Abstract

The fashion products of India are created through fusion of modern technologies and traditional craft skills. Crafts are not only bearer of Indian heritage but also the foundations of modern design innovations. This paper discusses the central role of the crafts as sources of inspiration for the Indian fashion designers. It highlights the role of the National Resource Centre (NRC) with its network of Resource Centres of the National Institute of Fashion Technology (NIFT) in collecting and preserving heritage resources through the applications of ICTs. The initiatives of NRC in developing a digital National Design Repository (NDR) with its constituents are discussed in details. The development of Shilpakala Jnana Kosha, a digital repository of tacit craft knowledge of artisans with applications of KM technologies has also been explained. The objectives of these initiatives of NIFT are to preserve the endangered traditional skills from extinction, infuse a process of revival and optimize utilization of traditional crafts in contemporary fashion design.

Introduction

The soul of Indian fashion design lies in its rich cultural heritage. Indian civilization with its immense diversity and a history spanning centuries has developed its own language of colour, structure and form expressed in innumerable rituals, objects, art forms and performances. Unlike the West where the position of the craft is quite ambiguous in the world of art, ‘the Indian tradition always held art and craft as one unified whole’\textsuperscript{i}. The Sanskrit word Kala represents both. As a natural corollary, ‘Indian crafts form the core foundation of design culture in India as they use a wide range of inherent skills and technologies in various forms’\textsuperscript{ii}. The public and private design initiatives, enterprises and modern Indian design pedagogy are leveraging traditional knowledge to innovate and gain leading edge in the
global economy. The indigenous craft remains the USP of the Indian fashion brand. The National Institute of Fashion Technology (NIFT) established in 1987 has been engaged in developing the Indian fashion idiom through training young fashion designers in humanizing design with culture and emotions. The Institute has consciously initiated a plan to develop a repository of traditional craft resources through its network of Resource Centres co-ordinated by the National Resource Centre. The real challenge for the information professionals lies in applying ICTs for preservation of the endangered craft skills and dissemination of the information for benefit of both the uneducated artisans and the modern fashion entrepreneurs for contemporary adaptations. This paper focuses on the designer of clothing & textiles due to the simple reason that ‘fashion is the most obvious expression of design in India’

The design process & Indian fashion designer

The design process in fashion begins with research and observation. The uniqueness of the creation of a designer lies in his or her interpretation of design sources. Sources of inspiration exist throughout everything and should be infused in the design process so that it becomes constant in the creative process. Anything visual or tactile, in fact sensual, can be a source of inspiration in fashion design. The sources of inspiration play the following roles:

- Increasing originality and creativity
- Making the design process easy
- Deriving harmonious colour schemes
- Maintaining harmony and uniformity of the collection
- Deriving technical acumen from products inspired
- Understanding the Fashion appropriation of the season
- Increasing aesthetic understanding of designers
- Drawing the borders for the design framework

World over designers of clothing and textiles draw inspirations from current garments, historic and ethnic costumes, fabric materials, artworks including paintings, sculpture, architecture, literature, movies, music, theater, natural objects and phenomena.

Symbiotic relation between Indian crafts & fashion design

Typically, Indian fashion designers also cull their design ideas from all of the above sources. However, crafts play the most important role compared to any of the other sources of inspiration. In this paper the term ‘Crafts’ is used to mean those activities that deal with the conversion of specific materials into products, using primarily hand skills with simple tools and employing the local traditional wisdom of craft processes. Crafts are not only bearer of Indian heritage but the foundations of (design) innovations of tomorrow. Koshy offers the following reasons to explain the centrality of crafts in Indian design:

- Crafts form the core of a culture and also its best form of sustainability
- Crafts provide a differential advantage to (Indian) design through ‘sense and sensitivity’ of encoded tacit values and aesthetics
- Crafts provide a connection to the heart unlike any other expression
- Crafts create a sense of continuity in a rapidly dematerializing world thus bridging the visceral with the virtual
In India the crafts and the design sectors share a symbiotic relationship. Through the craft linkages the designer connects with the natural world and the collective past. The craftskills of the past are adapted to contemporary design needs while ICTs are applied for fusing the past with the present at various levels from inspiration, visualization, manufacturing to marketing. The designer also fulfils developmental and the Gandhian patriotic responsibilities through her or his association to crafts. The assimilation of design language leads to renewal of the craft traditions and ensure the sustainability of our living crafts legacy. Identified in opposition to industrialized, faceless, mass-produced manufactures, support for craft producers and objects, it is believed, can halt the relentless spread of capitalism and new forms of imperialism.

