
Integrating Sustainable Development Goals into Fashion Education: Bridging Sustainability and Awareness among Future Designers

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Abstract: Although the fashion industry is a challenge in boosting the economy of the world, it is one of the most resource consuming and polluting industries. There is an urgency to do something about its environmental and social imprint, especially considering the Sustainable Development Goals (SDGs) of the United Nations. As the pillar of producing future designers, fashion education is the key to the development of sustainable practices and attitudes. The article discusses the idea of SDGs implementation in fashion schools as a method of developing sustainability consciousness and responsible design thinking in students. The review of the existing literature and the analysis of the curriculum and the views of stakeholders allow determining that the following opportunities and barriers exist in the processes of implementing sustainability in fashion pedagogy. The results indicate that integrating design education into SDGs can improve student awareness of ethical and ecological issues as well as equip them to become change agents of the fashion industry. The study is a proposal of a framework of curriculum development, which bridges sustainability and innovative creativity, such that future designers can be capable to make a significant contribution to the global sustainability agenda.

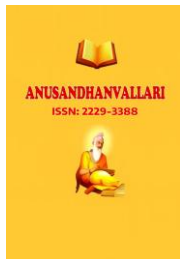
Keywords: Fashion Education, Sustainable Development Goals (SDG), Sustainability, Future Designers.

1. Introduction

The global fashion industry stands at a critical juncture where creativity, consumer demand, and sustainability intersect[1]. While fashion has long been associated with innovation and cultural expression, it is also one of the most resource-intensive and environmentally damaging industries worldwide. Water pollution, textile waste, unethical labor practices, and carbon emission are some of the issues that have brought up great concern on its sustainability in the long run[2]. As a reaction, the United Nations Sustainable Development Goals (SDGs), which were introduced in 2015, represent an international framework of dealing with these intertwined issues. Out of the 17 goals, some of them, including Responsible Consumption and Production (SDG 12), Climate Action (SDG 13), Decent Work and Economic Growth (SDG 8), and Gender Equality (SDG 5) are directly relevant to the fashion industry[3].

As the formative education of the future designers, entrepreneurs, and policymakers, fashion education can play an important role in the development of these objectives[4]. The principles and culture inculcated in students in the contemporary world will determine how the fashion business will address the circumstances of sustainability in the future[5]. Nevertheless, even with the growing understanding of sustainability in the world of international dialogue, the coverage of the SDGs in fashion education programs in most areas is still insufficient[6-7]. The consequence of this discontinuity is a, technically qualified but nonetheless under-equipped graduate who is not adequately trained to incorporate ethical, ecological, and social context-sensitivity in his or her practice.

According to the recent studies, the introduction of sustainability concepts into pedagogy is necessary not only as an elective subject but as a fundamental aspect of fashion education[8]. Project-based learning, interdisciplinary



collaboration, and industry partnerships are the approaches that are beginning to be identified as the effective ones in terms of developing critical awareness and practical skills[9-10]. However, the level of awareness and the level at which SDG principles are perceived by the fashion students is not a well-researched topic especially in the developing settings.

This paper aims at filling this gap by investigating how Sustainable Development Goals can be incorporated into fashion education. It explores the awareness levels of the students, their assumptions about the significance of various SDGs, and the pedagogical practices that will be the most effective in developing sustainability-oriented thinking. Also, it takes into account the views of educators to determine the barriers and opportunities in the integration of SDGs in the curriculum of fashion. As it helps to bridge the sustainability and awareness gap between future designers, the research is an addition to the creation of a roadmap that will help to align fashion education with the global sustainability agendas.

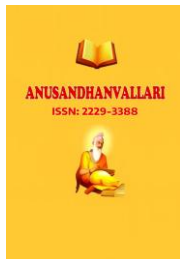
1.1 Research Objectives

- To examine the current extent of SDG integration in fashion education curricula.
- To assess the awareness and perception of SDGs among fashion design students.
- To explore the perspectives of educators and experts regarding opportunities and challenges in embedding sustainability in design education.
- To propose a framework for effective integration of SDGs into fashion pedagogy.

