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## **Innovative Employee Training And Development: Catalyzing The Green Economy Transition Through Strategic HR Management**

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***Abstract:***

*This study investigates the impact of Innovative Employee Training and Development on the Green Economy Transition, with a focus on the mediating roles of Employee Competency Enhancement and Strategic HR Management. Using a quantitative approach and analyzing data from 61 employees at the North Sumatra Provincial Communication and Information Office, the research employs SmartPLS for data analysis. The findings reveal that Innovative Employee Training and Development significantly enhances Employee Competency, which in turn positively influences the Green Economy Transition. Additionally, Strategic HR Management mediates the relationship between training and the green transition, further demonstrating its critical role in integrating sustainability into organizational practices. The results emphasize the importance of investing in advanced training programs and strategic HR management to drive environmental sustainability and achieve organizational goals related to the green economy. These insights provide valuable implications for organizations aiming to foster a sustainable future through effective employee development and strategic HR practices.*

**Keywords:** *Innovative Employee Training, Green Economy Transition, Employee Competency Enhancement, Strategic HR Management.*

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### **1. Introduction**

In the face of growing environmental challenges and the urgent need for sustainable economic practices, organizations are increasingly recognizing the critical role of human resource management in facilitating the transition to a green economy (Kim & Jung, 2022). By leveraging innovative employee training and development programs, businesses can empower their workforce with the necessary skills and knowledge to drive environmental initiatives and foster sustainable practices (Diatmono et al., 2020). Strategic HR management serves as a vital intermediary in this process ensuring that these training efforts not only enhance employee competencies but also align with broader organizational goals, thereby catalyzing meaningful progress toward a green economy (Metadata & Policies, 2020).

At the North Sumatra Provincial Communication and Information Office, the pursuit of a green economy transition is deeply connected to the implementation of forward-

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thinking training and development programs (Salman et al., 2023). These programs are designed to equip employees with the skills and insights needed to embrace sustainable practices within the organization's operations and services (Blanka et al., 2022). By focusing on innovative approaches, the office aims to enhance the capabilities of its workforce, enabling them to effectively integrate environmental considerations into their daily tasks and strategic initiatives. This transformation requires more than just technical training; it involves fostering a mindset shift that aligns with the broader goals of sustainability (Knies et al., 2024). Strategic human resource management plays a crucial role in this effort, acting as the bridge between the organization's environmental objectives and the professional growth of its employees. By strategically aligning training programs with sustainability goals, the office can ensure that employees are not only well-prepared to meet the challenges of a green economy but are also motivated to contribute to the organization's environmental mission (Kurnia Harahap et al., 2024). This alignment also facilitates the development of key competencies that empower employees to innovate and drive change, ultimately leading to more effective and sustainable communication and information management practices across the province (Rosyida et al., 2021). As a result, the office's commitment to both employee development and environmental stewardship positions it as a leader in the public sector's shift towards sustainability (Meyers et al., 2020). The integration of these elements within the North Sumatra Provincial Communication and Information Office exemplifies how public organizations can play a pivotal role in advancing the green economy, demonstrating that strategic investments in employee growth are essential for achieving long-term sustainability and operational excellence.

**Table 1. Report on the Results of the Performance Assessment of the Communication and Information Service**

Performance Elements	Assessment 2022	2023	Comparison	Description
Employee Work Targets (SKP)	83,6	81,8	Down	Excellent Performance Level = 91-100
Service Oriented	82	84	Ascend	
Accountable	83	80	Down	Good = 76-90
Competent	82	82	Tetap	
Harmonious	82	80	Down	Enough = 60-75
Loyal	81	81	Consistent	
Adaptive	82	82	Consistent	
Collaborative	83	83	Consistent	
Average	575	572	Down	
Average Performance Rating	82,14	81,71	Down	

