INNOVATIONS IN DESIGN AND TECHNOLOGY FOR TRADITIONAL TEXTILES

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Abstract
Innovations in traditional textiles are the tools for the new approaches and innovative aspects in the field of designing. Innovative approaches and skills play a significant role for the development of new designs in traditional textiles. It includes the ideas, skills and innovations in this field. In recent times it is an innovative field of knowledge for designers to develop their imaginations for enhancing the demand and uses of traditional textiles. It aids new look and styles with the adaptation of new innovative technology and Designing. It is the great opportunity for the designer to develop the scope for traditional textiles. It is very important to provide innovative designs in traditional Textiles for enhancing their demand in the international market. With the help of some innovations in textile designing and technology to increase the speed and accuracy. Reusing and Redesigning are useful to minimize the textiles waste, such innovative techniques provide the new identity to Indian textiles.

Key words: Design development, innovative skills, textiles, technology

Introduction:
Innovation means the process brings together innovative ideas and solutions that help to meet new requirements and the solution of those problems already existing in society. The term innovation refers to discovering innovative ideas and methods that have a positive impact on society and craftsmens.

New Innovation in the field of textile designing is the great step to develop the strong and sustainable practices in the field of textile.

Well said by Hon’ble Minister of State for Textiles" while fresh and unique ideas are the seed for development of a culture of innovation, commercial feasibility and adoration of these innovations is the fruit", All innovations are helping in boosting the performance and national competitive growth of the country.

Objectives of innovation action plan:
The Ministry of Textiles released an innovation action plan (IAP) for enabling innovation on 17th May, 2013. The objective of the API are followed;

- To develop the system to receive, encourage and reward innovative ideas.
- To get the solutions for the problems related to textile design and technology.
- To promote sustainable innovation for the environment.
Need of innovations in textile designs and technology:

To improve the working environment and conditions of workers.
To Develop new designs of the products with improved functional properties and performance.
To Improve the efficiency and productivity of workers.
To Develop low cost practices.
To Develop advanced and fast technology.

Innovations in the textile designs and technology:

**High speed charkha:** The charkha provides the livelihood for many handloom weavers. The conventional charkhas working were very slow and the productivity capacity was very limited. Advancement in the technology of charkha is a great initiative taken for the workers who are directly and indirectly associated with this craft. To increase the speed of the charkha gear system was introduced.

![Charkha](image)

**Reusing textile waste for reducing textile waste:** Many researchers, textile manufacturers and fashion brands are working on developing innovative techniques to reduce the textile waste. These techniques are totally environment friendly. Levi's is known for denim manufacturing. It started to develop the first jean by using the recycled 100% cotton old T-shirt in 2016. Levi's is targeted now all its products are made with 100 recycled cotton by 2025. Many other brands like Mango and Zara also use organic fabric in their products.

**3D Printing Technology:** is an innovative technology, it is not only fashionable and styles along with it is also a sustainable technology. 3D printing is very helpful in minimizing the waste. The designers develop the print according to the trend, discarded fabric can be melted and produce a new batch of clothes. The designs of 3D printing are very suitable for youngsters.

**Sustainable Packaging material:** In India most of packaging materials are made from plastic and these plastic waste pollute the environment in many ways. So now many companies and brands are switching to bio- packaging. India's many brands like Doodlage convert its waste and left-over material into the smaller size accessories. Other designer brands like Was A Sari, The Summer House, Sui etc also promote the bio- packaging.
Innovations in traditional embroidered articles: Kantha is a traditional embroidery of Bengal. Layers of old cloth were used for this embroidery and running stitch is mainly used. Traditional Kantha embroidery were made for personal use not for sale but now the time various products to be developed by this embroidery like cushion cover, bags, stoles, bags, bedsheets and sarees etc. These traditional embroideries have been highly appreciated for their stylized motifs, vibrant colors and variety of products range in the international market.

Zardozi Work is beautiful traditional metal embroidery, which is used to embellish the costumes of kings and the royals in India. Zardozi artisans were working on Khatali with ari needle for more than 8-9 hrs. Khatali is also called the Addaa. The NIFT students redesigned the Khatali for providing the proper working position to the craftsmen.

Improvisation of handloom and their parts: Frame loom is used by the weavers. The operation and working of the frame loom is not comfortable for weavers. The Frame loom is re-designed for the weavers to avoid the unnecessary fatigue and other health related issues. Redesign frame is very convenient for the weaver; it provides a comfortable and better sitting position to the weavers.

Multiple box looms: traditional looms have been placed in a single shuttle. Shuttle refilling and reloading leads to the wastage of time. In order to reduce this wastage of time some modifications have been adopted with the use of multiple box looms using two shuttles. In the weaving process when the first shuttle is to be stopped, the second shuttle automatically starts without stopping the loom. In the meantime empty shuttle can be refilled in the loom.
Suggestions:

- Multipurpose garments or textiles may be developed like mufflers can be used as the stole as well as a rapron skirt and top.
- It is required to minimize the textile waste produced at various stages of garments manufacturing.
- Sustainable approaches may be used for the safeguard for environment.
- Advanced technology to be developed like robotic technology may be used for garment manufacturing processes.
- Intelligent machinery to be developed for various functions of garments manufacturing like; automatic cutting devices, automatic button feeder machines etc.
- Eco-friendly textile materials to be invested.

Conclusion: innovation in the textile sector provides the new technology and comfortable working environment to the artisans. Innovative sustainable practices are introduced which are totally eco friendly. It discovered many steps for improving performance, better working conditions, and new opportunities for the development of texting designing. The main focus is to improve the competitive growth of Indian textiles and handicrafts on the international market. Many National Institutions of India and Textile research associations, Development commissioners of handloom and handicrafts are conducting innovations in the field of textile.

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