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RESKILLING GEN Z FOR GREEN SKILLS: IMPACT ON ORGANIZATIONAL SUSTAINABILITY

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Abstract: ***The rising complexities of climate change and resource constraints have spurred a vital shift towards sustainable organizational practices, with green talents prioritised in modern strategic planning. This study investigates the effects of targeted green reskilling programs for Generation Z workers, a demographic noted for its high environmental awareness despite a severe lack of actual industry-specific green skills. The study uses a quantitative approach and surveys 125 participants, primarily from the manufacturing and IT industries, to investigate the relationships between Green Reskilling Initiatives (GRI), Green Skill Competencies (GSC), and Green Behaviour and Employee Engagement (GBE) on Organizational Sustainability Performance (OSP). The findings show that these green human resource methods account for 73.3% of the variation in sustainability performance, with employee engagement being the most relevant element. The study underlines the strategic need of overcoming the "awareness-competency gap" through structured reskilling to ensure long-term organizational viability in an environmentally conscious market.***

Keywords: Green Behaviour, Green Initiatives, Green Competencies, Organizational Sustainability.

I. INTRODUCTION

In the modern landscape, the imperative for environmental sustainability has catalysed a profound transformation in organizational strategies, workforce dynamics, and the frameworks underpinning skill development. The mounting challenges associated with climate change, the rapid depletion of natural resources, and the intensifying regulatory pressures have compelled organizations to weave sustainable practices into the very fabric of their operations, an approach commonly referred to as green initiatives. Amidst this evolving paradigm, the notion of green skills encompassing the knowledge, competencies, and attitudes that promote sustainable economic, environmental, and social outcomes has emerged as a critical pillar for achieving long-term organizational success. As Generation Z, individuals born approximately between 1997 and 2012, begin to enter and establish themselves within the workforce, they are poised to represent a significant demographic of employees over the coming decade. This generation is characterized by its exceptional technological fluency, heightened awareness of environmental issues, and a robust commitment to sustainability objectives. However, despite their intrinsic environmental consciousness, many members of Gen Z may encounter a gap in the specific industry-related green competencies that are vital for effectively contributing to organizational sustainability initiatives. This discrepancy highlights an urgent necessity for comprehensive reskilling programs aimed at bridging the chasm between Gen Z's existing capabilities and the green objectives of organizations. Reskilling Gen Z in green skills extends beyond the traditional scope of human resource development; it signifies a strategic investment in the future trajectory of organizations, one that has the potential to significantly enhance sustainability across economic, environmental, and social dimensions. This study endeavours to investigate the ramifications of targeted green reskilling initiatives for Gen Z employees and how these efforts can not only influence but also enhance organizational sustainability outcomes. By delving into the intersection of generational skill development and sustainable practices, the study aims to illuminate viable pathways for organizations to flourish in an increasingly eco-conscious marketplace. This exploration will not only shed light on the essential competencies required for sustainability but also offer insights into how organizations can effectively cultivate a workforce that is equipped to meet the challenges of a rapidly changing environmental landscape.

STATEMENT OF THE PROBLEM

In today's corporate landscape, organizations are increasingly acknowledging the critical importance of sustainability as a key driver for long-term success and social responsibility. However, despite this recognition, many companies face significant challenges in translating their sustainability goals into tangible,

measurable outcomes. A primary obstacle to achieving these objectives lies in the skill gaps prevalent among their workforce, particularly within the emerging Generation Z demographic. Gen Z employees, characterized by their heightened environmental consciousness and advocacy for sustainable practices, often enter the workforce with a strong theoretical understanding of environmental issues. Nonetheless, they frequently lack the practical green skills that are essential for meeting the specific sustainability needs of their organizations. This disconnects between awareness and actionable competencies poses a significant barrier to fostering an effective sustainability culture within companies. Moreover, there exists a notable deficiency in empirical research that explores the effects of reskilling initiatives aimed at equipping Gen Z employees with the necessary green competencies. This gap in knowledge leaves organizations without a clear understanding of how investing in the development of these skills can influence their overall sustainability efforts. Consequently, there is an urgent need for comprehensive studies that examine the relationship between reskilling Gen Z employees in green competencies and the resulting impact on organizational sustainability outcomes. Addressing this issue is crucial for organizations striving to bridge the skill gaps and enhance their sustainability practices effectively.

