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CULTIVATING SUSTAINABLE MINDSETS: THE ROLE OF TRAINING AND DEVELOPMENT IN STRENGTHENING SDG COMPETENCIES

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ABSTRACT

The Sustainable Development Goals (SDGs) represent a global commitment to achieving social equity, economic growth, and environmental protection by 2030. Attaining these goals requires individuals and organizations to develop competencies that align with sustainability principles. This paper explores how training and development initiatives can cultivate sustainable mindsets and strengthen SDG-related competencies. It reviews existing literature, identifies theoretical and conceptual frameworks, and highlights research gaps. The study concludes that integrating sustainability into training and development enhances organizational performance, employee engagement, and societal well-being.

KEYWORDS: Sustainable Development Goals, training and development, sustainability, competency building, human resource development

1. INTRODUCTION

The 2030 Agenda for Sustainable Development, adopted by the United Nations in 2015, outlines 17 Sustainable Development Goals (SDGs) that aim to address global challenges such as poverty, inequality, and climate change (United Nations, 2015). Achieving these goals requires not only policy interventions but also the development of human competencies that support sustainable thinking and behaviour.

Training and development (T&D) play a crucial role in equipping individuals with the knowledge, skills, and attitudes necessary to contribute to sustainable development. Organizations that integrate sustainability into their learning and development strategies can foster a culture of responsibility, innovation, and ethical decision-making (Garavan et al., 2020). This paper examines how T&D can be leveraged to build SDG competencies and promote sustainable mindsets among employees.



1.1.Statement of the Problem

Despite the global emphasis on sustainability, many organizations struggle to translate SDG principles into actionable competencies within their workforce. Training programs often focus on technical or operational skills, neglecting the broader sustainability perspective. There is a lack of structured frameworks that connect training and development with SDG competency building. This gap limits the ability of organizations to align their human resource strategies with global sustainability objectives.

1.2.Need for the Study

The need for this study arises from the growing recognition that achieving the SDGs requires not only technological and policy innovations but also human capacity development. Employees must possess the competencies to think critically, act ethically, and collaborate effectively toward sustainable outcomes. Understanding how training and development can foster these competencies is essential for organizations seeking to contribute meaningfully to the 2030 Agenda.

1.3.Significance of the Study

This study contributes to the growing body of knowledge on sustainability-oriented human resource development. It provides insights into how training and development can be strategically designed to cultivate sustainable mindsets and competencies. The findings can guide policymakers, educators, and organizational leaders in integrating sustainability into learning frameworks. Furthermore, the study bridges the gap between theory and practice by linking HRD strategies with global sustainability goals.

1.4. Literature Review

The review of literature is done on four different dimensions and are elaborated hereunder:

1.4.1. Training and Development in the Context of Sustainability

Training and development have evolved from traditional skill-building activities to strategic tools for organizational transformation. According to Noe et al. (2017), T&D enhances employee performance, adaptability, and innovation. When aligned with sustainability objectives, T&D can also promote environmental stewardship and social responsibility (Jackson & Seo, 2019).

Sustainability-oriented training focuses on developing competencies that enable individuals to understand complex global systems and act responsibly within them. Lozano (2018) emphasized that sustainability education should integrate cognitive, socio-emotional, and behavioural dimensions to foster holistic learning. Similarly, UNESCO (2017) identified key learning objectives for sustainability, including systems thinking, critical reflection, and collaborative problem-solving.

1.4.2. SDG Competencies and Human Resource Development

Human Resource Development (HRD) scholars have increasingly recognized the importance of sustainability in workforce development. Garvan and McGuire (2010) proposed that HRD should



expand its focus to include environmental and social dimensions, thereby contributing to sustainable organizational performance.

Wiek et al. (2011) identified five core competencies for sustainability: systems thinking, anticipatory competence, normative competence, strategic competence, and interpersonal competence. These competencies enable individuals to analyze sustainability challenges, envision future scenarios, and implement effective solutions. Training programs that incorporate these competencies can help employees align their actions with the SDGs.

