

From Compliance to Institutionalization: Environmental, Social, and Governance Acceptance in Malaysia's Manufacturing Workforce Development

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Abstract

The growing prominence of Environmental, Social, and Governance (ESG) principles has intensified the need for sustainable and future-ready workforce systems in manufacturing industries worldwide. In Malaysia, however, ESG adoption within the manufacturing sector remains uneven, with many efforts focused on compliance and reporting rather than meaningful integration into workforce development. Although national initiatives such as the Ministry of Investment, Trade and Industry's i-ESG Framework and the Human Resource Development Corporation's (HRD Corp) sustainability programs have strengthened policy direction, limited empirical research has examined how ESG principles are interpreted, enacted, and institutionalized across manufacturing workplaces and Technical and Vocational Education and Training (TVET) environments. This gap underscores the need to understand the social, cultural, and institutional processes shaping ESG acceptance within Malaysia's manufacturing ecosystem. Guided by the interpretivist paradigm and employing Constructivist Grounded Theory (CGT), this study explores how manufacturing stakeholders conceptualize and socially construct ESG meanings, how ESG acceptance is enacted through workplace interactions and practices, and what challenges and enabling conditions influence

the integration of ESG-related competencies in workforce development. Using purposive and theoretical sampling, the study will involve manufacturing practitioners, TVET educators, and policymakers from HRD Corp and the Department of Skills Development (JPK). Data will be collected through semi-structured interviews and document analysis, and analyzed using iterative coding, constant comparison, and theoretical integration. The study is expected to yield a typology of ESG conceptualizations within workforce contexts, an empirically grounded understanding of factors that hinder or support ESG competency integration, and a dynamic grounded theory model explaining how ESG acceptance emerges and becomes institutionalized across industry, education, and policy interfaces. Theoretically, the study advances understanding of ESG as a socially constructed process, while practically offering insights to strengthen policy alignment, curriculum design, and capacity-building efforts for Malaysia's sustainability-driven manufacturing workforce.

Keywords: Compliance, Institutionalization, Environmental, Social, Governance, Malaysia's Manufacturing

Introduction

Despite Malaysia's institutional commitment to sustainability, the acceptance and adoption of ESG principles within the manufacturing workforce remain inconsistent, fragmented, and poorly understood. While policy initiatives such as HRD Corp's ESG Industry Framework and MITI's i-ESG Framework have raised awareness, systemic implementation across manufacturing industries has not yet been achieved (Nik Mahdi et al., 2024). Empirical research reveals that Malaysian manufacturers, particularly micro, small, and medium enterprises (MSMEs) face enduring barriers to ESG integration, including inadequate regulatory guidance, financial constraints, and limited managerial or technical capacity (Hock et al., 2025; Salin et al., 2023). These challenges are compounded by the absence of standardized frameworks and cross-sector collaboration, resulting in conceptual awareness that exceeds actionable capability.

Current ESG scholarship in Malaysia remains predominantly compliance-oriented and quantitative, privileging disclosure, governance metrics, and financial performance indicators over social interpretation or workforce transformation (Hussin et al., 2025; Ratnasingam et al., 2023). Within the manufacturing sector, this orientation leads to surface-level ESG adoption driven by export requirements rather than internalized workforce capacity building. Although leadership ethics and Green HRM initiatives have emerged as enabling factors (Ong et al., 2025; Wang et al., 2024), the interpretive and social processes that underpin genuine ESG acceptance among manufacturing employees and educators remain largely unexplored. Theoretical limitations further exacerbate this gap. Existing ESG models, largely adapted from Western frameworks, emphasize structural determinants such as board composition and governance transparency (Ng et al., 2023; Wong et al., 2021), offering limited insight into Malaysia's culturally embedded, socially mediated adoption processes. While studies in Green Human Resource Management and TVET-industry collaboration (Vinayan et al., 2020) highlight the importance of leadership commitment and workforce readiness, empirical theorization of ESG acceptance in Malaysia's manufacturing industries remains absent.