Crafts atlas of India

In this colourful country of 18 major and 1600 patois and dialects, six major religions, six major ethnic groups, 52 major tribes, 6400 castes and sub castes and over a billion people the number of living and dying crafts are innumerable. Indian craft traditions are influenced by the local topography, climate, and socio-religious factors. Widely dispersed across different states of India, each one specializes in one or other type of craft activity. Incidentally, the Government of India has two separate boards for handicrafts and handloom sectors. These two together constitute the crafts sector that plays a vital role in the Indian economy, contributing significantly to employment and foreign exchange. The handlooms is the second largest employer in India and the number of people employed (directly and indirectly) in Handicrafts sector is estimated to be around 6.2 mn, with an annual growth of about 2.5%. The following table lists the major clusters/regions for the production of craft items in India.

<table>
<thead>
<tr>
<th>Craft Items</th>
<th>Regions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Metal ware</td>
<td>Moradabad, Sambhal, Aligarh, Jodhpur, Jaipur, Barmer, Delhi, Rewari, Thanjavur, Chennai, Mandap, Beedar, Jagadhari, Jaiselmer</td>
</tr>
<tr>
<td>Wooden Art wares</td>
<td>Saharanpur, Nagina, Jaipur, Jodhpur, Barmer, Hoshiarpur, Srinagar, Amritsar, Jagdalpur, Bangalore, Mysore, Chennapatna, Chennai, Mandap, Kerala, Behrampur, Ahmedabad, Rajkot</td>
</tr>
<tr>
<td>Hand Printed Textiles</td>
<td>Jaipur, Barmer, Bagru, Sanganer, Jodhpur, Bhuj</td>
</tr>
<tr>
<td>Scarves</td>
<td>Farrukhabad, Amroha</td>
</tr>
<tr>
<td>Hand Knitted and Embroidered goods</td>
<td>Barmer, Jodhpur, Jaipur, Jaiselmer, Kutch, Ahmedabad, Lucknow, Jodhpur, Agra, Amritsar, Kullu, Dharamshala/Chamba, Srinagar</td>
</tr>
<tr>
<td>Marble and Soft Stone crafts</td>
<td>Agra, Chennai, Baster, Jodhpur</td>
</tr>
<tr>
<td>Papier Mache crafts</td>
<td>Kashmir, Jaipur</td>
</tr>
<tr>
<td>Terracota, Zari and Zari goods</td>
<td>Rajasthan, Chennai, Baster, Surat, Bareilly, Varanasi, Amritsar, Agra, Jaipur and Barmer</td>
</tr>
<tr>
<td>Imitation / Fashion Jewellery</td>
<td>Delhi, Moradabad, Sambhal, Jaipur, Kohima</td>
</tr>
<tr>
<td>Leather goods</td>
<td>Kolhapur, Indore, Barmer, Shanti Niketan</td>
</tr>
<tr>
<td>Sarees</td>
<td>Bhubaneswar, Berhampore, Cuttack, Bolanir, Bankura, Baluchar, Murshidab, Shantipur, Bhiwandi, Malagaon, Nagpur, Pune, Yeola, Ahmedabad, Bhuj, Cambay, Coimbatore, Karaikudi,</td>
</tr>
</tbody>
</table>
Kodalikaruppur, Kanchipuram, Kumbakonam, Rasipuram, Salem, Tirunelveli, Thanjavur, Taramangalam, Bangalore, Belgaum, Chitraguda, Dharwar, Hubli, Kolar, Mysore,, Guntur, Karim Nagar, Siddipet; Bhopal, Chanderi, Maheshwari, Jaipur/Saganer, Jaisalmer, Chitagarh, Jammu/Srinagar.