2. Literature Review

Murzyn-Kupisz, M., & Holuj, D. (2021), Fashion designers influence all facets of fashion impact—both beneficial and detrimental—rendering them essential contributors to sustainable fashion. Fashion design school ought to instruct emerging designers on sustainability and equip them with the tools to implement sustainable fashion practices. This concept prompted an exploration of sustainability challenges within Polish post-secondary fashion schools, a topic that has not been thoroughly investigated. The authors conducted interviews and analyzed the publications, documents, websites, and Facebook pages of these colleges. To classify their efforts in the all-encompassing educational system, art, craftsmanship, and commerce were used. The article identifies the current state and evaluates sustainable fashion education in Poland and the neighboring environment. Contemporary fashion education requires significant changes in the curriculum to meet the complexity of the sustainability issues. This is a global issue exacerbated in Poland by inadequate and disorganized governmental support, institutional challenges in both private and public educational institutions, and a lack of consumer knowledge regarding sustainability.

Masina, R. (2024), Colleges and universities are critical in preparing students to the sustainable development and sustainable development goals (SDGs). This research focused on the University of Zimbabwe (UZ), examining the incorporation of Sustainable Development Goals (SDGs) into textile science, apparel design, and technology (TSADT). It evaluated the correlation between the Sustainable Development Goals (SDGs) and the concept of Education 5.0, in conjunction with the current educational reforms at UZ. Multiple techniques and activities were analyzed to promote sustainable development within TSADT programs. The study utilized interviews, observations, and document analysis for data collecting, subsequently doing theme analysis. The findings demonstrated the congruence of program objectives with the Sustainable Development Goals, emphasizing areas for enhancement and prospects for improved incorporation of sustainable principles within the curriculum. This research holds considerable significance for UZ and other higher education institutions in Zimbabwe seeking to include sustainable development into their programs. It also improves comprehension of how higher education



institutions may integrate Sustainable Development Goals into diverse disciplines, equipping graduates to address sustainability challenges in the textile and apparel industry.

Langdown, A.(2014), The research examines the adverse effects of commodification in fashion design, specifically its relationship with reduced motivation for advancing the common good. It condemns the industry's profligacy, emphasizing the swift rate of transformation and resource depletion. The author promotes the integration of sustainable development into fashion education to cultivate a more reflective and analytical design methodology. The book underscores the importance of educators and designers in advancing a sustainable framework, advocating for global initiatives that foster adaptable creativity. Additionally, it advocates for significant pedagogical and engagement strategies designed to slow the fashion industry's tempo, promoting the integration of both innovative and sustainable practices into educational curricula, thus rendering them vital factors in design for the common good.

Wang, M., Murphy, R., & Christie, I. (2025), This study examines the incorporation of sustainable fashion practices in both the industry and education, emphasizing the changing function of fashion shows in advancing sustainability. It analyzes the obstacles encountered by the fashion industry in implementing sustainable practices, emphasizing new solutions proposed by academics and professionals. A literature study highlights the tenets of fashion sociology and examines the emergence of virtual fashion experiences. The paper highlights the importance of fashion education in promoting sustainability consciousness among designers, professionals, and consumers. Ultimately, it promotes a transition towards sustainability in the fashion sector, seeking to resolve the inherent conflicts between sustainability and fashion.

Li, C. and Sindhuphak, A. (2024)., The study focuses on SDGs integration in the education sector of the fashion and textile industry, as the goal of enhancing sustainability through multidisciplinary approach. The economic, environmental and social aspects were balanced in the analysis of relationships between academics and industry supply chains based on the use of the Triple Bottom Line (TBL) and the Stakeholder Theory. The methods that were used by the qualitative analysis included interviews, in which the professionals in the industry were interviewed and literature was reviewed to find information on sustainable practice in the education field. Studies show that pedagogies of SDG orientation should be adopted at the fashion and textile facilities with both academic and industrial sectors providing positive feedbacks to prove that the approach is viable. The study findings demonstrate the need to use the research findings to develop sustainable models of teaching, equip designers with essential knowledge and competencies, and enhance cooperation between the supply chain and learning organizations. The uniqueness of the study lies in the fact that it synthesized the existing research and expanded the multidisciplinary collaboration and the application of SDGs in fashion and textile education.