Therefore, this study addresses the critical need for a context-sensitive, empirically grounded theory that explains how ESG acceptance is socially constructed, negotiated, and institutionalized within Malaysia's manufacturing workforce development ecosystem. Guided

by Constructivist Grounded Theory (CGT) under the interpretivist paradigm, this research aims to uncover the meanings, interactions, and institutional processes through which ESG principles are understood, enacted, and sustained. By focusing on the manufacturing sector, a cornerstone of Malaysia's industrial transformation—this study seeks to generate a theoretical model that informs policy coherence, curriculum design, and sustainable workforce development practices.

1. To explore how manufacturing industry stakeholders conceptualize, interpret, and socially construct ESG principles within the context of workforce development and TVET.
2. To examine how ESG acceptance is enacted and negotiated through interactions, practices, and relationships within the manufacturing workforce and training environments.
3. To identify the challenges and enabling conditions that influence the integration of ESG-related competencies in workforce development initiatives and training programs.
4. To construct a grounded theoretical model that explains the process of ESG acceptance and institutionalization across industry, education, and policy interfaces in Malaysia's manufacturing sector.

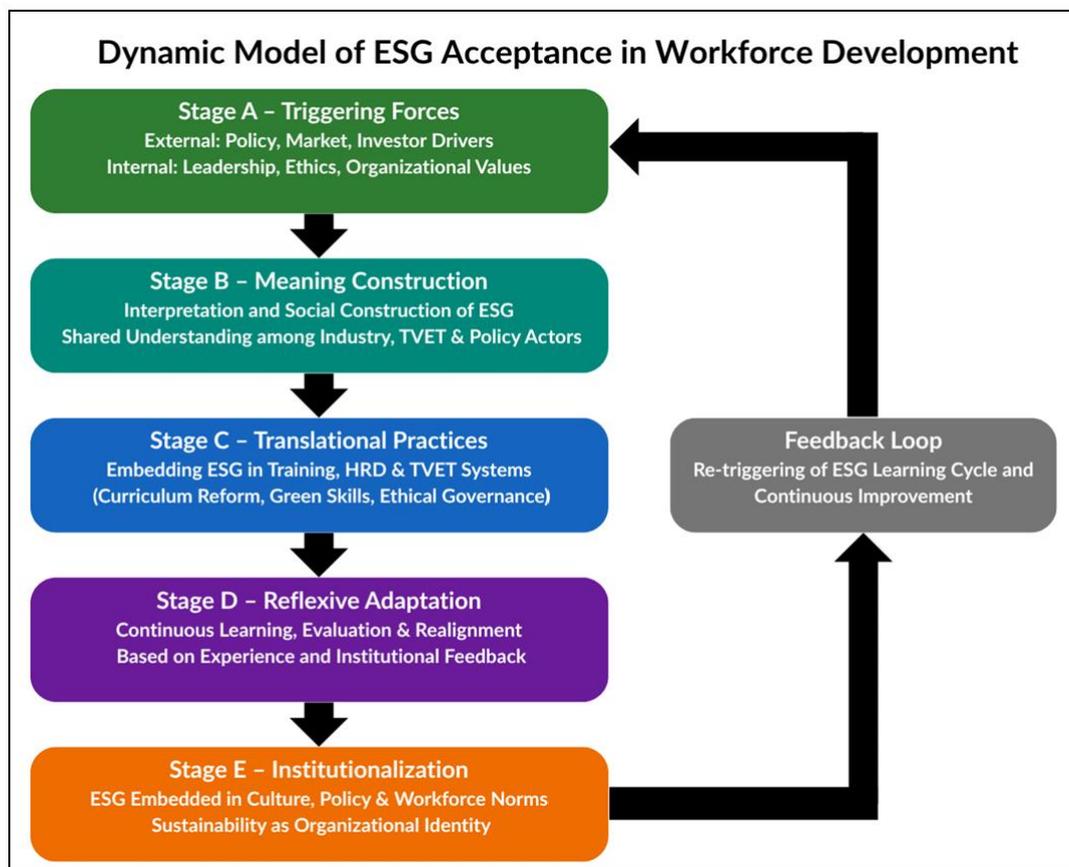
This study focuses on examining how Environmental, Social, and Governance (ESG) principles are conceptualized, accepted, and institutionalized within workforce development in Malaysia's manufacturing sector. The research is delimited to three primary stakeholder groups: manufacturing industry practitioners, Technical and Vocational Education and Training (TVET) educators involved in skills formation at advanced levels (SKM 6–8), and policymakers from agencies such as the Human Resource Development Corporation (HRD Corp) and the Department of Skills Development (JPK). The geographical scope is limited to manufacturing organizations operating within Malaysia, including selected subsectors such as electrical and electronics, automotive, machinery, medical devices, and wood-based industries, reflecting their varying ESG pressures and workforce configurations. Methodologically, the study is bounded by the use of Constructivist Grounded Theory (CGT), which frames the inquiry as an interpretive and inductive exploration of meaning-making processes. Data collection is restricted to qualitative methods, primarily semi-structured interviews and document analysis, with sampling limited to purposive and theoretical selection of participants who possess direct experience with ESG-related workforce initiatives. The conceptual scope is confined to understanding ESG acceptance within workforce development and TVET-linked training environments rather than evaluating corporate ESG performance, reporting, or environmental audits. The study's analytical focus is limited to exploring how ESG principles are interpreted, enacted through workplace interactions and training practices, and influenced by systemic challenges and enablers within Malaysia's manufacturing ecosystem. The final theoretical model produced will describe the process of ESG acceptance and institutionalization specifically within the interfaces of industry, education, and policy. As such, findings are not intended for generalization to all sectors but for deep contextual understanding of ESG integration within Malaysia's manufacturing and workforce development landscape.