<table>
<thead>
<tr>
<th>Tie &amp; Dye items</th>
<th>Bhubaneswar, Berhampore, Cuttack, Bargarh, Bolanir, Bhuj mandri, Jamnagar, Patan., Po champally, Udaipur.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furnishings</td>
<td>Bhubaneswar, Berhampore, Cuttack, Naupatna, Bhagalpur, Patna, Dharbanga, Broach, Bawani, Chennimalai, Erode, Karur, Mallasamudram, Manamedu, Madurai, Nagercoil, Ilkal, Agra, Ghaziabad, Gorakhpur, Varanasi.</td>
</tr>
<tr>
<td>Shawls</td>
<td>Bagasara, Porbandar, Bilaspur, Camba, Kulu, Kangra, Manali, Simla, Jammu/Srinagar.</td>
</tr>
<tr>
<td>Bedlinen</td>
<td>Bankura, Dinajpur, Bhagalpur, Sholapur, Erode, Kallidaikurichi, Karur, Vellore, Tumkur, Bilaspur, Chamba, Kulu, Kangra, Karimnagar, Mangalagiri, Palakol, Sripuram, Yemminaganur, Agra, Farrukhabad,</td>
</tr>
<tr>
<td>Bath linen</td>
<td>Dharmapuri, Erode, Kallidaikurichi, Karaikudi, Mallasamudram, Nagercoil, Sundarapandium, Tirunelveli, Vellore, Gorakhpur,</td>
</tr>
<tr>
<td>Floor coverings</td>
<td>Adoni, Eluru, Kurnool, Warrangal, Bikaner, Amroha, Agra, Farrukhabad, Hathras, Jammu/Kashmir</td>
</tr>
</tbody>
</table>

**NIFT, the Crafts sector & Indian fashion design**

The National Institute of Fashion Technology (NIFT), established in 1987 has been producing fashion professionals who are holding key positions in the industry. NIFT has developed a design pedagogy that draws its basic inspirations from the traditional craft heritage of India. One of the main objectives of NIFT has been to blend modern technologies with traditional skills to present a contemporary fashion statement. The academic programmes are designed to turn global designers with international fashion sensibilities but firmly rooted on the Indian soil. NIFT continuously interact with the crafts sector through programmes built into the academic curriculum like field studies, internships, design projects, graduation projects and its cluster initiatives. However, it is the network of the Resource Centres, co-ordinated by the National Resource Centre (NRC) that is pooling and disseminating information to the designers, would-be designers and the entrepreneurs, that plays a pivotal role in building the bridge between the fashion world and the crafts sector.

**National Resource centre & its network of Resource Centres**

The National Resource Centre (NRC) with its 12 Resource Centres (RCs) contribute to shaping of the global Indian fashion designers with its storehouses of sources of creative designs and various services for information dissemination. RCs also familiarize the artisans occasionally with the modern design process thereby encouraging them to innovate and adapt global trends.
Collections of creative sources in Resource Centres

The Institute has a Resource Centre system with an integrated collection of documented materials and print and audio-visual resources, the only one of its kind in the subcontinent. In all the twelve centres, there are Resource Centres comprising collections of print including books, journals and other reference materials and non-print materials including audio-visual materials, costume, textiles and fashion accessories.

A scientific analysis of the sources of inspiration of the Indian fashion designers has led the Resource centres to collect information resources pertaining to the following areas:

**Historic & Regional costumes**: Designers are usually sensitive to the combinations of design elements and principles in each historical period of costume. Literature and audio-visual materials related to both Western and Asian period costumes from museum galleries, representations in sculptures, murals, paintings from historical monuments are all treasured in each Resource Centre. Each RC also showcases representative clothing traditions of every cultural region of India.

**Designer Garments**: Creations of contemporary Western and Indian designers are collected and widely used as sources of design ideas. The collections of designer garments at NIFT Delhi include works of leading Western and Japanese designers. Of the Indian designers the prized possessions are creations of Ritu Kumar, JJ Valaya, Manish Arora, Rajesh Pratap Singh, Geetanjali Kashyap, Sunita Shankar and others. All of them except Ritu Kumar were alumni of NIFT.