The decline in employee performance at the North Sumatra Provincial Communication and Information Office from 2022 to 2023, as evidenced by the drop in average performance scores, highlights a significant challenge in maintaining organizational excellence. Despite achieving high levels of competency, the overall decrease in key performance indicators, such as accountability and harmony, signals a need for strategic interventions. This phenomenon underscores the importance of

continuous employee development and skill enhancement to ensure that the workforce is equipped to meet evolving demands. It suggests that without targeted training and development initiatives, even competent employees may struggle to sustain or improve their performance over time. This situation directly aligns with the research focus on innovative employee training and development as a catalyst for both individual and organizational growth, particularly in the context of advancing towards a green economy. Addressing these performance gaps through strategic human resource management can not only improve employee outcomes but also bolster the organization's ability to deliver high-quality public services, reinforcing the essential connection between workforce competency and organizational success.

To bridge the current understanding with recent research, it is essential to identify the gaps that this study aims to address. Recent studies have consistently highlighted the role of employee training in enhancing organizational performance, especially within the context of digital transformation and sustainable development (Potnuru et al., 2021). However, many of these studies focus primarily on the private sector, leaving a significant gap in understanding how such initiatives impact public sector organizations, particularly in the communication and information sectors (Vithayaporn et al., 2021). Moreover, while the importance of strategic HR management is well-documented, there is limited research exploring its specific role in supporting the green economy transition through employee development (Cayrat & Boxall, 2023). Another gap lies in the insufficient examination of how continuous competency enhancement can mitigate performance declines in public institutions (Salman et al., 2020). Furthermore, the integration of environmental objectives with employee training programs remains underexplored, particularly in the context of Indonesian public administration (Abidovna & Lecturer, 2023). This study seeks to fill these gaps by investigating the strategic role of innovative employee training and development in driving both performance improvements and the transition towards a green economy within the North Sumatra Provincial Communication and Information Office.

This research aims to address the identified gaps by investigating how innovative employee training and development can enhance performance and support the transition towards a green economy in the North Sumatra Provincial Communication and Information Office. Specifically, the study seeks to evaluate the effectiveness of strategic HR management in aligning training programs with sustainability goals, thereby improving employee competencies and overall organizational performance. By focusing on this public sector organization, the research intends to provide insights into how tailored training interventions can mitigate performance declines, foster a green economy, and contribute to more effective public service delivery. This will offer valuable guidance for public sector entities in Indonesia and beyond, aiming to integrate environmental considerations into their workforce development strategies.

## **2. Theoretical Background**

### **Green Economy Transition**

The Green Economy Transition refers to a systemic shift towards economic practices that promote environmental sustainability, social equity, and economic resilience. This transition aims to reduce environmental impacts while fostering economic growth and improving quality of life (Wang et al., 2022). It involves transforming traditional economic systems to incorporate sustainability into core business practices, including energy efficiency, waste reduction, and the use of renewable resources. By adopting green technologies and practices, organizations can minimize their carbon footprint and enhance their contributions to a sustainable future (Kowalska et al., 2022).

One critical aspect of the Green Economy Transition is the integration of sustainable practices into organizational strategies and operations. This includes implementing green technologies, such as renewable energy systems and eco-friendly materials, as well as adopting sustainable business models that prioritize long-term environmental health over short-term gains (Atiku & Lawal, 2020). According to recent studies, organizations that effectively integrate sustainability into their operations not only achieve significant environmental benefits but also enhance their competitive advantage and operational efficiency (Minbaeva, 2021). This integration is essential for aligning organizational goals with broader environmental objectives and for meeting regulatory and consumer demands for sustainable practices.

Furthermore, the success of the Green Economy Transition relies heavily on the development and training of human capital. Employees must be equipped with the knowledge and skills needed to implement and manage green practices effectively (Yang & Li, 2023). Innovative training programs that focus on sustainability competencies can empower employees to drive change within their organizations and contribute to broader environmental goals. By investing in such training, organizations can build a workforce that is not only adept at navigating the complexities of a green economy but also motivated to lead in environmental stewardship, thus ensuring a successful transition towards a sustainable future (Lai et al., 2021).

