Analysis of the Impact of Green Training and Development Practices on Employee Performance in Western Kenya Public Universities

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Abstract- This study examines the impact of green training and development practices on employee performance in public universities in Western Kenya. The rapid growth of universities in Kenya has put pressure on these institutions to embrace sustainability practices. However, the role of green human resource management practices, particularly green training, on employee performance in Kenyan public universities remains relatively unexplored. The study adopted a positivist philosophy and an explanatory research design. The target population was 438 employees in top and middle level management from 11 public universities in Western Kenya, out of which a sample of 209 respondents was selected using cluster, stratified and simple random sampling techniques. Data was collected using a questionnaire and analyzed using inferential statistics of correlation and multiple regression analysis. The findings reveal that green training practices have a significant positive effect on employee performance, accounting for 9.4% of the variation. Green training enhances employees' knowledge, competencies and skills which in turn improves their performance. The regression model was statistically significant at p=0.05 level. The study recommends that universities should prioritize and invest in green training by increasing budgetary allocations for staff capacity building programs on environmental conservation. This will equip employees with the necessary knowledge and skills to contribute effectively to environmental sustainability while enhancing their performance and productivity. The study contributes to the growing body of knowledge on green human resource management and provides practical insights for university management in Kenya to promote sustainable practices through employee training and development.

Indexed Terms- Green Training, Development Practices, Employee Performance, Public Universities, Kenya

I. INTRODUCTION

1.1 Background

The growing concern for environmental sustainability has compelled organizations, including higher education institutions, to adopt green practices. Universities play a crucial role in promoting sustainability and shaping the future of society. In Kenya, the rapid expansion of university education has led to an increase in the number of public universities. As of 2021, there were 32 public universities in Kenya (www.statista.com, 2023). These institutions are expected to lead by example in implementing sustainable practices and promoting environmental consciousness among their stakeholders.

1.2 Green Training and Development Practices

Green training and development practices are a key component of green human resource management (GHRM). These practices involve providing employees with the necessary knowledge, skills, and competencies to contribute to the organization's environmental goals (Pinzone et al., 2019). Green training can include on-the-job training, workshops, and continuous education programs that focus on environmental management, waste reduction, energy efficiency, and sustainable practices (Ojo & Fauzi, 2020). By investing in green training, organizations can create a culture of environmental awareness and engage employees in sustainable behaviors (Mandago, 2018).

1.3 Employee Performance

Employee performance refers to the job-related activities and how well an employee executes them

(Risal, Asyik, & Suroso, 2021). It encompasses factors such as quality, quantity, efficiency, and effectiveness of work. Employee performance is crucial for organizational success and can be influenced by various factors, including training and development, motivation, and work environment (Saputro & Nawangsari, 2021). In the context of GHRM, employee performance also includes their contribution to the organization's environmental goals and their engagement in eco-friendly practices.

1.4 Public Universities in Western Kenya

Western Kenya is home to 11 public universities, namely Kabianga University (KABU), Bomet University (BOMU), Kotalel Arap Samoei University (KASU), Maseno University (MU), Rongo University (RU), Kisii University (KSU), Jaramogi Oginga Odinga University of Science and Technology (JOOUST), Masinde Muliro University of Science and Technology (MMUST), Kibabii University (KIBU), Kaimosi Friends University (KAFU), and Alupe University (AUC) (www.lreb.or.ke, n.d.). These institutions are members of the Kenya Green University Network (KGUN), a joint initiative of the Commission for University Education (CUE), the National Environment Management Authority (NEMA), and the United Nations Environment Programme (UNEP) (Chemjor, 2020). As such, they are expected to integrate sustainability practices into their operations and contribute to the national environmental agenda.

1.5 Research Objectives

1. The main objective of this study is to examine the impact of green training and development practices on employee performance in public universities in Western Kenya. Specifically, the study aims to:
2. Assess the extent to which public universities in Western Kenya have implemented green training and development practices.
3. Determine the relationship between green training practices and employee performance in these institutions.
4. Provide recommendations for enhancing green training and development practices to improve employee performance and environmental sustainability in public universities.