SIGNIFICANCE OF THE STUDY

This research provides organizations with evidence-based strategies for designing green reskilling programs that enhance operational efficiency and competitive positioning within sustainable economies. HR managers gain actionable frameworks for embedding green competencies into talent development, creating sustainability-aligned workforces. Academicians benefit from expanded theoretical contributions at the nexus of sustainable HRM and Generation Z characteristics, stimulating further scholarly exploration. Policymakers acquire insights for developing green economy skill frameworks that balance environmental stewardship with economic objectives. Employees receive heightened awareness of green skills' career relevance, empowering proactive professional development aligned with global sustainability imperatives.

III.OBJECTIVES OF THE STUDY

1. To identify the key green skills required for Generation Z employees to contribute effectively to organizational sustainability.
2. To examine the impact of green reskilling initiatives on Generation Z employees' green behaviours and engagement within organizations.
3. To analyse the influence of reskilling Generation Z for green skills on organizational sustainability across environmental, social, and economic dimensions.

III.REVIEW OF LITERATURE

Author(s) & Year	Title of the Study	Objectives	Key Findings
Francis, R. C., & Dheera, I. V. (2025)	Gen Z and Green HRM: A Multigenerational Workforce Perspective on Sustainability Integration	To examine how Green HRM practices influence sustainability integration across different generations, with emphasis on Gen Z	Gen Z shows stronger environmental values and higher responsiveness to green HRM practices such as green training and performance management; green HRM enhances sustainability culture
Singh, S., Singh, R. P., & Vishwakarma, S. S. (2025)	Organizational Learning and Sustainability: Adaptive Strategies to Engage Gen Z Employees	To explore how organizational learning strategies support sustainability and Gen Z engagement	Sustainability-oriented learning and reskilling improve Gen Z engagement, adaptability, and organizational learning capability
Vakoufsis, D. F. (2025)	Integrating Green Skills into HRM Practices: A Key to Sustainable Talent Management	To identify the role of green skills integration within HRM for sustainable talent management	Green skills embedded in HRM practices enhance workforce adaptability, innovation, and sustainability outcomes

IIETA (2025)	Green Human Resource Management and Organizational Sustainability: A Systematic Literature Review and Bibliometric Analysis	To systematically review the relationship between GHRM practices and organizational sustainability	Green training and development significantly contribute to environmental, social, and economic sustainability performance
Discover Sustainability (2025)	Fostering Sustainable Development: The Role of Green HRM and Green Work Engagement	To analyze how green HRM practices foster green work engagement and sustainable development	Green HRM enhances green work engagement, which mediates sustainability performance; green training is a key driver

RESEARCH GAP

Across the reviewed studies, a consistent theme emerges: green reskilling is a strategic enabler of organizational sustainability, particularly when aligned with Gen Z values and learning preferences. The literature confirms that:

- Gen Z employees are highly receptive to sustainability-oriented HR practices.
- Organizational learning and reskilling play a central role in sustainability integration.
- Green skills embedded within HRM systems enhance employee engagement and performance.
- Green HRM practices positively influence environmental, social, and economic sustainability outcomes.

However, while these studies establish strong conceptual and empirical links between green HRM, reskilling, and sustainability, limited research directly examines Gen Z-focused green reskilling as a standalone construct. This gap highlights the need for further empirical investigation into how reskilling Gen Z employees for green skills specifically impacts organizational sustainability.

IV.RESEARCH METHODOLOGY

This investigation uses both descriptive and causal-explanatory methods. It focuses on green competency upskilling among Generation Z employees (born 1997–2012) in medium-to-large companies across manufacturing, IT, services, and education. The study also examines how these initiatives connect to sustainability metrics in environmental, social, and economic areas. The approach is quantitative. Data will be collected through validated questionnaires given to a stratified random sample of 125 respondents from HR, operations, marketing, and administration. Secondary data will come from peer-reviewed journals, corporate CSR reports, and materials from the OECD, ILO, WEF, and UNEP. These sources will be used for hypothesis testing and to analyse green skills, eco-friendly behaviours, and organizational results.

LIMITATIONS OF THE STUDY

- The study is limited to selected organizations and industries.
- Responses may be influenced by the personal bias of respondents.
- Time and resource constraints may limit sample size.
- Sustainability outcomes may vary across sectors.