Print and online fashion magazines, designer catalogues, designer directories are all acquired by each Resource centre to educate the readers about current fashion trends.

**Artworks**: In design education the exploration of fine arts especially paintings, sculpture, architecture have played a significant role in the development of aesthetics. All the RCs have rich literature on Fine Arts and architecture. The Indian designer draws inspirations equally from the Gothic to Renaissance styles, Impressionists to post-Modern styles. The works of all Indian painters ranging from Nandalal Bose to Amrita Shergill to modern Gujral, Ganesh Pyne, Bikash Bhattacharjee, M.F Hussein and many others are referred to by the students and researchers in fashion design.

Visuals of works of all Western and Indian artists and catalogues of exhibitions are collected in the Resource Centres to generate creative ideas.

**Movies, television, dance & theatre**: Film costume designs set fashion trends throughout the world, more so in India. The larger than life images of the heroes and heroines exercise huge impact on the fashion preferences of the youth. The entertainment media with multiplying television channels bring global fashion to the bedrooms of average ordinary Indians. However, its not modern theater, but traditional dance forms and folk theatre with their typical costume and styles that inspire creativity in the designers. RCs collect rich literature and audio-visual materials on performing arts to instill creative thinking among the students of fashion design.

**Materials Collections**: Materials collection ranging from fabrics, leather, metals and alloys serve as an important source of inspiration. ‘Visual and tactile characteristics of materials, an
intriguing texture or interesting print might serve as the design foundation for a collection’. xii The infinite variety of Indian textiles have enamoured the whole world for centuries and now lends competitive advantage to Indian fashion products. All the Resource Centres collect representative samples of the whole range of cotton with typical regional textures and shades from Tamil Nadu, Andhra Pradesh, Madhya Pradesh to Bengal, silk from Assam, Bengal, Bihar, Maharashtra and Kashmir and all other natural fabrics from all the regions of India. These collections serve as the foremost sources of creative inspiration.

Craftworks: The Western designers club all the craftworks including traditional textiles of the original people of Asia, Africa, America and Australia under ‘ethnic’ inspirations. They draw design ideas from the traditional colours, motifs, shapes and spaces as tourists. But for the Indian designer craft is more than a source of inspiration. The craftsperson ‘combines within his being the tradition that embraces both the producer and the consumer within the social fabric.’xiii Realizing this strong bond each Resource Centre has developed special collections of samples of region wise representative crafts of textiles, embroideries, dyeing, printing, jewellery, metal crafts, leather works and many others especially from its own state. Besides works on Indian crafts by different authors, reports of field studies done by students and faculty on craft documentation projects are also goldmines of information.

Services for designers & would be designers

The Resource Centres(RC) offer all the regular library and information services including Reference service, Web OPAC, Online access to e-journals, databases & institutional repository, Articles Indexing, Current Awareness Service, barcode based Circulation service, Selective Dissemination of Information (SDI), inter library loan service and reprographic service to the users.

Special services to Craft Cluster Initiatives of NIFT

NIFT has been engaged in development of craft clusters since 2002 through intervention in business development services to promote these clusters for their distinctive styles for higher value realization in new markets and life-styles on a sustainable basis. Through a chain of design nodes at the rural level and design studios at NIFT centres the cluster project supports the artisans in product development, enterprise management, trend forecasts, market intelligence and linkages etc. The information needs of all designers and other experts engaged in cluster development initiatives are directly provided by the Resource centre in each centre.

Weaving a knowledge tapestry for the future: National Design Repository (NDR)

A National Design Repository has been envisaged by the National Resource centre for leveraging the potentials of Indian traditional arts and crafts to gain leading edge in the global design scenario. Till now the RCs have been functioning independently at local levels through primarily serving the urban designers who were referring to craft traditions as sources of inspiration. Thus the dialogues of the RC with the weavers or artisans are generally, indirect, through the mediation of designers or other cluster professionals. Interactions with the rural artisans are sporadic. NDR has been planned after realizing the benefits of a direct interaction with the craftsperson through an integrated information service at national level to reach the remote areas through applications of ICTs. The implementation is taking place through various phases.
Goals of NDR:
To preserve the endangered crafts of India and utilize the same for development of the modern Indian fashion industry