2. Methodology

Methodology means the way and the procedures that are applied in research to gather, analyze, and interpret the data. It delineates the general approach adopted to incorporate the various elements of the study in a logical and orderly manner so that the research problem is well tackled. Research design is a part of a methodology, as well as data collection methods (surveys, interviews or experiments), and methods of data analysis. It also gives a reason why a particular way is chosen as opposed to another within the assurance of the research.

2.1 Research Design:

The study used a mixed-methods approach in which qualitative and quantitative methods was combined. The qualitative part also contributed to a comprehensive view of educators' and curriculum developers' experiences, while the quantitative part (student surveys) provided quantitative information reflecting higher educational

students' awareness and attitudes towards sustainability. The combination of the two approaches allowed to obtain an in-depth knowledge of how SDGs could be mainstreamed into fashion education.

2.2 Data Collection:

In order to collect the data needed to fulfill the research objectives, three complementary methods were used.

1. Document Analysis

- Curricula and course outlined from selected fashion institutions were reviewed to identify the extent to which sustainability and SDG-related themes were incorporated.
- Besides that, relevant policy documents and institutional reports related to education in sustainability had also been scrutinized.

2. Semi-Structured Interviews

- Fashion professors, course developers, and experts in environment the co-operated to complete the research.
- The focus of the study was primarily their views on the barriers, opportunities, and strategies for the seamless integration of teaching related to SDGs.

3. Student Surveys

- The survey was distributed among fashion design students from different schools.
- The main theme of the questions was the knowledge of the Sustainable Development Goals (SDGs) by the students, their opinions about sustainability, and their awareness of the necessity for sustainable design in their later professional activity.

3.3 Sampling Strategy

A purposive sampling technique was employed to select institutions and participants. The criteria included:

- Institutions offering fashion design programs.
- Educators who had hands-on teaching experience in courses related to sustainability.
- Students enrolled in undergraduate and postgraduate fashion programs.

Sample Group	Estimated Size	Selection Criteria
Institutions	5–7	Public and private universities/colleges with fashion programs
Educators & Experts	10–15	Minimum 3 years of teaching or curriculum development experience
Students	100–150	Enrolled in fashion programs (UG & PG levels)

3.4 Data Analysis:

- Qualitative Data (documents and interviews): Interpreted via thematic coding, attention was given to areas of curriculum design, institutional support, student involvement, and sustainable methodologies.
- Quantitative Data (surveys): Reported using descriptive statistics (mean, frequency and percentages) to examine awareness and attitude towards SDGs. The responses to questions of undergraduate and postgraduate students were compared using cross-tabulation.

4 Result and Discussion

4.1 Awareness of SDGs among Students

The survey results highlight a clear difference in the degree of knowledge between undergraduate (UG) and postgraduate (PG) students. Only 35% of undergraduate students claimed to be highly aware of the facts, whereas 45% reported a moderate level of awareness, and 20% a low level. On the other hand, postgraduate students showed a significant higher amount of awareness, as 55% of them assessed the level as high, 35% as moderate, and only 10% as low. The data implies that postgraduate students tend to be more aware than undergraduates.

