



TRANSITION FROM EDUCATION 4.0 TO EDUCATION 5.0 WITH RESPECT TO THE FASHION INDUSTRY

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ABSTRACT

The transition from **Education 4.0** to **Education 5.0** marks a significant paradigm shift in the landscape of learning, particularly within the fashion and textile industry. While Education 4.0 emphasized digital integration, technological innovation, and industry alignment, Education 5.0 focuses on human-centered learning that balances advanced technology with ethical, social, and environmental considerations. This article explores the evolution from Education 4.0's skill-driven, technology-focused model to the holistic and interdisciplinary approach of Education 5.0, which aims to foster creativity, sustainability, and ethical practices. It highlights how Education 5.0, through personalized learning, collaboration between academia and industry, and a commitment to sustainability, prepares students to address the fashion industry's evolving demands while fostering social and environmental well-being.

Keywords: Education 4.0-5.0, Human centric, sustainability, technology, ethical innovation.

INTRODUCTION

"The function of education is to teach one to think intensively and to think critically.

Intelligence plus character – that is the goal of true education."

— Martin Luther King Jr.

Education serves a purpose beyond imparting subject-specific knowledge; it plays a vital role in shaping individuals' personalities and preparing them for real-world challenges. This human-centric approach is at the core of *Education 5.0*, where the focus extends to fostering critical and innovative thinking through advanced technologies while promoting holistic human development.

The evolution from *Education 1.0* to *Education 5.0* has witnessed a paradigm shift, moving from traditional classroom teaching to personalized, technology-driven learning tailored to meet both societal and personal needs:

- **Education 1.0:** Traditional, rote learning with classroom teaching, chalkboards, and standardized exams.
- **Education 2.0:** Introduction of digital tools, multimedia, and interactive learning elements.
- **Education 3.0:** Technology-integrated, personalized learning with an emphasis on critical thinking and student participation.
- **Education 4.0:** Future-focused learning, incorporating industry-relevant technologies.
- **Education 5.0:** Human-centric, interdisciplinary, and blended learning, emphasizing global collaboration among educational institutions, industries, and governments.

The development of advanced technology has had far-reaching impacts on the education sector across various disciplines, including fashion and textiles. According to UNESCO, Education 4.0 emerged in response to the 4th Industrial Revolution, which aimed at transforming education through advanced technologies such as artificial intelligence (AI) and automation. As we transition to Education 5.0, the emphasis shifts towards more humanized teaching, focusing on students' social and emotional growth while leveraging technology to improve the quality of life in society.

The fashion and textiles industry is a significant driver of the global economy, characterized by trends, creativity, and craftsmanship. Education 5.0 places a renewed emphasis on human values in preparing future designers and industry leaders. It champions the integration of ethics and sustainability, ensuring that education aligns with industry demands while benefiting society and the environment.

This article explores the transition from Education 4.0 to 5.0, particularly in the fashion and textiles industry, analysing curriculum expectations, skill requirements, sustainable production processes, and the challenges in implementing these changes.

REVIEW OF EDUCATION 4.0

UNESCO identified eight distinct characteristics of learning under Education 4.0, which emerged during the 4th Industrial Revolution:

1. **Global Citizenship Skills:** Focusing on creating global awareness, sustainability, and active participation in the global community.
2. **Innovation and Creativity Skills:** Encouraging complex problem-solving, analytical thinking, creativity, and systems analysis.
3. **Technological Skills:** Developing digital competencies, including programming, digital responsibility, and effective use of technology.
4. **Interpersonal Skills:** Cultivating emotional intelligence, empathy, leadership, and social awareness.
5. **Personalized and Self-Paced Learning:** Transitioning from standardized learning to flexible, individualized learning paths.
6. **Accessible and Inclusive Learning:** Expanding learning opportunities beyond the traditional classroom, promoting inclusivity.
7. **Problem-Based and Collaborative Learning:** Shifting from process-based instruction to project- and problem-based learning through collaboration.
8. **Lifelong Learning:** Encouraging continuous learning, enabling individuals to improve and acquire new skills throughout their lives.

EDUCATION 4.0 AND THE FASHION INDUSTRY

In the context of fashion, Education 4.0 brought significant changes by integrating digital technologies and personalized learning, impacting the industry in various ways:

- **Skill Development:** Workers in the fashion industry learned digital and analytical skills, fostering innovation in sustainable practices and preparing students for e-commerce and other emerging markets.
- **Technology Integration:** AI, virtual reality (VR), and 3D printing revolutionized the production process, fostering creativity while reducing carbon footprints.

- **Sustainability Awareness:** Future designers became aware of eco-friendly materials and sustainable practices, promoting responsible fashion.
- **Consumer-Centric Approach:** Fashion students learned how to use data analytics to understand consumer behavior, enhancing targeted marketing strategies.
- **Global Collaboration:** Cross-cultural exchanges and global internships broadened students' perspectives, offering a more diverse and inclusive understanding of fashion.
- **Entrepreneurship:** Innovations in fashion education encouraged entrepreneurship, with students creating start-ups focused on new markets, technologies, and advanced e-commerce.

Education 4.0 equipped fashion students and professionals with the skills necessary to adapt to a rapidly evolving industry landscape driven by technology and sustainability.