### **Innovative Employee Training and Development**

Innovative employee training and development involve adopting new and creative approaches to enhance employees' skills and knowledge, preparing them to meet evolving industry demands and organizational goals (Collins, 2021). This concept emphasizes the use of cutting-edge techniques, technologies, and methodologies to deliver training that is both effective and engaging. Examples include utilizing digital platforms for virtual learning, incorporating interactive simulations, and leveraging data analytics to tailor training programs to individual needs. By continuously evolving training methods, organizations can ensure that their employees remain competitive and capable in a rapidly changing business environment (Mikołajczyk, 2022).

The integration of innovative training practices has been shown to significantly impact employee performance and organizational outcomes. For instance, the use of virtual reality and gamification in training programs has been linked to higher engagement levels and improved learning retention (Zhang et al., 2022). These methods provide immersive and interactive learning experiences that better prepare employees for real-world challenges. Additionally, data-driven approaches allow for the customization of training content, ensuring that employees receive relevant and timely information tailored to their specific roles and career aspirations (Mentes, 2023). Such innovations not only enhance the effectiveness of training but also contribute to greater job satisfaction and performance.

Moreover, effective training and development programs play a crucial role in driving organizational change and achieving strategic objectives (Mikhno et al., 2021). By focusing on innovative approaches, organizations can better align their training efforts with their overall goals, such as promoting sustainability or advancing technological capabilities. This alignment ensures that employees are not only skilled in their respective fields but also equipped to contribute to broader organizational initiatives. In turn, this leads to a more agile and adaptable workforce capable of navigating complex and dynamic business environments, ultimately driving organizational success and growth (Dachner et al., 2019).

### **Strategic HR Management**

Strategic HR management involves aligning human resource practices with the overall goals and strategic direction of an organization (Kang & Lee, 2021). It extends beyond traditional HR functions, focusing on integrating HR strategies with business objectives to drive organizational success. This approach ensures that HR activities, such as recruitment, development, and performance management, are not only efficient but also contribute to achieving long-term goals. By positioning HR as a strategic partner, organizations can leverage their human capital to create competitive advantages and foster sustainable growth (Subramony et al., 2021).

One key aspect of strategic HR management is the development of HR practices that support organizational strategy. This includes designing talent management systems that attract and retain top talent, implementing leadership development programs to build future leaders, and creating performance management processes that align individual goals with organizational objectives. According to recent research, organizations that effectively integrate HR strategies with business goals experience higher levels of employee engagement and organizational performance (D'Amato & Korhonen, 2021). Strategic HR management enables organizations to proactively address talent gaps, manage workforce capabilities, and adapt to changing business needs, ultimately driving better outcomes and enhanced organizational performance.

Furthermore, strategic HR management plays a crucial role in fostering a positive organizational culture and driving change initiatives. By aligning HR practices with the desired organizational culture, HR professionals can influence employee behavior and organizational values, creating a cohesive and motivated workforce (Younas &

Bari, 2020). Additionally, strategic HR management supports change management efforts by preparing and equipping employees to embrace new initiatives and adapt to evolving business environments. This proactive approach helps organizations navigate transitions smoothly and ensures that employees are aligned with the organization's vision and strategic objectives, thereby facilitating successful organizational change and long-term success (Blanka et al., 2022).

### Employee Competency Enhancement

Employee competency enhancement refers to the process of developing and refining employees' skills, knowledge, and abilities to improve their performance and support organizational goals. This concept encompasses a range of activities, including targeted training programs, skill development workshops, and on-the-job learning opportunities. The goal is to ensure that employees possess the competencies required to excel in their roles, adapt to changing job demands, and contribute effectively to the organization's success. Competency enhancement not only improves individual performance but also strengthens the overall capability of the workforce.