Table 1: Awareness Levels of SDGs among Students

Awareness Level	UG Students (%)	PG Students (%)
High	35	55
Moderate	45	35
Low	20	10

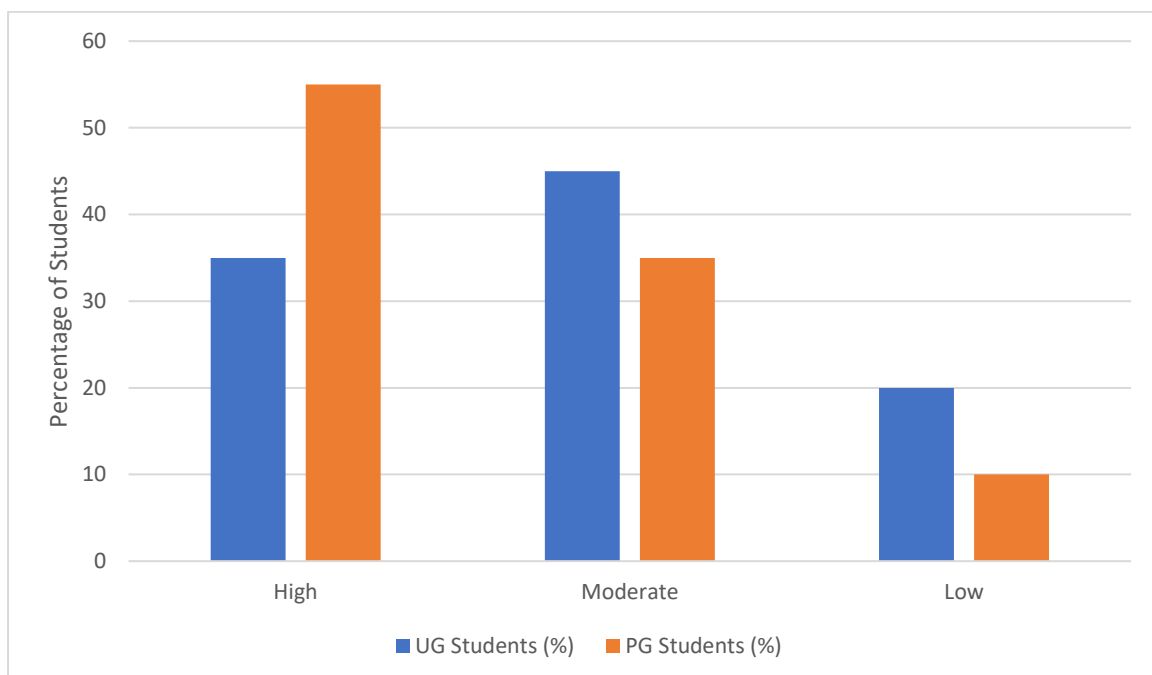


Figure 1: Awareness Levels of SDGs among Fashion Students

Postgraduate students presumably are more informed about environmental problems, and it might be due to their wider academic exposure, specially designed sustainability modules, and the opportunity for interdisciplinary learning. The statement suggests that the level of awareness is raised with the learning content and thus the need to start teaching sustainability concepts in undergraduate courses.

4.2 Perceived Importance of SDG Themes

As part of the study, students had to evaluate some themes of the Sustainable Development Goals (SDGs), namely Responsible Consumption and Production (SDG 12), Climate Action (SDG 13), Decent Work and Economic Growth (SDG 8) and Gender Equality (SDG 5), by giving scores from 1 to 5, where 1 corresponds to "not important at all" and 5 corresponds to "extremely important". The findings indicated a clear pattern of behavior: PG students acknowledged these SDG themes to be more important than UG students, whose rating scores were notably lower.

Table 2: Perceived Importance of SDGs (Average Rating out of 5)

SDG Theme	UG Avg Rating	PG Avg Rating
Responsible Consumption (SDG 12)	3.8	4.5
Climate Action (SDG 13)	3.5	4.2
Decent Work (SDG 8)	3.2	3.9
Gender Equality (SDG 5)	3.6	4.1
Quality Education (SDG 4)	3.7	4.4
Partnerships for Goals (SDG 17)	3.4	4.0