1.4.3. Organizational Learning and Sustainable Mindsets

Organizational learning theories suggest that continuous learning fosters adaptability and innovation (Argyris & Schön, 1996). When sustainability principles are embedded in learning processes, organizations can develop a shared understanding of sustainable practices. Senge (2006) described this as the creation of a “learning organization” where individuals continually expand their capacity to achieve desired results.

Empirical studies have shown that sustainability training enhances employee engagement and organizational reputation. For instance, Kim and Park (2020) found that sustainability-oriented training programs improved employees’ environmental awareness and commitment to corporate social responsibility. Similarly, Jabbour and Santos (2008) demonstrated that green training positively influences environmental performance in manufacturing firms.

1.4.4. Challenges in Implementing Sustainability Training

Despite its benefits, integrating sustainability into training programs faces several challenges. These include limited resources, lack of expertise, and resistance to change (Ehnert et al., 2016). In many organizations, sustainability is still perceived as a peripheral activity rather than a strategic priority. Overcoming these barriers requires leadership commitment, cross-functional collaboration, and continuous evaluation of training outcomes.

1.5. Research Gap

While existing studies have explored sustainability education and HRD, limited research has examined the direct relationship between training and the development of SDG-specific competencies in organizational contexts. Most studies focus on higher education or environmental management, leaving a gap in understanding how corporate training can systematically build SDG competencies across sectors. This study addresses this gap by proposing a conceptual framework that links training and development with sustainable mindset cultivation and SDG competency enhancement.



1.6. Research Questions

1. What are the key competencies required to support the achievement of the Sustainable Development Goals?
2. How can training and development initiatives be designed to cultivate sustainable mindsets among employees?
3. What strategies can organizations adopt to integrate sustainability into their training and development programs?
4. What challenges hinder the effective implementation of sustainability-oriented training?

1.7. Objectives of the Study

The objectives of this study are designed to explore the relationship between training and development initiatives and the cultivation of SDG-related competencies within organizations. The specific objectives are:

1. To identify the key competencies required to support the achievement of the Sustainable Development Goals (SDGs).
2. To examine the role of training and development in fostering sustainable mindsets among employees.
3. To analyze strategies for integrating sustainability principles into organizational training and development programs.
4. To evaluate the challenges and barriers faced by organizations in implementing sustainability-oriented training initiatives.
5. To propose a conceptual framework linking training and development with SDG competency enhancement and organizational sustainability performance.

2. MATERIALS AND METHODS

The theoretical and conceptual framework based on which this study is been done and the methodology being adopted have been narrated hereunder:

2.1. Theoretical Framework

This study is grounded in two key theories: Human Capital Theory and Transformative Learning Theory.

Human Capital Theory (Becker, 1993) posits that investment in employee education and training enhances productivity and organizational performance. When applied to sustainability, this theory suggests that developing SDG competencies through training increases an organization's capacity to achieve sustainable outcomes.

Transformative Learning Theory (Mezirow, 1997) emphasizes the process of critical reflection that

leads to a change in perspective. Sustainability training encourages individuals to question existing assumptions and adopt new ways of thinking that align with sustainable values. This theoretical lens supports the idea that training can transform mindsets and behaviours toward sustainability.

2.2. Conceptual Framework

The following chart illustrates the relationship between training and development, sustainable mindset cultivation, and SDG competency enhancement.



Figure 1: Conceptual Framework

This framework suggests that effective training and development initiatives foster sustainable mindsets, which in turn strengthen SDG competencies. Enhanced competencies contribute to improved organizational sustainability performance and alignment with global goals.

2.2.1. Training and Development (T&D)

Training and development refer to systematic efforts undertaken by organizations to enhance employees' knowledge, skills, and attitudes.

According to Noe et al. (2017), effective training programs not only improve performance but also shape values and behaviours. When sustainability principles are embedded in T&D, employees become more conscious of their environmental and social responsibilities (Jackson & Seo, 2019).

2.2.2. Sustainable Mindset Formation

A sustainable mindset is a way of thinking that integrates environmental, social, and economic considerations into everyday decisions. It reflects an individual's awareness, values, and commitment to sustainability. Training programs that emphasize reflection, experiential learning, and collaboration

help employees internalize sustainability values (Mezirow, 1997). The development of a sustainable mindset involves three dimensions of Cognitive Dimension, Affective Dimension and Behavioural Dimension. Transformative learning theory supports this process by explaining how individuals shift their perspectives through critical reflection and experiential engagement (Mezirow, 1997).

