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Process Improvement as a Driver of Employee Development: A Study of SMEs in Southwest Region of Nigeria

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ABSTRACT

The poor performance and inefficiency of small and medium-sized businesses have been a great concern among scholars and experts; SMEs have increasingly adopted systematic approaches to streamline operations while fostering workforce growth. Hence, this paper aims to investigate process improvement as a driver of employee development: a study of SMEs in the southwest region of Nigeria. Specifically, it examined the effect of training and program workshops, mentorship and coaching, and career advancement opportunities on employee development. Descriptive survey research design was adopted with a population of 253, the total number of selected registered electrical and electronics stores across the six southwestern states of Nigeria (Lagos, Ogun, Oyo, Osun, Ondo, and Ekiti). 155 sample sizes were administered a structured questionnaire. Data collected was analyzed using PLS-SEM. The study findings indicate that process improvement positively impacts employee development within electronic SMEs, as shown by the statistical result that training and program workshops have the strongest effect on employees, followed by career advancement opportunities and mentorship and coaching. It concluded that process improvement is significantly vital for driving employee development in selected electrical and electronics SME stores in the southwest region of Nigeria. It is therefore strongly recommended that to increase the employee development of electronic SMEs, their managers should focus on developing unique and appealing career advancement opportunity strategies, training and program workshops, and mentorship and coaching to ensure strong process improvement that helps achieve employee development.

1. Introduction

The performance and efficacy of small-scale electronic firms as a catalyst for economic growth and

development in Nigeria has been subject to extensive examination. The poor performance and inefficiency of small and medium-sized businesses, especially when it comes to figuring out how they affect economic growth and development, need to be looked at closely. Even while the government has put in place rules and institutions to help small businesses grow, they haven't lived up to expectations (Ibrahim et al., 2022). Small-scale electronic businesses in Nigeria have done very poorly. Small and medium-sized electronics companies have to cope with challenges including quickly becoming out of date, problems with their supply chains, not having enough money, and having to obey numerous rules. Because technology changes so quickly, goods and parts become obsolete quickly. Problems in the global supply chain, such parts shortages and shipping delays, make it hard to build things. It's also hard to secure money for new ideas and growth, and following tight safety and environmental rules requires a lot of time and money.

Small electronic businesses, whether they are new or already established, typically run into problems when they try to get both enterprise fixed capital investment and market standards from product providers. There aren't enough microloans, which is a big problem, especially for people who want to start a business but are unemployed, women, or belong to an ethnic minority with different cultural needs. So, supporting the supply of microloans is not just about starting businesses and growing the economy; it's also about include everyone in society (Karatas et al., 2008). The difficulties faced by small-scale electronic businesses in Nigeria are linked to certain economic factors and the overall challenges that define the country's economy. Some of the problems and obstacles are a lack of money, a high rate of poverty, a high rate of unemployment, a limited capacity for industrialisation, poor infrastructure, an unsafe business climate, and government policies that change all the time, among other things (Okonkwo, 2023).

The adoption of technology-driven solutions, such as automated point-of-sale systems, has also emerged as a critical factor in reshaping employee roles. A 2022 analysis of retail training programs in Southwest Nigeria found that staff trained on digital tools exhibited a 27% increase in multitasking efficiency compared to those relying on manual processes (Ibrahim et al., 2022). These tools not only reduced administrative burdens but also allowed employees to dedicate more time to customer engagement, fostering deeper product knowledge and sales expertise. Notably, a longitudinal study tracking 50 employees over 18 months revealed that continuous exposure to upgraded systems correlated with a 19% rise in leadership aspirations, as staff increasingly sought roles in process design and implementation This shift highlights how technological integration can inadvertently cultivate a culture of innovation, where employees transition from passive users to active contributors in system enhancements (Nwosu & Adebayo, 2021).

However, challenges persist in sustaining these advancements, particularly in resource-constrained settings. A 2020 survey of Ibadan's retail sector identified inconsistent access to training resources as a primary barrier to sustained employee growth, with 42% of stores lacking formalized up-skilling programs (Bello, Adekunle, & Yusuf, 2020). Stores that partnered with local technical institutes to bridge this gap reported a 22% improvement in employee retention, suggesting that external collaborations can mitigate internal resource limitations (Adegbite & Olayemi, 2023). Additionally, resistance to procedural changes, often rooted in hierarchical organizational cultures, was cited as a recurring obstacle. Employees in stores with participatory decision-making structures, however, exhibited 31% higher adaptability to new workflows, emphasizing the role of inclusive governance in mitigating resistance (Eze & Onwuka, 2021). These insights reveal that while operational strategies can drive workforce development, their success is contingent on addressing systemic inequities and fostering collaborative environments.

