

INTEGRATING GREEN SKILLS INTO HRM PRACTICES: A KEY TO SUSTAINABLE TALENT MANAGEMENT

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Abstract: Human resource management (HRM) plays an important role in aligning organizational goals with sustainability objectives, and integrating green skills into HRM practices is essential for driving long-term success. This paper explores how HRM can embed green skills development into talent acquisition, training, and performance management as part of a sustainable talent management strategy. Green skills, defined as the abilities and knowledge that contribute to environmental sustainability, are becoming increasingly important as organizations strive to reduce their ecological footprint. Through a review of current literature, the paper investigates the frameworks and best practices for incorporating green competencies into HRM processes, highlighting the role of green skills in shaping recruitment criteria, employee development programs, and performance metrics. Sustainable talent management, which involves nurturing a workforce capable of contributing to environmental and social goals, requires HRM to rethink traditional approaches. By embedding green skills into the employee lifecycle—starting with job design and recruitment, followed by training initiatives and ongoing performance evaluation—HRM departments can facilitate the development of environmentally conscious talent. This paper argues that green skills serve as the cornerstone of sustainable talent management, enabling companies to achieve both competitive advantage and environmental responsibility. The findings of this paper underscore the need for HRM professionals to adopt a strategic approach that integrates sustainability into core HR functions. Specifically, green skills development consists a key element of HR strategies to meet both organizational sustainability goals and the expectations of an increasingly eco-conscious workforce. Furthermore, the research provides recommendations for HRM practices, such as incorporating green competencies into job descriptions, offering sustainability-focused training programs, and designing performance management systems that reward green initiatives. By bridging the gap between HRM practices and organizational sustainability goals, this paper contributes to sustainable human resource management knowledge. The recommendations offered provide actionable insights for HR professionals seeking to embed sustainability into their practices, ensuring that organizations can attract, develop, and retain talent that aligns with their environmental and social objectives.

Keywords: Green skills, sustainable talent management, HRM practices, organizational sustainability, environmental responsibility.

1. INTRODUCTION

Employers have traditionally sought two primary categories of skills: technical skills and general skills. Technical skills, which are specific to particular occupations, such as programming or automobile repair, are typically hands-on and task-oriented (Laker & Powell, 2011). On the other hand, general skills encompass broader capabilities required for interacting with others and navigating workplace dynamics, including communication, teamwork, problem-solving, and critical thinking. Both types of skills have historically been crucial for securing and maintaining employment. However, this landscape has shifted in recent years. Possessing both technical and general skills is no longer deemed sufficient to guarantee employment (Schulz, 2008).

In addition to these foundational skill sets, employers are increasingly prioritizing what are termed "green skills." These competencies are essential for fostering sustainable development at social, economic, and environmental levels. The majority of current economic activities fall short in contributing to sustainable development due to the inadequate integration of advanced technical and technological practices. As a result, countries, particularly those in the developing world, have incurred significant costs in managing the consequences of environmental degradation and climate change, which, in turn, have profound impacts on social and economic systems (Chinowsky et al., 2011).

Environmental pollution and climate change are not just ecological concerns; they are also detrimental to the sustainability of global economic activities. As climate change continues to accelerate, its effects—such as altered weather patterns, increasingly severe droughts or monsoons, and rising sea levels—are expected to become more pronounced. These environmental shifts will likely have catastrophic social and economic consequences if decisive and effective measures are not taken to address these challenges (Mousavi et al., 2011). Without such interventions, the negative feedback loop between environmental degradation and economic instability will continue to exacerbate, threatening long-term sustainability across multiple sectors.

2. THEORY OF GREEN SKILLS

To develop a model that supports learning cities in promoting sustainable economic development through skills enhancement, it is essential to address two key conceptual challenges related to the greening of skills. Historically, global research on the greening of economies has primarily concentrated on justifying the necessity for green growth strategies. These studies have emphasized the creation of appropriate policy frameworks to facilitate the transition to green growth, prioritizing sustainable development initiatives, measuring the progress of these initiatives, analyzing structural changes, and identifying factors driving shifts in skills and occupations. Additionally, they have examined the transformation of existing jobs, the emergence of new ones, the classification of "green skills," and the potential for job creation within this context (Strietska-Ilina et al., 2012).

Despite these efforts, research conducted by the European Centre for the Development of Vocational Training (Cedefop) reveals that "most learning providers have yet to incorporate green skills into their educational strategies" (Cedefop, 2012). This finding contrasts with data from the Organization for Economic Co-operation and Development (OECD, 2011), which indicated that more than half of the countries surveyed had introduced specific environmental training programs. These differing results underscore the variability in the implementation of green skills training across regions.