2.2.3. SDG Competency Development

SDG competencies are the specific knowledge, skills, and attitudes that enable individuals to contribute effectively to sustainable development. Wiek et al. (2011) identified five key competencies which is given as a chart below:



Systems Thinking Competence means understanding interconnections among social, economic, and environmental systems. Anticipatory Competence indicates the envisioning sustainable futures and preparing for long-term challenges. Normative Competence specifies applying ethical principles and sustainability values in decision-making. Strategic Competence relates to designing and implementing effective sustainability strategies. Interpersonal Competence explains about collaborating with diverse stakeholders to achieve common goals.

Training and development programs that incorporate these competencies enable employees to align their actions with the SDGs and contribute to organizational sustainability.

2.2.4. Organizational Sustainability Performance

When employees possess strong SDG competencies and sustainable mindsets, organizations benefit through improved sustainability performance. This includes:

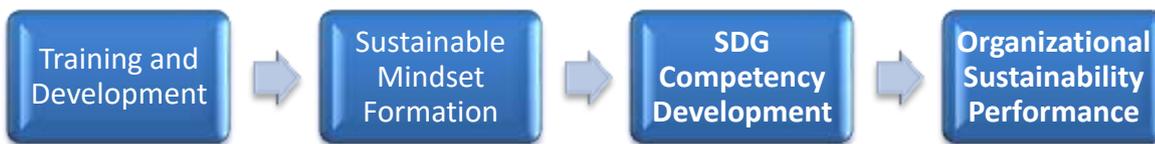
- ❖ Enhanced environmental management and resource efficiency.
- ❖ Stronger corporate social responsibility (CSR) initiatives.

- ❖ Increased innovation in sustainable products and services.
- ❖ Improved reputation and stakeholder trust.

Garavan et al. (2020) argue that sustainability-oriented HRD practices lead to long-term organizational resilience and competitiveness.

2.3. Relationships Among the Components

The conceptual framework proposes a causal and reinforcing relationship among the four components:



Training programs that integrate sustainability principles foster awareness and reflection, leading to the development of sustainable mindsets. Once individuals internalize sustainability values, they are more likely to acquire and apply SDG-related competencies in their professional roles. Employees equipped with SDG competencies contribute to improved sustainability outcomes, innovation, and ethical practices within the organization. As organizations achieve better sustainability performance, they reinvest in training and development, creating a continuous cycle of learning and improvement. The conceptual framework is grounded in two key theories:

Human Capital Theory (Becker, 1993)

This theory suggests that investment in training enhances employee capabilities, which in turn improves organizational performance. In this context, sustainability training is viewed as an investment that yields both economic and social returns.

Transformative Learning Theory (Mezirow, 1997)

This theory explains how individuals change their perspectives through critical reflection and experiential learning. Sustainability training encourages employees to question unsustainable practices and adopt new, responsible behaviours.

Together, these theories explain how training and development can transform individual mindsets and competencies, leading to sustainable organizational outcomes.

The conceptual framework demonstrates that training and development act as the foundation for cultivating sustainable mindsets and building SDG competencies. These competencies, in turn,



enhance organizational sustainability performance. The framework emphasizes a continuous learning cycle, where improved performance reinforces further investment in sustainability-oriented training. This model provides a practical and theoretical basis for organizations and researchers to design, implement, and evaluate training programs that contribute directly to the achievement of the Sustainable Development Goals.

2.4. Methodology

This study adopts a qualitative research design based on secondary data analysis. Data were collected from peer-reviewed journals, reports from international organizations, and case studies of companies implementing sustainability training. The analysis focused on identifying patterns, best practices, and challenges in developing SDG competencies through training and development.

3. RESULT AND DISCUSSION

The results of this qualitative study are derived from an extensive review and synthesis of secondary data, including academic literature, organizational case studies, and international reports on sustainability training and SDG competency development. The findings are organized according to the study's objectives and conceptual framework.