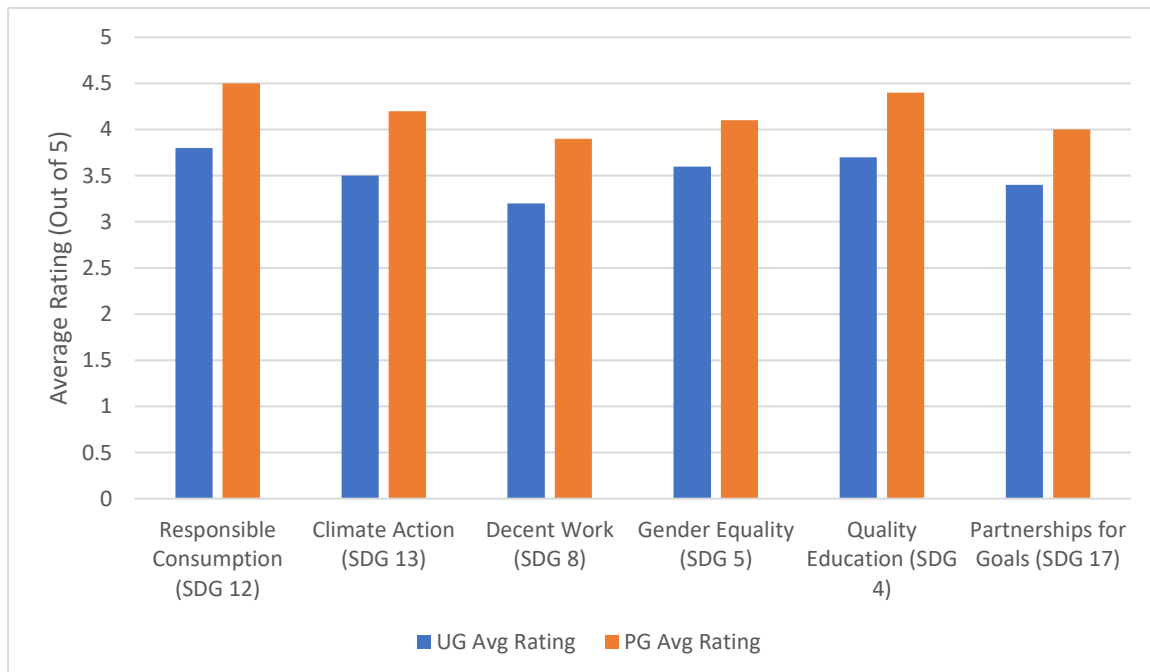


Figure 2: Perceived Importance of SDG Themes

UG as well as PG students acknowledge the significance of Responsible Consumption (SDG 12) and Climate Action (SDG 13) and identify them as the most critical issues. Their reasoning is the fact that these two goals have

the clearest link to the environmental footprint of the fashion industry. PG students definitely emphasize the need for Good Quality Education (SDG 4) and Partnerships (SDG 17) much more than others and this may perhaps be due to there having been more involved with collaborative projects and academic dialogues. The lower scores for Decent Work (SDG 8) may indicate that social and labor issues in the fashion industry are less recognized than the environmental aspects, thus signalling a lack of comprehensive sustainability education.

4.3 Preferred Learning Methods

Students have shared their thoughts and need that the topics of sustainability and Sustainable Development Goals (SDGs) should be effectively included in fashion education programs. Numerous contributors have emphasized that the issue of sustainability should be the core of the curriculum and not only an easily accessible or standalone topic. Quite a few students prepared the ground for this to be achieved through a practical, hands-on approach, mentioning that workshops, internships, and interaction with the industry would be an excellent way to familiarize them with sustainable fashion practices.

Table 3: Preferred Learning Methods for Sustainability Education

Learning Method	UG Preference (%)	PG Preference (%)
Workshops/Projects	40	35
Industry Collaboration	25	30
Classroom Lectures	20	15
Digital Modules	15	20