Literature Review

Malaysia's national policy efforts have been made to institutionalize ESG, including MITI's i-ESG Framework and HRD Corp's sustainability-linked capacity-building initiatives, both of which aim to strengthen industrial transformation and workforce readiness. However, scholars note a persistent gap between policy ambition and organizational practice, especially among micro, small, and medium enterprises (MSMEs), which often lack the resources, expertise, or incentives to embed ESG into workforce systems (Nik Mahdi et al., 2024; Hock et al., 2025). As a result, ESG adoption tends to be compliance-driven rather than transformative, further demonstrating the need for a deeper understanding of how ESG principles are interpreted and enacted within manufacturing and training environments. The chapter then presents global and Malaysian perspectives on ESG in workforce development, noting that manufacturing industries worldwide increasingly link ESG with green skills, ethical leadership, and sustainable production practices. In Malaysia, efforts to embed ESG-related competencies within the workforce are emerging through TVET curriculum reforms, industry-education partnerships, and HRD-linked training programs. However, empirical studies reveal that ESG literacy remains low among workers and managers, and that many organizations struggle to translate policy language into actionable workforce practices (Mukhtar et al., 2023). This suggests that ESG acceptance involves more than structural implementation; it is a cognitive and cultural process shaped by shared meanings and institutional expectations. To establish theoretical grounding, the chapter critically reviews four major theories widely used in sustainability and organizational behavior research. The Theory of Planned Behavior (TPB) explains individual attitudes and intentions toward ESG practices but is limited in accounting for cultural or institutional factors that influence behavior in Malaysia's collectivist context (Ajzen, 1991; Zahari et al., 2024). Institutional Theory highlights the role of coercive, mimetic, and normative pressures in driving ESG compliance but tends to overlook agency, ethics, and the interpretive processes through which ESG becomes meaningful to organizational actors (DiMaggio & Powell, 1983; Ong et al., 2025). These limitations suggest the need for more interpretive approaches to understanding ESG acceptance. Stakeholder Theory is also reviewed for its relevance to ESG governance, as it emphasizes ethical responsibility and the balancing of diverse stakeholder interests (Freeman, 1984). Yet, Malaysian studies show that ESG stakeholder engagement is often dominated by government and investors, with employees and communities receiving limited attention (Buniamin, 2020; Yusoff et al., 2023). This reinforces the idea that power dynamics and institutional culture significantly shape ESG priorities within organizations, and that genuine ESG acceptance requires more inclusive and participatory workforce engagement than is currently practiced in the sector. The chapter further evaluates the Diffusion of Innovation Theory, which explains how new practices spread across industries through peer learning, perceived advantage, and cultural compatibility (Rogers, 2003). Evidence from Malaysian manufacturing shows that ESG diffusion is highly dependent on organizational readiness, cultural norms, and national values such as collectivism and long-term orientation (Ren, 2024; Hasanah et al., 2024). These findings highlight that ESG diffusion is not a linear or purely technical process but a socially constructed one that requires ongoing negotiation and adaptation within manufacturing ecosystems.