II. LITERATURE REVIEW

2.1 Theoretical Framework

This study is anchored on the Human Capital Theory and the Resource-Based View (RBV) theory. The Human Capital Theory, developed by Becker (1964), posits that investing in employee training and development leads to increased productivity and organizational performance. It emphasizes the importance of human capital as a critical resource for organizational success (Becker, 1993). In the context of GHRM, investing in green training and development enhances employees' knowledge, skills, and abilities related to environmental sustainability, leading to improved environmental and organizational performance (Yong et al., 2019).

The RBV theory, proposed by Barney (1991), suggests that an organization's competitive advantage stems from its unique bundle of resources and capabilities. It emphasizes the importance of developing and leveraging internal resources, including human capital, to achieve superior performance (Barney, 2001). Green training and development practices can be viewed as a valuable, rare, inimitable, and non-substitutable (VRIN) resource that can contribute to an organization's sustainable competitive advantage (Yong et al., 2019).

2.2 Empirical Review

2.2.1 Green Training Practices and Employee Performance

Several studies have investigated the relationship between green training practices and employee performance. Pinzone et al. (2019) conducted a study in the Italian healthcare sector and found that green training had a positive effect on employees' pro-environmental behaviors and job satisfaction. The authors emphasized the role of green training in creating a culture of sustainability and engaging employees in environmental initiatives.

Similarly, Ojo and Fauzi (2020) examined the impact of environmental awareness and leadership commitment on IT professionals' engagement in green IT practices. The study revealed that environmental awareness, which can be enhanced through green training, significantly influenced employees'

participation in green IT initiatives, leading to improved environmental performance.

Mandago (2018) investigated the influence of green HRM practices on environmental sustainability in service-based state corporations in Kenya. The findings showed that green training and development had a significant positive relationship with environmental sustainability. The author recommended that organizations should invest in green training programs to equip employees with the necessary skills and knowledge to contribute to environmental goals.

These empirical studies highlight the positive link between green training practices and employee performance in various contexts. However, there is limited research on the impact of green training on employee performance in the context of public universities in Kenya, which this study aims to address.

2.3 Conceptual Framework

The conceptual framework for this study illustrates the relationship between green training and development practices (independent variable) and employee performance (dependent variable) in public universities in Western Kenya. It also considers the potential moderating effect of organizational citizenship behavior (OCB) on this relationship.
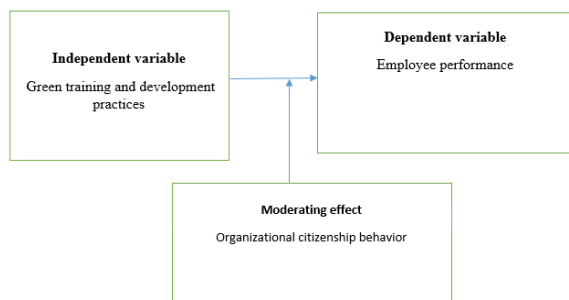
The framework suggests that green training and development practices, such as on-the-job training, workshops, and continuous education programs focused on environmental sustainability, can directly influence employee performance in terms of quality, quantity, efficiency, and effectiveness of work. Additionally, OCB, which refers to voluntary employee behaviors that contribute to organizational

effectiveness (Organ, 1988), may moderate the relationship between green training and employee performance. Employees who exhibit high levels of OCB are more likely to engage in pro-environmental behaviors and apply the knowledge and skills gained from green training to improve their performance and contribute to the organization's environmental goals

III. METHODOLOGY

3.1 Research Philosophy

This study adopts a positivist philosophy, which emphasizes objective and empirical observation, measurement, and analysis of phenomena (Khaldi, 2017). Positivism assumes that reality is independent of the researcher and can be studied through scientific methods (Carnap & Pap, 2021). In this study, the relationship between green training and development practices and employee performance is examined using quantitative methods, in line with the positivist approach.

3.2 Research Design

The study employs an explanatory research design, which is a quantitative approach that aims to test hypotheses and establish causal relationships between variables (Efron & Ravid, 2019). This design is appropriate for examining the impact of green training and development practices on employee performance and the moderating role of OCB in this relationship.

3.3 Study Area

The study is conducted in public universities located in Western Kenya, which comprises 11 counties: Bomet, Bungoma, Busia, Homabay, Kakamega, Kericho, Kisii, Kisumu, Migori, Nandi, Nyamira, Siaya, Transnzoia, and Vihiga. The region is home to 11 public universities, namely Kabianga University (KABU), Bomet University (BOMU), Kotalel Arap Samoie (KASU), Maseno University (MU), Rongo University (RU), Kisii University (KSU), Jaramogi Oginga Odinga University of Science and Technology (JOOUST), Masinde Muliro University of Science and Technology (MMUST), Kibabii University (KIBU), Kaimosi Friends University (KAFU), and Alupe University (AUC).