An effective competency enhancement strategy involves assessing current skill levels, identifying gaps, and implementing tailored development initiatives. Organizations often use competency frameworks to define the specific skills and behaviors needed for various roles and to create structured development paths for employees. According to recent research, targeted competency development programs significantly impact employee performance and job satisfaction by addressing individual strengths and weaknesses (Machado & Davim, 2020). These programs can include a mix of formal education, mentorship, and experiential learning, designed to build relevant skills and prepare employees for future challenges.

Additionally, competency enhancement supports organizational growth by fostering a culture of continuous learning and improvement. When employees are encouraged to develop their competencies, they become more engaged and motivated, which can lead to higher levels of productivity and innovation (Söderholm, 2020). Organizations that prioritize competency enhancement can better adapt to market changes, implement new technologies, and drive strategic initiatives. By investing in employees' development, organizations not only improve their immediate operational effectiveness but also build a resilient and adaptable workforce capable of sustaining long-term success and achieving competitive advantage.

Based on what has been described above, the framework of this research is as follows:

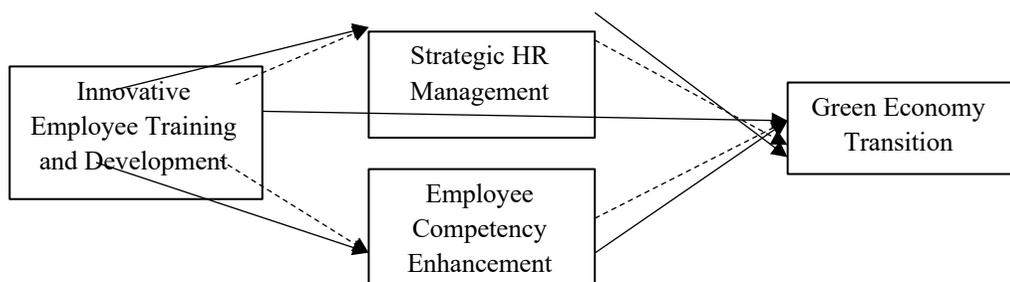


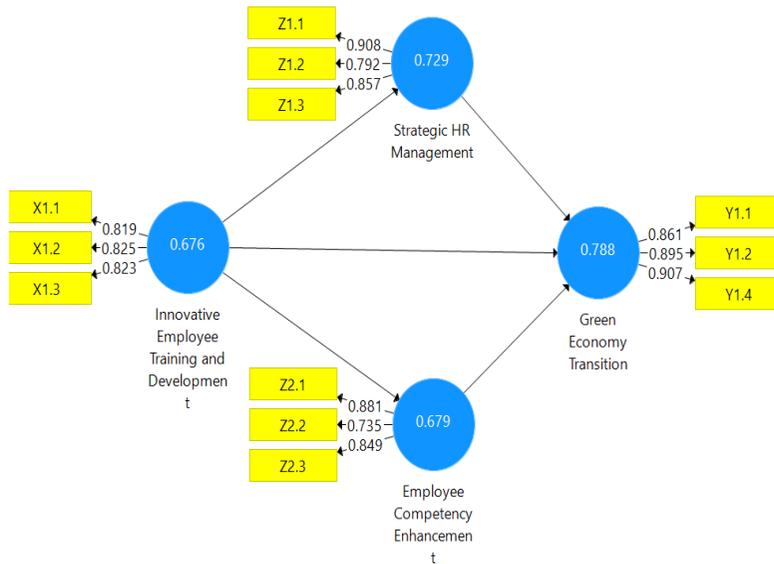
Figure 1. Research Framework

### **3. Methodology**

The research methodology employs a quantitative design to investigate the relationships between various factors influencing the Green Economy Transition at the North Sumatra Provincial Communication and Information Office. The sample consists of all 61 employees within the organization, ensuring a comprehensive representation of the population. Data is collected using an online questionnaire distributed via Google Forms, which facilitates efficient and widespread participation. The analysis is conducted using SmartPLS, a statistical tool that enables the examination of complex relationships among variables. In this study, Innovative Employee Training and Development serves as the independent variable, while Green Economy Transition is the dependent variable. Strategic HR Management and Employee Competency Enhancement act as intervening variables (Rampa & Agogué, 2021). This methodological approach allows for a thorough evaluation of how training and development initiatives, supported by strategic HR management, impact the transition towards a green economy, with a focus on enhancing employee competencies.