Objectives:
The objectives of NDR will be:

- Cater to the information needs of the producers, creators i.e., crafts people at the grass root levels directly and the designers and entrepreneurs in the urban areas.
- Develop an interactive digital repository of typical Indian motifs, patterns, techniques and skills in the manufacturing of various textiles and handicrafts.
- Promote fusion of traditional techniques with modern technologies by offering a forum of interaction to the craftsmen and the designers.
- Preservation of skills and techniques on the verge of extinction due to absence of patronage and market.
- Enhance marketability of craft products in the competitive global market.

Constituents of NDR:
In the initial phase NDR will integrate the resource pools of the network of the Resource Centres with the Craft Cluster Initiatives of NIFT. The Institutional repository of NIFT under construction, the regular information services of the Resource Centres will be integrated with other repositories of NDR. In subsequent phases NIFT will collaborate with other national bodies engaged in the development of crafts sector.

- Ministry of Textiles
- Export Promotion Councils
- Indira Gandhi National Centre for Arts
- National Museum & other museums
- Any private corporate body

Deliverables of NDR:
A plan to develop NDR in phases has been chalked out. The objective is to prioritize serving the thrust areas in craft sectors in view of threat of extinction to rare skills and techniques and identification of products with high marketability.

Phase I
In the initial phase following components of NIFT Institutional Repository will be developed.

E-Repository of craft documentation reports of NIFT:
Digitisation of craft documentation reports of NIFT students have already been initiated at NRC with contributions from all NIFT centers. At present only executive summaries are
uploaded. This repository will soon be upgraded to a full text e-repository of the project reports and other important craft surveys etc. These reports are valuable since these projects sensitize the young designers and their faculty about the materials and processes as well as local culture, socio-economic and historical milieu wherein the crafts are located.

**Virtual Swatch Library:**

NIFT Resource Centres have fully documented collection of representational fabrics from all over India. An image database of the swatch collection with technical details are being developed. Subsequently additions from various craft clusters will also be available for reference.

**Indian Fashion Museum:**

An image database of costumes/textiles/accessories of India belonging to different historical periods to the contemporary held in slides, videos and CD collections of Resource Centres of NIFT is under construction. Links to other costume and textiles museums and other institutions are also provided.

**Trend forum:**

Trend information is vital for fashion industry and can benefit the artisans if interpreted to them in their languages. NDR will provide access to trend information regarding colours, fabrics, silhouette and business trends to the weavers and artisans for product differentiation.

**Phase II**

In this phase following projects which demand vast resource mobilization and documentation expertise will be taken up:

**Indian Design Bank:**

An image bank of motifs and patterns typical to each regional specific craft of India is under construction. The objective is to preserve the originality of each pattern in the danger of extinction and mutation due to external influences in each geographical region. This image bank will serve the cause of the artisans in registering for Copyright and Geographical Indications protection.

**Indian Regional Costume Repository:**

The range of clothing styles and drapes in India are perhaps unparalleled in any other country of the world. Documenting and imaging of these variations demand professional expertise and technological support that is being arranged for this project.

**Business Data Bank:**
A business data bank is being developed at NRC the same will be upgraded in association with the Cluster initiatives of NIFT to offer the following services:

- Crafts directories
- Directories of fashion professionals, products and services.
- On-demand state of the art report.
- Buyer’s kiosk: NDR will facilitate e-commerce through its kiosk by providing a platform for buyer-seller interaction
- Statistics regarding export-import, production etc. Data will be pooled and processed from all the Govt. agencies including Export Promotion Councils.

**Translation Forum:**

Translation services are essential to reach the craftspeople at the grassroots level in this multilingual country. NDR will provide this service through RCs in different states.