3.4 Target Population

The target population for this study consists of 438 employees in top and middle-level management positions from the 11 public universities in Western Kenya. This includes Deputy Vice-Chancellors, Registrars, Deans, and Heads of Departments/Sections.

3.5 Sampling Technique

The study employs a combination of cluster, stratified, and simple random sampling techniques. Cluster sampling is used to select the public universities in Western Kenya, where each university represents a subgroup of the target population. Stratified sampling is then used to categorize the employees into different strata based on their positions (Deputy Vice-Chancellors, Registrars, Deans, and Heads of Departments/Sections). Finally, simple random sampling is used to select participants from each stratum, ensuring that every member of the stratum has an equal chance of being included in the sample.

3.6 Sample Size

The sample size for this study is determined using Slovin's formula, which yields a sample of 209 respondents from the target population of 438 employees. The sample size is proportional to the number of employees in each university and each stratum.

3.7 Data Collection

Primary data is collected using a structured questionnaire with closed-ended questions and a 5-point Likert scale. The questionnaire is designed to elicit information on the respondents' perceptions of green training and development practices, employee performance, and OCB. The questionnaire is administered to the selected sample of employees in the participating universities.

3.8 Data Processing and Analysis

The collected data is coded and analyzed using SPSS version 25.0. Descriptive statistics, such as mean and standard deviation, are used to summarize the data. Inferential statistics, including Pearson's correlation and multiple regression analysis, are employed to examine the relationships between the variables and test the hypotheses.

The regression models used in the study are:

Model 1: $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$

Model 2: $Y = \beta_0 + \beta_1X_1 * M + \beta_2X_2 * M + \beta_3X_3 * M + \beta_4X_4 * M + \varepsilon$

Model 3: $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + M + \beta_1X_1 * M + \beta_2X_2 * M + \beta_3X_3 * M + \beta_4X_4 * M + \varepsilon$

Where:

Y = Employee performance

X_1 = Green reward management

X_2 = Green recruitment

X_3 = Green training practices

X_4 = Green performance appraisal

M = Organizational Citizenship Behaviour (moderating variable)

β_0 = Constant

β_1, β_2, β_3, β_4 = Coefficients of the independent variables

ε = Error term

The regression analysis will determine the impact of green training and development practices on employee performance and the moderating effect of OCB on this relationship.

IV. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

[Present the descriptive statistics of the study variables, including mean, standard deviation, and frequency distribution. Summarize the key findings from the descriptive analysis.]

4.2 Correlation Analysis

The study conducted a correlation analysis to examine the relationship between green training practices and employee performance. The results are presented in Table 1.

Table 1: Correlation between Green Training Practices and Employee Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.314a	.099	.094	.46268

Predictors: (Constant), Green Training Practices

The correlation analysis revealed a significant positive relationship between green training practices and employee performance (r = 0.314, p < 0.01). This suggests that as green training practices increase, employee performance tends to improve.

4.3 Regression Analysis

A regression analysis was performed to determine the impact of green training practices on employee performance. The results are presented in Tables 2 and 3.

Table 2: Model Summary

		Coefficients^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	8.370	1.848		4.529	.000
	GTP	.495	.105	.314	4.708	.000
	Dependent Variable:	EP				

The regression model summary shows that green training practices account for 9.9% of the variance in employee performance (R² = 0.099). The adjusted R² of 0.094 indicates that green training practices explain 9.4% of the variability in employee performance.

The regression coefficients reveal that green training practices have a significant positive impact on employee performance (β = 0.495, p < 0.001). The unstandardized coefficient (B) indicates that for every unit increase in green training practices, employee performance increases by 0.495 units, holding other variables constant.

4.4 Discussion of Findings

The results of this study demonstrate that green training practices have a significant positive impact on employee performance in public universities in Western Kenya. This finding aligns with previous research that highlights the importance of green training in enhancing employees' knowledge, skills, and competencies related to environmental sustainability (Pinzone et al., 2019; Ojo & Fauzi, 2020; Mandago, 2018).