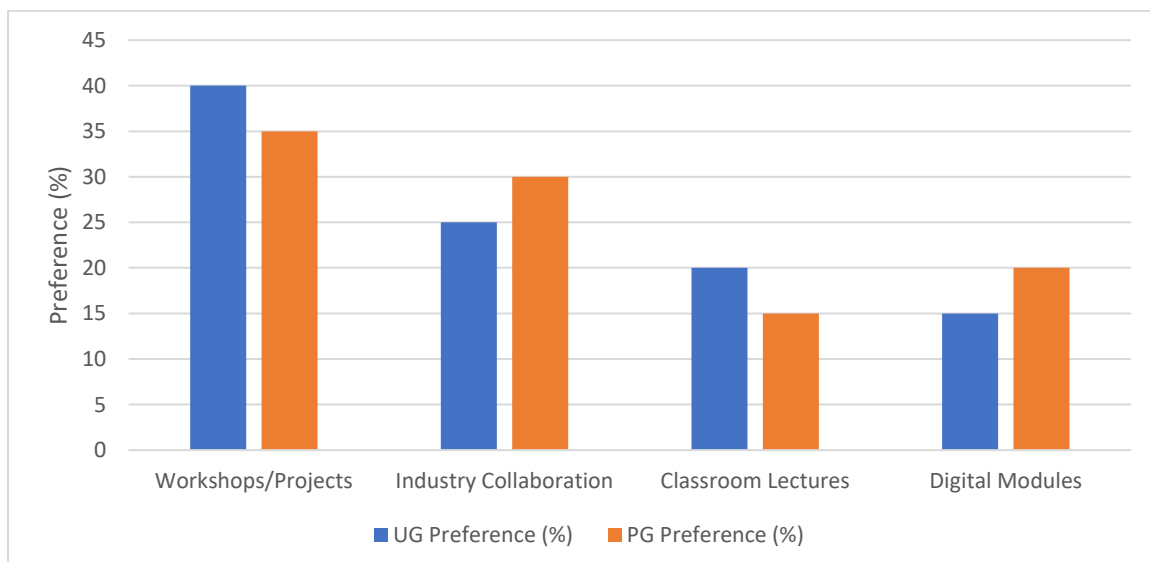
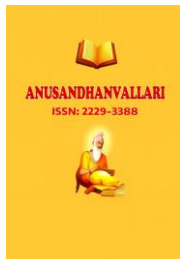


Figure 3: Preferred Learning Methods for Sustainability Education

Workshops and projects were the most preferred method, indicating that students value experiential learning and hands-on practice. PG students, being nearer to the professional world, showed more interest in work with the industry. Among these students, lectures had the least amount of supporters, which means that for such a subject



as sustainable development, conventional methods of teaching might not be efficient and more engagement is needed.

Discussion

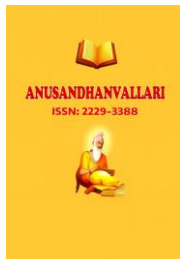
The findings of this study highlight a significant difference in awareness levels of Sustainable Development Goals (SDGs) between undergraduate and postgraduate fashion students. While postgraduate students demonstrated a considerably higher level of understanding, undergraduate students mostly exhibited moderate or low awareness. This suggests that advanced academic exposure, particularly through specialized courses and interdisciplinary learning, positively influences sustainability knowledge. The findings underscore the need for incorporating the topics of sustainability in the curriculum of college courses from the very beginning instead of leaving them for graduate study only.

Besides that, the difference in the perception of the importance of specific Sustainable Development Goals (SDGs) by students is another point worth mentioning. Both undergraduate and postgraduate respondents acknowledged environmental objectives such as Responsible Consumption (SDG 12) and Climate Action (SDG 13) as the most appropriate ones for the fashion sector meaning the concern of the industry's ecological footprint is almost universal. Nevertheless, the themes limited to the society, for instance, Decent Work (SDG 8) and Gender Equality (SDG 5), were given lower importance, especially by the undergraduates; what this suggests is that although environmental sustainability is becoming more popular, the social side of fashion in the areas of fair wages, safe working conditions, and inclusivity is still barely represented in fashion education. Fashion education must be at the forefront of addressing and overcoming this imbalance to push a full understanding of sustainability.