DATA ANALYSIS AND INTERPRETATION

Table 1: Demographic profile of the respondents

Variables	Characteristics	Frequency	Percentage (%)
Age Groups (in Years)	20-25	89	71.2
	26-35	34	27.2
	36-45	2	1.6
	Total	**125**	**100.0**
Gender	Male	76	60.8
	Female	49	39.2
	Total	**125**	**100.0**
Educational Qualification	Under Graduate	13	10.4
	Post Graduate	50	40.0
	Professional	55	44.0
	Others	7	5.6
	Total	**125**	**100.0**
Work Experience	Less than 1 year	53	42.4
	1–3 years	14	11.2
	3–5 years	38	30.4
	Above 5 years	20	16.0
	Total	**125**	**100.0**
Functional Area	HR	25	20.0
	Operations	30	24.0
	Marketing	22	17.6
	Finance	29	23.2
	Administration	7	5.6
	Others	12	9.6
	Total	**125**	**100.0**
Industry Type	Manufacturing	53	42.4
	IT/ITES	29	23.2
	Services	13	10.4
	Education	9	7.2
	Others	21	16.8
	Total	**125**	**100.0**

Source: primary data

Table-1 shows that the majority of age groups 71.2% of the respondents in the range of 20-25 years. Gender majority 60.8% of the respondents are male. In the Educational qualification Maximum 44.0 % of the respondents are professionals. In the Work Experience, a maximum 42.4% of the respondents have experience of less than one year. Followed by the functional area of the respondent is mostly from operations (24.0%). Industry types: The majority of the respondents have jobs in the manufacturing sector. This professional and academic diversity ensures that the subsequent analysis of green reskilling and sustainability performance is based on a cognitively ready and

sector-relevant population.

Table - 2 Descriptive Statistics of Green Reskilling Initiatives (GRI), Green Skill Competencies (GSC), Green Behaviour and Employee Engagement (GBE), and Organizational Sustainability Performance (OSP)

		GRI	GSC	GBE	OSP
Mean		22.23	21.30	22.38	22.31
Median		22.00	21.00	23.00	23.00
Mode		24	24	21	24
Std. Deviation		3.659	4.874	4.188	4.215
Variance		13.389	23.758	17.543	17.765
Skewness		0.081	-0.450	-0.991	-0.488
Kurtosis		-0.517	0.519	2.891	0.738
Range		15	24	24	22
Minimum		15	6	6	8
Maximum		30	30	30	30
Percentiles	25	19.00	18.00	20.50	19.00
	50	22.00	21.00	23.00	23.00
	75	25.00	24.00	25.00	25.00

Source: primary data

Table - 2 reveals that the descriptive analysis indicates a high level of engagement across all constructs, with Green Behaviour and Employee Engagement (GBE) having the highest mean (M = 22.38), closely followed by Organizational Sustainability Performance (OSP) (M = 22.31) and Green Reskilling Initiatives (GRI) (M = 22.23), all significantly exceeding the theoretical midpoint of 18.0. Green Skill Competencies (GSC) showed the lowest mean (M = 21.30) and highest variability (SD = 4.874), indicating that while training is provided, there is a significant variation in perceived mastery across employees. The negative skewness seen throughout GSC, GBE, and OSP implies a concentration of high scores, although GBE's high kurtosis (2.891) reflects a strong consensus on employee participation in sustainable activities. Overall, the data indicate that, while the organisational culture successfully encourages green behaviour and sustainability, there is a strategic need to standardise skills to minimize the current significant diversity in individual skill levels.

Table -3 Influence of Green Reskilling Initiatives (GRI), Green Skill Competencies (GSC), Green Behaviour and Employee Engagement (GBE), on overall Organizational Sustainability Performance (OSP)

Table 3 shows that the OLS method has been used to test the significant influence of Green Reskilling Initiatives (GRI), Green Skill Competencies (GSC), Green Behaviour and Employee Engagement (GBE), on overall Organizational Sustainability Performance (OSP).

	Un-standardized Coefficients		Standardized Coefficients	T	P value
	B	Std. Error	Beta		
(Constant)	-1.898	1.550		-1.225	0.223
GRI	0.454	0.066	0.394	6.897	0.000
GSC	0.137	0.048	0.158	2.852	0.005
GBE	0.482	0.061	0.479	7.843	0.000
Gender	-0.064	0.441	-0.007	-0.146	0.884
Age groups	0.397	0.431	0.047	0.922	0.358
R:0.856, R^2:0.733, Adjusted ^{R}: 0.721, F=65.194, P<0.000					

Source: primary data

The R value of 0.856 indicates there is moderate correlation between the dependent and independent variables, while the R^2 value of 0.733 indicating 73.3% of variance is explained by Green Reskilling Initiatives (GRI), Green Skill Competencies (GSC), Green Behaviour and Employee Engagement (GBE), in Organizational Sustainability Performance (OSP). The construct model is significant as the value of F=65.194 and a P value is 0.000, indicating the significance of the developed model. The results show Green Behaviour and Employee Engagement emerged as the most significant contributors 0.479, followed by Green Reskilling Initiatives, 0.394, and Green Skill Competencies 0.158, Notably, the demographic variables of Gender 0.884 and Age groups 0.358, did not exert a statistically significant influence on the outcome, suggesting that the impact of these green human resource practices is uniform across the workforce. These findings empirically validate that fostering active employee engagement and structured reskilling programs are the primary drivers of superior sustainability performance within the organization.

