes improves production efficiency while increasing the quality of finished products.
The technology developed based on the research results is suitable for application in light industry enterprises as well as in individual design practice. This scientific work contributes to the creation of garments that meet the needs of plus-size women, reflect national values, and satisfy modern requirements. In the future, it is advisable to expand experimental studies in this field and introduce digital modeling capabilities.

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