Across all four theories reviewed, a consistent limitation emerges: each framework privileges behavioral, structural, or functional determinants but pays insufficient attention to interpretive meaning-making and context-specific social processes. For Malaysia's

manufacturing sector, where ESG is still evolving and contested, understanding how stakeholders construct and negotiate ESG meanings becomes essential. This theoretical gap justifies the adoption of Constructivist Grounded Theory (CGT), which emphasizes co-construction of knowledge, reflexivity, and the interpretation of lived experiences (Charmaz, 2014). CGT is therefore positioned as the most suitable methodological and theoretical approach for uncovering how ESG acceptance unfolds in real-world manufacturing and TVET contexts. As shown in Figure 1, the Dynamic Model of ESG Acceptance in Workforce Development explains ESG acceptance as a cyclical and socially constructed process linking policy, organizational practice, and workforce learning. The framework shows how external pressures such as policy, market, and investor demands, together with internal leadership values, trigger ESG engagement. These forces shape shared meanings of ESG among industry, TVET, and policy actors, which are then translated into training systems, human resource development, and workplace practices. Continuous reflection and feedback enable adaptation, leading to the institutionalization of ESG as part of organizational culture and workforce norms. This study applies the framework to examine how ESG acceptance evolves within Malaysia's manufacturing workforce ecosystem.



Research Methodology

This study is grounded in the interpretivist paradigm, which assumes that realities are socially constructed through human interaction (Mohajan & Mohajan, 2022; Keane, 2025), and employs Constructivist Grounded Theory (CGT) as the methodological foundation. CGT, as developed by Charmaz (2014), supports the co-construction of meaning and the development of theory grounded in participants lived experiences, making it suitable for examining how Environmental, Social, and Governance (ESG) principles are conceptualized, accepted, and

institutionalized within workforce development in Malaysia's manufacturing sector (Chia et al., 2023). A qualitative design is adopted given its strength in capturing subjective interpretations, contextual realities, and socially mediated processes (Keane, 2025). Data will be collected primarily through in-depth semi-structured interviews, supported by document analysis of key policy frameworks such as MITI's i-ESG Framework, HRD Corp sustainability initiatives, and JPK/MSQF curriculum standards. Participants will be selected using purposive sampling, followed by theoretical sampling consistent with CGT procedures (Charmaz, 2021; Ahmad & Wilkins, 2024). The study will involve three stakeholder groups: (i) manufacturing practitioners such as HR managers, ESG or sustainability officers, and operations or training managers; (ii) TVET educators and institutional administrators; and (iii) policymakers and institutional representatives from HRD Corp and JPK. Sampling will begin with approximately 10–15 interviews, expanding until theoretical sufficiency is reached (Campbell et al., 2020; Saedin et al., 2024). Data analysis will follow CGT analytical procedures, including line-by-line initial coding, focused coding, constant comparison, memo-writing, and iterative theory construction (Stough & Lee, 2021; Keane, 2025). NVivo or similar qualitative software will be used to organize and manage data systematically (Campbell et al., 2021). Ethical approval will be obtained from the university ethics committee prior to data collection. Informed consent will be secured from all participants, who will be briefed on the study's purpose, procedures, potential risks, and their right to withdraw at any stage without penalty (Smith & Johnson, 2021; Lee & Anderson, 2020).