### **4. Empirical Findings/Result**

The study presents a comprehensive analysis of data collected from 61 respondents, highlighting key demographic characteristics and assessing the validity and reliability of the measurement model. The analysis confirms the validity and reliability of the constructs used, as all variables—Green Economy Transition, Innovative Employee Training and Development, Strategic HR Management, and Employee Competency Enhancement—exhibit factor loadings above 0.7, Cronbach's alpha values exceeding 0.70, and AVE values greater than 0.50. Overall, the data analysis verifies the robustness and reliability of the model, providing a solid foundation for hypothesis testing and research interpretation.



**Figure 2. Validity and Reliability Testing**

After passing through several stages of validity and reliability testing, where all questionnaire items have met the research criteria, the following are the results of the path analysis in the following table:

**Table 2. Hypothesis Testing**

Hipotesis	Sampel Asli (O)	Rata-rata Sampel (M)	Standar Deviasi (STDEV)	T Statistik (O/STDEV)	P Values
Innovative Employee Training and Development - > Green Economy Transition	0,283	0,273	0,090	3,163	0,002
Innovative Employee Training and Development - > Strategic HR Management	0,539	0,554	0,102	5,283	0,000
Innovative Employee Training and Development - > Employee Competency Enhancement	0,506	0,527	0,101	4,999	0,000
Strategic HR Management - > Green Economy Transition	0,301	0,302	0,124	2,428	0,016
Employee Competency Enhancement -> Green Economy Transition	0,381	0,381	0,107	3,565	0,000
Innovative Employee Training and Development - > Strategic HR Management -> Green Economy Transition	0,162	0,169	0,079	2,042	0,042
Innovative Employee Training and Development - > Employee Competency	0,193	0,199	0,064	3,014	0,003

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Enhancement -> Green  
Economy Transition

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The relationship between Innovative Employee Training and Development and the Green Economy Transition demonstrates a significant impact, as indicated by a path coefficient of 0.283 with a t-statistic of 3.163 and a p-value of 0.002. This result suggests that implementing innovative training and development programs plays a crucial role in facilitating the transition towards a green economy. By equipping employees with advanced skills and knowledge, organizations can better align their operations with sustainability goals and drive environmental improvements. The substantial effect size underscores the importance of investing in cutting-edge training approaches to enhance employees' ability to contribute to sustainable practices (Iskakov et al., 2021). Effective training not only improves employees' competencies but also fosters a culture of sustainability within the organization, thereby accelerating the green economy transition and supporting broader environmental objectives.

## 5. Discussion

The analysis reveals a strong relationship between Innovative Employee Training and Development and Strategic HR Management, with a path coefficient of 0.539, a t-statistic of 5.283, and a p-value of 0.000. This indicates that implementing innovative training and development practices significantly enhances strategic HR management within organizations. The high effect size suggests that modern and effective training programs contribute to better alignment of HR strategies with organizational goals. By adopting innovative approaches to employee development, organizations can improve their HR practices, making them more strategic and responsive to business needs (Yu et al., 2024). This alignment facilitates more effective talent management, leadership development, and performance optimization, thereby strengthening the overall strategic HR framework and enhancing organizational performance. The findings underscore the critical role of cutting-edge training in transforming HR functions to better support and drive organizational success.