**Phase III**

**Shilpakala Jnan kosha: knowledge repository of crafts:**

The craft skills and techniques in India have been transmitted through oral traditions and apprenticeship since time immemorial. Ananda Coomaraswamy, the Indian art scholar, truly characterized Indian craft as a ‘sacred mystery’ - critical knowledge of techniques of colours, patterns, printing, materials, textures, ornamentation are still locked in the recesses of the minds of the artisans, generally confined to a handful of families in a particular community. This tacit knowledge bank is disappearing fast due to lack of documentation, patronage, marketability and lopsided industrial development. NDR plans to preserve this invaluable knowledge with the applications of KM technologies:

**Weaving NDR Technology**

- The proposed platform should be in the form of a Portal which is web enabled providing connectivity across the nation through the Internet. The portal would act as a one-stop gateway to the digital repositories and other electronic resources and information services of participating organisations including access of external knowledge resources and shall have following building blocks:

  - Single logon
  - Unified search
  - Personalization
  - Collaboration
  - Security
  - Scalability
  - Openness
  - Application integration

**User Interface**
Portal shall make available friendly and personalised front-end interface for its users which shall be fully graphic providing for ease of access / operations.

Application

The application integration will be with an open ended approach.

Server Platform / Networking

The proposed NDR will be initially based on Windows 2000 series as current activities are taking place. Other platforms like Linux platform for Web Server / Library server would be considered if need be. The Web Servers and NRC Servers of the organizations will be on Internet backbone and for networking, TCP/IP protocol are employed. There will be a central Data Centre with necessary firewalls and a Data Recovery Centre at the heart of the portal. NIFT will lay out WAN in due course for secure higher connectivity.
**Shilpakala Jnan Kosha Technology:**

<table>
<thead>
<tr>
<th>Functionality</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Searching</td>
<td>Search engines</td>
</tr>
<tr>
<td>Categorizing</td>
<td>Computer languages (XML, RDF)</td>
</tr>
<tr>
<td>Composing</td>
<td>Office suite applications</td>
</tr>
<tr>
<td>Summarizing</td>
<td>Artificial intelligence</td>
</tr>
<tr>
<td>Distributing</td>
<td>Networks</td>
</tr>
<tr>
<td>Workflow</td>
<td>Groupware</td>
</tr>
</tbody>
</table>

**Conclusion:**

The NDR initiative is only a modest beginning in preserving the collective heritage of a nation and thus of the humanity. The judicious applications of ICTs to generate a large-scale repository of tacit craft knowledge will eventually lead to revival of the magnificent arts and crafts traditions of India. The vision is to create a fashion confluence of myriad colours, textures, motifs and structures created by the craftsmen and women and the global modern designers. The eternal Indian designs of the craftsmen add spiritual dimensions to the modern Indian fashion design. The spiritualism inherent in craftsmanship of India is best expressed in this *doha* (verse) of the 15th century weaver-poet saint Kabir:
"This garment so delicate
Which warp, which weft,
Which thread is it thus made?
Ingia*, the warp of the moon, Pingia*, the weft of the sun,
Sushumna, the subtle thread,
Eight petals of the lotus as spinning wheel,
Five elements to weave it with.
For all of ten months the Master was busy at work,
Making the loom sing, He created the cloth.
Once worn, devotees and ascetics put it to bad use
And left their veil soiled.
But Kabir, Thy servant, has worn it with care,
As he received it, so he returns it."

Kabir Das, 15th century Jula*a* weaver and poet
5 Mete, Fatma, 2006. The creative role of sources of inspiration in clothing design. In International Journal of Clothing Science and technology. 18(4) 278-
8 Ranjan, M P. 2005. Craftsmanship in education: Towards a creative India in the knowledge economy. ……
11 Mete, Fatma, 2006. The creative role of sources of inspiration in clothing design. In International Journal of Clothing Science and technology. 18(4) 278-
12 Mete, Fatma, 2006. Ibid.
Cool, contemporary fashion using traditional techniques and materials. From Kolkata to Kutch, young Indian designers are going back to their roots. They are reshaping Indian cool by using techniques such as ikat dyeing, zardozi embroidery, bidri metal work and more to create modern clothes and accessories. Consumers, too, are appreciating this old-meets-new package. We’ve picked 50 of our favourite such brands. The ultra-modern concept store celebrates Indian craftspeople by showcasing their skills in its line of accessories. (48-Hour Dhurrie bag: Rs15,500. Facebook page).