In developing countries, the response to the skills demands associated with environmental challenges and climate change has been notably lacking. Most studies have indicated that governmental bodies and formal technical and vocational education and training (TVET) systems have yet to rise to the occasion in addressing these critical skills gaps. Educational initiatives are often fragmented and inconsistent, and their influence on the environmental sustainability of industries and the broader economy has remained minimal (Strietska-Ilina et al., 2012). However, recent research provides a more optimistic view in certain sectors. For instance, a study conducted by Pavlova (2015) found that TVET providers in the agricultural and construction industries across many Asian countries have been more proactive. These institutions have embraced the concept of green restructuring and successfully integrated green competencies into their training programs, demonstrating a positive shift toward sustainable skills development in these fields.

This contrast in approaches between regions and sectors highlights the need for a more cohesive and integrated response to green skills training worldwide. Comprehensive efforts are required to ensure that education systems, particularly in developing regions, are equipped to meet the growing demand for skills that support environmental sustainability and contribute to broader economic resilience.

Olga Strietska-Ilina and colleagues (2012) categorize general green skills into several key areas, which have been further elaborated by Pavlova (2014). These categories encompass a broad range of competencies necessary for addressing environmental challenges within the context of sustainable development:

- **Cognitive skills:** These include a heightened environmental awareness and a willingness to engage with sustainability issues. They also involve skills such as systems and risk analysis, as well as innovative thinking, which enables individuals to identify opportunities and devise new strategies to tackle green challenges effectively.
- **Interpersonal skills:** These relate to coordination, management, and business acumen, all of which are crucial for fostering holistic, interdisciplinary approaches that integrate economic, social, and ecological objectives.
- **Communication and negotiation skills:** These competencies are vital for managing conflicting interests in complex contexts. Additionally, marketing skills are important for promoting greener products and services to a broader audience, encouraging sustainable consumption.
- **Intrapersonal competencies:** This category includes adaptability and the ability to acquire transferable skills. Such competencies are essential for workers to learn and apply new technologies and processes required in green jobs, particularly in industries adopting low-carbon technologies.

Complementing this framework, a study conducted by Per Capita (2010) offers a practical approach to general green skills, focusing on technical and managerial abilities that support sustainable practices. The study highlights the following skills:

- **Quantification and monitoring:** The ability to measure and track the use of resources such as waste, energy, and water.
- **Management systems:** The development and implementation of systems to manage waste, energy, and water more efficiently.
- **Procurement and selection:** The skills required to make informed decisions when procuring materials or selecting resources, ensuring they have minimal environmental impact.

- **Material use and impact quantification:** Competencies related to measuring the environmental impact of material use.
- **Minimization of impact and use:** Skills that enable individuals to reduce the environmental footprint of products and processes.
- **Impact assessment:** The ability to assess the environmental consequences of actions, projects, or policies.
- **Risk management:** Competence in identifying, evaluating, and managing risks associated with environmental and sustainability challenges.

Together, these frameworks underscore the multifaceted nature of green skills. They highlight not only the need for technical and managerial capacities but also the importance of cognitive, interpersonal, and communication abilities to drive sustainable practices in various sectors. This comprehensive understanding of green skills equips individuals and organizations to contribute more effectively to sustainable development goals across diverse industries.

3. GREEN SKILLS AND HRM PRACTICES

Historically, green skills were predominantly associated with gardening and horticulture, but today, they have become essential for people in all walks of life. The concept of "green skills" emerged alongside the rise of green technologies, yet public awareness of these skills remains relatively low. While most people are familiar with general skills, technical skills, and employability skills, their understanding of green skills is often limited (Zolkifli et al., 2016).

In general terms, green skills are seen as sustainability-related competencies that align with technical expertise, knowledge, values, and attitudes essential for fostering sustainable outcomes across social, economic, and environmental spheres in business, industry, and communities (McDonald et al., 2012). These skills encompass the knowledge, abilities, values, and attitudes necessary for individuals and societies to reduce the environmental impact of human activities and contribute to sustainability efforts.

Green skills can be understood through three distinct dimensions: cognitive, psychomotor, and emotional. These dimensions collectively form the foundation of green skills required for promoting sustainable development in the workforce.

- **Cognitive dimension:** This dimension emphasizes knowledge related to environmental protection and sustainability. It includes understanding concepts such as climate change, resource management, and pollution control, all of which are critical elements of green skills.
- **Psychomotor dimension:** This aspect refers to the practical application of green skills, such as the ability to minimize energy consumption, reduce greenhouse gas emissions, or implement sustainable practices in various industries. These skills involve hands-on abilities to perform tasks that directly contribute to environmental conservation and sustainability efforts.
- **Emotional dimension:** This dimension highlights the values and attitudes that motivate individuals to engage in sustainable practices. For example, a person's commitment to conserving natural resources, their willingness to adopt environmentally friendly behaviors, and their concern for ecological well-being are all integral emotional aspects of green skills.