The analysis shows a significant relationship between Innovative Employee Training and Development and Employee Competency Enhancement, with a path coefficient of 0.506, a t-statistic of 4.999, and a p-value of 0.000. This result indicates that advanced and creative training programs substantially improve employees' competencies. The high effect size underscores the effectiveness of incorporating modern training methodologies, such as interactive learning and technology-based tools, in enhancing employees' skills and performance (Papa et al., 2020). By investing in innovative training approaches, organizations can ensure that employees acquire the necessary knowledge and abilities to meet evolving job demands, thereby fostering a more capable and skilled workforce. This enhancement in employee competencies not only boosts individual performance but also contributes to achieving organizational objectives and maintaining a competitive edge in the industry.

The path coefficient of 0.301, t-statistic of 2.428, and p-value of 0.016 indicate a significant relationship between Strategic HR Management and the Green Economy Transition. This finding suggests that effective strategic HR management practices

play a crucial role in facilitating the transition towards a green economy. By aligning HR strategies with sustainability goals, organizations can drive initiatives that integrate environmental considerations into their operations and culture (Zakharchenko et al., 2021). Strategic HR management supports this transition by fostering a workforce adept at implementing green practices, promoting sustainability-focused policies, and managing change effectively. This alignment not only enhances organizational sustainability efforts but also contributes to achieving broader environmental objectives, demonstrating the integral role of HR management in advancing a green economy.

The path coefficient of 0.381, t-statistic of 3.565, and p-value of 0.000 highlight a significant relationship between Employee Competency Enhancement and the Green Economy Transition. This result indicates that improving employee competencies has a substantial impact on advancing the transition towards a green economy. Enhanced employee skills and knowledge enable organizations to implement and sustain environmentally friendly practices more effectively (Azevedo et al., 2021). When employees are well-equipped with the necessary competencies, they are better positioned to contribute to sustainability initiatives, adapt to green technologies, and support organizational goals related to environmental responsibility. This relationship underscores the importance of investing in competency development as a means to drive significant progress in achieving a green economy and reinforcing an organization's commitment to sustainable practices.

The analysis indicates a significant indirect effect of Innovative Employee Training and Development on the Green Economy Transition through Strategic HR Management, with a path coefficient of 0.162, a t-statistic of 2.042, and a p-value of 0.042. This finding suggests that innovative training and development programs influence the Green Economy Transition not only directly but also indirectly by enhancing strategic HR management practices. Effective training initiatives improve HR strategies, which in turn facilitate the organization's transition towards sustainability goals (Elidemir et al., 2020). By fostering robust HR management practices that align with green objectives, organizations can better integrate sustainability into their operational frameworks and culture. This indirect effect highlights the critical role of strategic HR management as a mediator in leveraging advanced training to support environmental initiatives and achieve broader sustainability targets.

The analysis reveals a significant indirect effect of Innovative Employee Training and Development on the Green Economy Transition through Employee Competency Enhancement, with a path coefficient of 0.193, a t-statistic of 3.014, and a p-value of 0.003. This indicates that innovative training programs enhance employee competencies, which, in turn, positively impact the transition towards a green economy. The development of advanced skills and knowledge through innovative training enables employees to implement and support sustainability initiatives more effectively (Ali et al., 2021). By improving competencies, employees become more adept at adopting green technologies and practices, thereby contributing to the organization's environmental goals. This indirect relationship underscores the

importance of focusing on employee development as a crucial pathway for advancing green economy objectives and reinforcing sustainable practices within organizations

## 6. Conclusions

The research concludes that Innovative Employee Training and Development plays a pivotal role in advancing the Green Economy Transition by directly enhancing Employee Competency and indirectly influencing this transition through Strategic HR Management. The significant direct effects observed highlight that modern and effective training programs improve employee skills, which are essential for implementing green practices. Additionally, the study shows that strategic HR management acts as a crucial mediator, further amplifying the impact of innovative training on sustainability goals. These findings underscore the necessity of investing in cutting-edge training initiatives and robust HR strategies to drive meaningful progress towards environmental sustainability, demonstrating that comprehensive employee development is integral to achieving a green economy.

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