EDUCATION 5.0: A HUMAN-CENTERED APPROACH

Education 5.0 goes beyond technological proficiency, placing a greater focus on human-centered values such as creativity, ethics, and sustainability. It acknowledges the societal and environmental impact of industries like fashion and textiles, emphasizing collaborative solutions that serve both people and the planet. In this context, Education 5.0 promotes:

- **Sustainability:** Incorporating eco-friendly design, circular fashion principles, and zero-waste strategies into educational curricula.
- **Ethical Production:** Emphasizing fair labor practices, supply chain transparency, and environmentally conscious design and production.
- **Creativity and Innovation:** Encouraging original design thinking that integrates digital tools while maintaining a focus on artistry, craftsmanship, and human values.

Key Features of Education 5.0:

1. **Human-Centric Approach:** Education 5.0 emphasizes personal development, ethical considerations, and emotional intelligence alongside technical skills. The goal is to

create well-rounded individuals who are not just technically competent but also socially conscious and empathetic.

2. **Technology as an Enabler:** While Education 4.0 emphasized the use of cutting-edge technology (e.g., AI, IoT, automation), Education 5.0 integrates these technologies in a way that enhances creativity, human connection, and problem-solving without compromising ethical considerations or human-centric values.
3. **Sustainability and Ethics:** The curriculum in Education 5.0 incorporates sustainability, circular economy principles, and ethical practices. Students are taught to understand the impact of their decisions on society and the environment, making them more responsible citizens and professionals.
4. **Interdisciplinary and Collaborative Learning:** Education 5.0 encourages interdisciplinary studies, where students can learn across subjects, combining skills from different fields to solve complex problems. Collaboration between universities, industries, and governments becomes central to providing relevant, real-world learning experiences.
5. **Flexible and Lifelong Learning:** It fosters a flexible learning environment where students can personalize their education according to their goals. Lifelong learning opportunities are emphasized, allowing individuals to continuously upgrade their skills in a rapidly changing world.
6. **Global Perspective:** Global citizenship is a major focus of Education 5.0. Learners are encouraged to engage with diverse cultures and collaborate across borders to solve global challenges such as climate change, inequality, and social justice.

Differences from Education 4.0:

- **Education 4.0** focused primarily on preparing students for the future workplace by integrating digital tools, automation, and technological skills.
- **Education 5.0** takes this further by recognizing the importance of social, ethical, and environmental responsibility, ensuring that technology serves humanity, rather than the other way around.

EDUCATION 5.0 AND THE FASHION INDUSTRY

Education 5.0's human-centered, interdisciplinary learning approach has several implications for the fashion industry:

- **Creativity and Ethics:** Ethical considerations are at the forefront of Education 5.0, encouraging designers to create with purpose, considering the social and environmental impact of their work.
- **Personalized Learning:** Modular and flexible courses allow students to tailor their education based on personal interests, career goals, and the evolving demands of the industry.
- **Advanced Technology Integration:** AI, IoT, augmented/virtual reality, blockchain, and other advanced technologies transform how students learn, creating immersive and practical learning experiences.
- **Skill Development:** Education 5.0 emphasizes experiential learning through industry collaboration, project-based learning, and digital environments, fostering communication, problem-solving, and hands-on skills.
- **Global Perspective:** Global exchange programs, internships, and project collaborations expose students to diverse perspectives and experiences, enriching their understanding of fashion on an international scale.
- **Lifelong Learning:** Encouraging continuous professional development, Education 5.0 supports upskilling and reskilling to meet the ever-changing demands of the fashion industry.

According to PwC's report, *Navigating the Shift to Education 5.0*, the three pillars of this approach include:

1. **Industry-University Collaboration**
2. **Government Initiatives and Policies**
3. **Technology and Infrastructure**

These pillars are essential for building a dynamic, personalized learning environment that aligns with global educational and industry trends.

CHALLENGES AND BARRIERS TO IMPLEMENTING EDUCATION 5.0

Despite its potential, several challenges must be addressed to fully implement Education 5.0 in India:

1. **Internet Availability:** Digital communication requires increased internet access across urban and rural areas.
2. **Rural-Urban Divide:** The digital literacy gap between rural and urban regions must be bridged to ensure equitable learning opportunities.
3. **Government Support:** Financial and technological support from government agencies is essential for successful implementation.
4. **Reskilling the Workforce:** Existing professionals need to be reskilled to keep pace with the latest digital technologies.
5. **Interdisciplinary Curriculum:** Developing a cohesive curriculum that integrates knowledge from different streams of education can be challenging.
6. **Industry Internships:** The fashion industry must offer paid, longer-term internships to provide students with hands-on experience and training.
7. **Ethical and Environmental Education:** Educational institutions need to implement ethics and sustainability at all levels to prepare students for responsible industry practices.
8. **Global Outreach:** Advanced technologies and language education are necessary to help students navigate cultural barriers in the global market.
9. **Cultural Appropriation:** Education on preserving traditions and indigenous crafts is crucial for the ethical continuation of cultural heritage.

CONCLUSION

The transition from Education 4.0 to 5.0 marks a significant shift in how fashion and textiles education is approached. The integration of human-centered, ethical, and sustainable



values with advanced technology sets the foundation for a new generation of fashion professionals. Education 5.0 promotes lifelong learning, encourages global collaboration, and ensures that students are equipped with the skills needed to meet the challenges of a rapidly evolving fashion industry. By fostering creativity, ethics, and innovation, Education 5.0 prepares students to lead the fashion world towards a more sustainable and socially responsible future.

As stated by Malcom X... 'Education is the passport to the future, for tomorrow belongs to those who prepare for it today.'

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