The correlation analysis revealed a moderate positive relationship between green training practices and employee performance, suggesting that as universities invest more in green training, employees tend to perform better. This could be attributed to the increased awareness, knowledge, and skills that employees gain through green training programs, which enable them to contribute more effectively to the organization's environmental goals.

The regression analysis further confirmed the significant impact of green training practices on employee performance, with green training accounting for 9.4% of the variability in performance. This finding emphasizes the role of green training as a critical component of GHRM in driving employee performance and organizational success. By equipping employees with the necessary competencies to engage in pro-environmental behaviors and practices, green training can lead to improved job performance and overall organizational effectiveness.

The study's findings support the propositions of the Human Capital Theory and the Resource-Based View (RBV) theory. Investing in green training and development, as posited by the Human Capital Theory, enhances employees' knowledge and skills, leading to increased productivity and performance. Moreover, green training practices can be considered a valuable, rare, inimitable, and non-substitutable (VRIN) resource, as suggested by the RBV theory, contributing to the organization's sustainable competitive advantage.

The results of this study have important implications for public universities in Western Kenya and beyond. University management should prioritize and allocate sufficient resources for green training and development programs to enhance employee performance and contribute to the institution's environmental sustainability goals. By creating a culture of continuous learning and environmental awareness, universities can foster a workforce that is equipped to tackle the challenges of sustainability and drive positive change.

V. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This study investigated the impact of green training and development practices on employee performance in public universities in Western Kenya. The findings reveal that green training practices have a significant positive effect on employee performance, accounting for 9.4% of the variation in performance. The results support the propositions of the Human Capital Theory and the Resource-Based View (RBV) theory, emphasizing the importance of investing in human capital and developing valuable, rare, inimitable, and non-substitutable (VRIN) resources for organizational success.

The study highlights the crucial role of green training in equipping employees with the knowledge, skills, and competencies necessary to contribute to the organization's environmental sustainability goals. By enhancing employees' environmental awareness and enabling them to engage in pro-environmental behaviors, green training can lead to improved job performance and overall organizational effectiveness. The findings of this study contribute to the growing body of knowledge on green human resource management (GHRM) and provide valuable insights for public universities in Western Kenya and beyond. The study underscores the need for university management to prioritize and invest in green training and development programs to foster a culture of environmental sustainability and drive employee performance.

5.2 Recommendations

Based on the findings of this study, the following recommendations are made:

Public universities in Western Kenya should allocate sufficient resources and increase budgetary allocations for green training and development programs to enhance employees' environmental knowledge, skills, and competencies.

University management should develop and implement comprehensive green training programs that cover various aspects of environmental sustainability, such as waste reduction, energy efficiency, and sustainable practices.

Universities should foster a culture of continuous learning and environmental awareness by incorporating green training into their regular employee development initiatives and performance management systems.

University leadership should demonstrate a strong commitment to environmental sustainability and actively support green training and development practices to encourage employee engagement and participation.

Universities should collaborate with industry partners, government agencies, and environmental organizations to develop and deliver relevant and up-to-date green training programs that address the specific needs of the higher education sector.

5.3 Limitations and Suggestions for Future Research

While this study provides valuable insights into the impact of green training practices on employee performance in public universities in Western Kenya, it has some limitations that should be acknowledged. First, the study focused on a specific geographical region, which may limit the generalizability of the findings to other contexts. Future research could explore the impact of green training practices on employee performance in different regions and sectors.

Second, the study relied on self-reported data from employees, which may be subject to bias. Future studies could incorporate objective measures of employee performance and environmental sustainability outcomes to provide a more comprehensive assessment of the impact of green training practices.

Third, the study examined the direct relationship between green training practices and employee performance. Future research could investigate the mediating and moderating factors that may influence this relationship, such as employee motivation, organizational culture, and leadership support.

Finally, the study employed a cross-sectional design, which provides a snapshot of the relationship between green training practices and employee performance at a single point in time. Future research could adopt a longitudinal approach to examine the long-term

effects of green training on employee performance and organizational sustainability.

Despite these limitations, this study contributes to the growing body of knowledge on GHRM and provides valuable insights for public universities in Western Kenya and beyond. The findings underscore the importance of green training and development practices in driving employee performance and organizational sustainability, and offer practical recommendations for university management to foster a culture of environmental awareness and continuous learning.

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