This survey has also unveiled the significant preference of students for 'experience-based' learning rather than 'lecture-based'. It appeared from the survey questions that both the undergraduate and postgraduate students' most preferred way to learn about sustainability was through industry collaborations, workshops, and hands-on projects. This shift of preference shows that students are looking for opportunities to prove their theoretical knowledge in real-world scenarios. As a result, these kinds of projects (upcycling, sustainable material experimentation, and partnerships with eco-friendly brands) not only have a measure of understanding but also issue the participants' innovation and creativity. These findings reiterate the fact that pedagogy needs to change from the traditional passive classroom teaching to the interactive, project-driven models that are in line with the design-oriented nature of fashion education.

Teachers' views also confirm the necessity for changes in teaching methodologies. They admitted that their institutions had problems like too much curriculum, shortage of teaching materials, and lack of support from the administration, but they also pointed out a possibility for creativity. A number of them talked about the importance of cross-disciplinary relationships, co-relating environment science, business and social studies with fashion curriculum. Besides, they underlined the function of industry collaborations in making sustainability education more meaningful and easier for the students. The disclosures are aligned with student picks, suggesting that both learners and educators are in accord as to the requirement of practical, real-world activities being an essential part of the sustainable fashion education.

The integration of SDGs into fashion education sends a strong message that the change needed is more profound than just the addition of new modules, when the findings are combined. Besides that, it demands a systemic reformation of educational curricula, pedagogy, and school policies. A sustainability culture of responsibility and consciousness can be fashion schools' generated by indiscriminately integrating sustainability throughout all courses, thus, not giving it the status of an autonomous subject. The survey also reveals that promoting sustainability consciousness is not merely an academic undertaking—it bestows future designers with the attitude



and competences to become the industry's leader of change, which is battling with increasing environmental and social problems.

5. Conclusion

This study set out to explore the integration of Sustainable Development Goals (SDGs) into fashion education as a means of fostering sustainability awareness and responsible design practices among future designers. The findings indicate that there are distinct differences in the knowledge levels of undergraduates and postgraduates, the latter being more knowledgeable about sustainability concepts. The statement supports the need for the incorporation of content related to SDG at an earlier stage of the curriculum to guarantee that understanding and analytical skills are built from the basic stages of fashion education.

The study also showed that students understand a lot the importance of the environmental goals such as Responsible Consumption (SDG 12) and Climate Action (SDG 13), however, ethical and social aspects that include Decent Work (SDG 8) and Gender Equality (SDG 5) raise less interest among students. The difference between the two areas indicates the necessity of a more balanced and deeper commitment to the environment which would not only cover ecological issues but also deal with the rights of workers, the integration of the marginalized and social justice in the fashion sector.

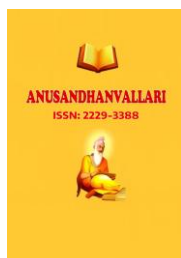
The fact that students strongly preferred experiential and collaborative learning methods really underlines the need for getting a new angle on the pedagogical approaches. Classroom lectures often serve well as a conceptual ground in the subject matter, however, they fall short in engaging the students in sustainability education. Consequently, practicable routes like internships, the involvement of the industry, and community projects, not just theoretically but also through action, have become the most suitable vehicles for students to transfer what they have learned into the actual world, as well as becoming familiar with the latest real-world practice.

Educators' viewpoints also substantiate the results which reveal the issues as well as the possibilities. Despite the fact that curriculum overload and lack of resources are still obstacles, the identification of cross-disciplinary learning and partnership with the industry as opportunities indicates the willingness of the educational sector to innovate in sustainability education. These ideas imply that effective incorporation of SDGs depends to a large extent on the redesign of the curriculum along with institutional and policy-level support.

Essentially, it is not only about a mere change in the curriculum in fashion education, but it is also a shift that transmits the idea of the designer as the promoter of the necessary sustainable changes. Programs on fashion education, when put in line with the global goals of sustainability, academic institutions gain the possibility of training future professionals through planning, nurturing, and skill development to take up environmental and social issues. The combination is important to the effect that future designers become efficient in taking part in the making of an environmentally friendly and socially just fashion industry.

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