To protect confidentiality, pseudonyms and alphanumeric identifiers will replace participants' real names, positions, and organizational affiliations in all transcripts and reports (Santuah & Abazaami, 2021). Audio files, transcripts, and related documents will be stored in password-protected, researcher-only folders, ensuring secure data management (Smith et al., 2022). Trustworthiness will be enhanced through data triangulation, member checking, reflexive journaling, and maintaining an audit trail to ensure credibility, dependability, confirmability, and transferability (Jiang et al., 2023; Durand et al., 2022). These strategies ensure that the findings are methodologically rigorous and firmly grounded in participants' experiences.

Expected Results

The first expected outcome relates to understanding how stakeholders in Malaysia's manufacturing sector and TVET ecosystem conceptualize and interpret ESG principles. The study is expected to uncover how ESG meanings are constructed through a mix of regulatory pressures, market expectations, industrial culture, and leadership values. These insights will likely produce a typology that shows how different actors prioritize environmental, social, and governance dimensions and how abstract policy terms become context-specific interpretations that guide workforce development practices.

The second outcome concerns how ESG acceptance is enacted and negotiated through workplace interactions and training practices. The study is expected to reveal that ESG acceptance is not merely a compliance task but a lived and relational process shaped by communication, collaboration, and power dynamics within organizations. The findings will likely distinguish symbolic acceptance, where ESG exists mainly for reporting purposes, from substantive acceptance, where ESG values are embedded in ethical leadership, human resource development practices, and daily workplace routines. This outcome will

demonstrate ESG as a practice-based process influenced by interpersonal relationships and organizational norms.

The third outcome focuses on identifying the challenges and enabling conditions that shape the integration of ESG-related competencies into workforce development initiatives. Anticipated findings include constraints such as limited ESG literacy, insufficient resources, weak industry–education coordination, and inconsistent policy execution. At the same time, the study is expected to highlight enablers such as strong leadership commitment, coherent policy support from HRD Corp and JPK, innovative curricula, and effective TVET–industry partnerships. This outcome will clarify how these factors interact to determine whether ESG integration remains superficial or becomes meaningful.

The fourth outcome involves constructing a grounded theoretical model that explains the overall process of ESG acceptance and institutionalization across industry, education, and policy interfaces. This model is expected to illustrate ESG acceptance as a dynamic and cyclical process involving triggering forces, meaning construction, translation into practice, reflexive adaptation, and eventual institutionalization within workforce systems. Beyond offering theoretical contributions, this model will also provide a foundation for practical policy and strategic recommendations that support Malaysia’s sustainability-driven workforce and industrial transformation agenda.

Conclusion

This study addresses the critical gap in understanding how Environmental, Social, and Governance (ESG) principles are interpreted, enacted, and institutionalized within Malaysia’s manufacturing workforce and TVET ecosystem. Although national frameworks such as MITI’s i-ESG and HRD Corp’s ESG initiatives signal strong policy commitment, ESG adoption in workforce development remains fragmented and uneven. By employing the Constructivist Grounded Theory (CGT) approach under the interpretivist paradigm, the study aims to uncover the socially constructed meanings of ESG, the practices through which acceptance unfolds, and the systemic conditions that support or hinder ESG competency integration. Through engagement with industry practitioners, TVET educators, and policymakers, the research will produce an empirically grounded explanation of how ESG acceptance develops across industry, education, and policy interfaces.

The expected contributions of the study are both theoretical and practical. Theoretically, the research will generate a grounded model that conceptualizes ESG acceptance as a dynamic, multi-stage process shaped by meaning-making, interaction, and institutional alignment. Practically, the findings will offer insights to guide policy refinement, curriculum enhancement, and capacity-building strategies within TVET and manufacturing organizations, especially at advanced skills levels (SKM 6–8). The study’s outcomes will help strengthen policy coherence, improve industry–education collaboration, and support Malaysia’s broader transition toward a sustainable, values-driven, and future-ready manufacturing workforce. Overall, the proposed research contributes a meaningful bridge between ESG policy aspirations and real-world workforce practices, advancing Malaysia’s sustainability and human capital development agenda.

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