Together, these dimensions reflect a holistic approach to green skills that goes beyond mere technical knowledge, incorporating practical abilities and the emotional drive to support sustainability. Green skills are essential for workers to effectively contribute to a more sustainable society, economy, and environment. They play a crucial role in shaping behaviors and practices that reduce the ecological impact of industries and communities while promoting long-term sustainability.

More and more organizations and companies recognize the value of turning their processes green in maintaining their business growth and success. For this reason, environmental management is considered important to integrate into human resources so that the business becomes sustainable. Of course, developing a sustainable business is characterized as a long and difficult process. Because of the complexity it presents companies are faced with obstacles and challenges especially when it comes to implementing green tactics in human resources. Two of the most important factors related to green human resource management are employee training and rewards (Ari et al., 2020).

Companies in the modern economy seek to enhance the work and behavioral skills of employees in order to make it easier and more efficient to manage the demands of the consumers (Babakus et al. (2003). In fact, employee training has a direct influence on the more efficient implementation of environmental corporate actions (Jabbour and Santos, 2008). Green training helps employees to understand the importance of protecting the environment and develop corresponding concerns. Also, according to the literature, green training creates commitment from both the employees and the company regarding sustainability and therefore the successful implementation of green practices

in human resources. Green programs and seminars help human resources to be more aware of environmental protection. Worth noting pushes that green actions are directly related to corporate social responsibility and promote organized, valid and thorough practices (Srivastava and Shree, 2019). Numerous studies have shown that training as an indicator of green human resource management is extremely important and is a means to promote environmental, corporate management and employee commitment to environmental protection (Luu, 2018).

As industries strive to meet global sustainability goals, demand for professionals equipped with these skills continues to rise. The transition to a green economy not only involves adopting sustainable technologies but also upskilling workers to adapt to new roles and responsibilities in environmentally focused sectors. For example, in the construction industry, green skills include expertise in sustainable building materials and energy-efficient design (Cedefop, 2021). As such, the integration of green skills into the workforce is essential for driving sustainable development and meeting international climate targets.

Sustainable talent management (STM) focuses on aligning human resource practices with long-term environmental and social goals. STM goes beyond traditional talent management by considering the sustainability of the talent pipeline and the long-term impact of human resource strategies on both employees and the environment. According to Ehnert et al. (2016), sustainable talent management involves recruiting, developing, and retaining employees who are not only skilled in green practices but are also committed to corporate sustainability values. This approach ensures that organizations are equipped with the necessary human capital to thrive in a green economy. STM emphasizes creating a balance between economic performance, social equity, and environmental stewardship, promoting a workplace culture where employees are encouraged to contribute to sustainability efforts (Renwick et al., 2013). Ultimately, by integrating green skills into STM, companies can foster a workforce that is adaptable to the changing demands of the green economy while simultaneously promoting long-term organizational sustainability.

4. CONCLUSIONS

The integration of green skills into human resource management (HRM) practices is no longer optional but essential for organizations striving for sustainability. By embedding green competencies into talent acquisition, training, and performance management, organizations can create a workforce that not only drives business success but also contributes to environmental and social sustainability. This paper has explored how green skills serve as the cornerstone of a sustainable talent management strategy, demonstrating their importance in aligning HRM practices with broader organizational sustainability goals.

In talent acquisition, organizations must redefine recruitment criteria to emphasize environmental awareness and sustainability-focused skills. This ensures that new hires possess the green competencies necessary to contribute to the company's sustainability efforts from the outset. Additionally, by integrating green skills into training programs, HRM can enhance the environmental literacy of employees, equipping them with the knowledge and tools to implement sustainable practices in their daily tasks.

Overall, the integration of green skills into HRM practices creates a synergy between employee development and organizational sustainability goals. By adopting a strategic approach to green skills development, HRM can ensure that sustainability is woven into the fabric of the organization. This not only enhances the company's environmental performance but also strengthens its competitive advantage in a market increasingly focused on sustainability. Moving forward, HRM professionals must continue to innovate and refine their practices to support the ongoing evolution of sustainability in the workplace.

In conclusion, green skills are a pivotal component of sustainable talent management. As businesses face mounting pressure to address environmental concerns, HRM's role in fostering a sustainability-oriented workforce becomes more critical than ever. The recommendations provided in this paper offer practical guidance for HR professionals looking to integrate green skills into their talent management strategies, thereby contributing to both organizational success and a sustainable future.

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