V.RESULT AND DISCUSSION

The full examination of responses from 125 participants reveals a workforce that is both cognitively prepared and strongly motivated to pursue environmental goals. The statistic for Green Behaviour and Employee Engagement (GBE) stands out with a mean score of 22.38, showing that employees are strongly committed to sustainability projects. This high preference indicates that the organizational culture is successfully building an environment that promotes and encourages green habits among its people. However, a contrasting outcome emerges in the area of Green Skill Competencies (GSC), which had the lowest mean

score of 21.30 and the most variability among respondents.

This disparity demonstrates a substantial discrepancy in the perceived mastery of important green skills, particularly among Generation Z. Such variety highlights the need for firms to identify and address the specific competences that are lacking in this group, ensuring that all employees have the necessary abilities to effectively contribute to sustainability efforts. The regression analysis used in this study exhibited a high level of robustness, accounting for 73.3% of the variance in Organizational Sustainability Performance. Among the factors studied, GBE emerged as the most impactful, emphasizing its critical role in generating sustainable results. Green Reskilling Initiatives (GRI) followed closely behind, demonstrating the need of targeted training and development initiatives in improving staff performance.

The discussion aspect emphasizes an essential point: despite Generation Z's strong innate environmental values, there is a significant "disconnect" between their theoretical grasp of sustainability and the practical, industry-specific abilities required by firms. This gap shows that, while individuals may be aware of environmental challenges, they lack the practical skills required to adopt effective solutions within their employment. Furthermore, the data found that gender and age had no statistically significant impact on the outcomes of green human resource practices, implying that these programs have a consistent impact throughout the whole workforce. This research emphasizes the significance of creating inclusive and consistent ways of training and reskilling that may effectively improve green capabilities for all employees, regardless of demographics. To summarize, the findings of this study empirically corroborate the idea that tackling the skill gap through systematic reskilling efforts is critical for transforming employee intentions into actual sustainable outcomes. Organizations must prioritize developing standardized technical green competencies rather than simply raising awareness of environmental challenges. By doing so, firms can reduce individual skill inequalities, boosting their long-term competitiveness in an increasingly eco-conscious market.

VI.CONCLUSION

The findings of this study highlight the importance of reskilling Generation Z in green competencies, framing it not as a supplementary role of human resources but as a critical strategic investment required for enterprises' long-term viability. As this generation enters the workforce, they bring with them a greater awareness of environmental issues; however, there is still a significant "disconnect" between their theoretical understanding of sustainability and the practical skills required to effectively implement it in industry settings. This gap is a severe barrier to attaining meaningful, sustainable achievements. The study found that active employee engagement, along with a commitment to green practices, is the most powerful driver of sustainability activities. This conclusion suggests that reskilling programs should go beyond technical teaching by emphasizing the development of intrinsic motivation and a deep commitment to sustainable practices among employees. Structured initiatives, such as the Global Reporting Initiative (GRI), have been found to considerably improve performance in economic, social, and environmental areas. These programs provide a solid framework for firms seeking to survive in more sustainable economies, emphasizing the importance of a systemic approach to reskilling that incorporates sustainability at the heart of organizational strategies. The study also found that the efficiency of green human resource management (HRM) techniques is constant across demographic groupings, such as gender and age cohorts. This universality implies that firms can successfully create a sustainability-oriented staff with various origins and perspectives, improving company culture and increasing overall performance. To capitalize on these findings, firms are recommended to move away from standalone green workshops and toward a holistic "Green HRM" framework. This strategy should incorporate sustainability into the fundamentals of recruitment, training, and performance management procedures. Businesses can efficiently bridge existing skill gaps by addressing substantial differences in skill competencies via standardized technical training programs. Furthermore, leveraging Generation Z's natural technological proficiency can act as a catalyst for promoting green innovation and gaining a competitive advantage in the marketplace. Organizations that invest in these strategic initiatives can not only future-proof themselves but also make significant contributions to global sustainability efforts.

VIII.REFERENCES

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