3.1. Identification of Key SDG Competencies

The analysis confirmed that five core competencies—systems thinking, anticipatory competence, normative competence, strategic competence, and interpersonal competence—are essential for achieving the SDGs (Wiek et al., 2011). These competencies enable individuals to understand complex sustainability challenges, anticipate future risks, make ethical decisions, and collaborate effectively. The reviewed studies consistently emphasized that these competencies form the foundation for sustainable behaviour and decision-making in organizations.

3.2. Role of Training and Development in Fostering Sustainable Mindsets

The findings revealed that training and development initiatives significantly influence the formation of sustainable mindsets among employees. Programs that incorporate experiential learning, reflection, and real-world problem-solving were found to be most effective in promoting sustainability-oriented thinking (Mezirow, 1997; Lozano, 2018). Organizations that embedded sustainability into their training curricula reported higher levels of employee engagement, ethical awareness, and innovation (Kim & Park, 2020).

3.3. Strategies for Integrating Sustainability into Training Programs

The results identified several effective strategies for integrating sustainability into training and development:



- Aligning training objectives with specific SDG targets.
- Incorporating sustainability modules into onboarding and leadership programs.
- Using experiential and project-based learning to address real sustainability challenges.
- Partnering with educational institutions and NGOs for specialized sustainability training.
- Establishing evaluation mechanisms to measure behavioural and performance outcomes.

These strategies were found to enhance both individual learning and organizational sustainability performance.

3.4. Challenges in Implementing Sustainability-Oriented Training

The study found that organizations face multiple barriers when implementing sustainability training. Common challenges include limited financial resources, lack of qualified trainers, insufficient management support, and resistance to behavioural change (Ehnert et al., 2016). In some cases, sustainability training was treated as a compliance requirement rather than a strategic investment. Overcoming these challenges requires leadership commitment, integration of sustainability into corporate strategy, and continuous monitoring of training outcomes.

3.5. Validation of the Conceptual Framework

The results support the proposed conceptual framework linking Training and Development → Sustainable Mindset Formation → SDG Competency Development → Organizational Sustainability Performance. Evidence from the reviewed literature indicates that organizations investing in sustainability-oriented training experience measurable improvements in environmental performance, social responsibility, and innovation capacity (Garavan et al., 2020; Jabbour & Santos, 2008).

The framework's feedback loop was also validated: as organizations achieve better sustainability outcomes, they tend to reinvest in training and development, creating a continuous cycle of learning and improvement.

The review indicates that training and development are essential mechanisms for embedding sustainability into organizational culture. Programs that emphasize awareness, skill development, and behavioural change can transform employees into active contributors to sustainable development. However, the success of such programs depends on leadership support, alignment with organizational goals, and continuous evaluation.

Organizations that integrate sustainability into their training frameworks not only enhance employee competencies but also strengthen their reputation and competitiveness. The findings align with previous research suggesting that sustainability-oriented HRD contributes to long-term organizational resilience (Garavan et al., 2020).

3.5. Implications of the Study

The study has several practical and theoretical implications. For practitioners, it highlights the



importance of aligning training programs with sustainability objectives to build a competent and responsible workforce. For policymakers, it underscores the need to promote sustainability education and capacity-building initiatives across sectors. Theoretically, the study contributes to HRD literature by linking training and development with SDG competency frameworks.

3.6.Limitations of the Study

The study is based on secondary data and conceptual analysis, which may limit the generalizability of findings. Empirical validation through primary data collection would strengthen the conclusions. Additionally, the study focuses primarily on organizational contexts and does not extensively address educational or community-based training programs.

3.7.Scope for Future Study

Future research can explore empirical models to measure the impact of sustainability training on organizational performance and SDG achievement. Comparative studies across industries and regions can provide deeper insights into best practices. Longitudinal studies could also examine how sustainability competencies evolve over time through continuous learning and development.

4. CONCLUSION

Cultivating sustainable mindsets through training and development is vital for achieving the Sustainable Development Goals. By embedding sustainability principles into learning frameworks, organizations can build the competencies needed to address global challenges. Training programs that focus on awareness, skill development, and behavioral transformation can create a workforce capable of driving sustainable change. Future research should continue to explore the dynamic relationship between human resource development and sustainability outcomes.

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