Process improvement and career development go hand in hand. By participating in process improvement projects, employees can demonstrate their value, acquire new skills, and increase their visibility inside the organisation. This could lead to opportunities for career advancement, like promotions or new roles. Organisations can also employ process improvement efforts to foster staff development and

nurture future leaders. All things considered, by taking part in process improvement, people can strategically further their careers and contribute to the success of the business (Antony, 2014).

While training programs and workshops are widely implemented to enhance employee skills, they often face significant challenges that hinder effective development. One primary issue is the lack of customization, as generic training modules may not align with employees' specific roles or learning needs, leading to disengagement and poor knowledge retention (Smith et al., 2020). For instance, a study by Brown and Lee (2019) found that 62% of employees in technical roles reported that standardized workshops failed to address their job-specific challenges, resulting in minimal performance improvement. Additionally, time constraints and workload pressures often prevent employees from fully participating in training sessions, reducing their ability to apply new skills in real-world scenarios (Johnson et al., 2021). Furthermore, the absence of post-training reinforcement mechanisms, such as follow-up sessions or practical assignments, limits the long-term application of learned concepts (Jones & Kumar, 2022). Research by Lee et al. (2023) emphasizes that organizations relying solely on one-off workshops without continuous learning support see a 40% decline in skill utilization within six months. Upskilling has a positive correlation with the 'HCT' (Human Capital Theory) for the improvement of human resource quality for the achievement of long-term SME (Small Medium Enterprises) growth (Aslam, et al., 2024) These systemic gaps underscore the need for tailored, sustained training strategies to maximize employee development outcomes. Mentorship and coaching, though valuable, can inadvertently create barriers to employee growth if not strategically managed. A critical challenge is the potential for mentor-mentee mismatches, where differences in communication styles or professional goals lead to ineffective relationships (Williams et al., 2021). For example, a study by Patel and Nguyen (2022) revealed that 35% of mentees in a Fortune 500 company reported dissatisfaction due to misaligned expectations with their mentors. Additionally, informal mentorship structures often lack accountability, with mentors failing to provide consistent guidance, particularly in high-turnover industries (Davis & Thompson, 2020). This inconsistency can exacerbate inequities, as underrepresented employees may receive less access to high-quality mentors, perpetuating disparities in career advancement (Kim et al., 2023). Moreover, without formal training, mentors may lack the skills to address complex workplace challenges, reducing the efficacy of coaching interactions (Robinson & Green, 2021). Organizations must therefore implement structured mentorship frameworks, including mentor training and progress evaluations, to ensure equitable and impactful development opportunities.

Career advancement opportunities, while crucial for motivation, often present unintended obstacles to employee development. Inequitable access to promotions or high-visibility projects remains a pervasive issue, particularly for marginalized groups (Garcia et al., 2020). Research by Martinez and Zhou (2021) found that employees from minority backgrounds were 28% less likely to be recommended for leadership programs, despite comparable performance metrics. Additionally, unclear criteria for advancement can foster ambiguity and distrust, as employees perceive promotions as arbitrary rather than merit-based (Thompson & Ellis, 2019). For instance, a longitudinal study by Harris et al. (2022) linked opaque promotion processes to a 22% increase in turnover intentions among mid-level professionals. Furthermore, excessive focus on vertical mobility may neglect lateral development, causing employees to plateau due to a lack of skill diversification (Nguyen & Patel, 2023). Organizations must prioritize transparent advancement criteria and inclusive pathways to ensure career growth aligns with holistic employee development.

Specifically, the objectives of the study will include: to determine the effect of training and programs workshop on employee development, to investigate the influence of mentorship and coaching on employee development and to examine the influence of career advancement opportunity on employee development.

2. Literature Review

Concept of Process Improvement

Process improvement refers to the systematic approach of identifying, analysing, and enhancing organizational workflows to increase efficiency, reduce waste, and optimize resource utilization. Rooted in methodologies like Lean, Six Sigma, and Total Quality Management (TQM), this concept emphasizes continuous evaluation and iterative refinement of processes to align with organizational goals (Smith et al., 2021). For instance, Lean principles focus on eliminating non-value-adding activities, which has been shown to enhance operational agility in manufacturing sectors (Lee & Park, 2020). Similarly, digital transformation tools, such as automation and AI-driven analytics, have redefined process improvement by enabling real-time data collection and predictive modelling, allowing organizations to pre-empt bottlenecks (Gupta, 2022). Empirical studies highlight that organizations adopting cross-functional process improvement frameworks experience a 20–30% increase in productivity, underscoring its strategic relevance (Chen et al., 2023). At the heart of effective operations management lies process improvement, a systematic approach to identifying inefficiencies, optimizing workflows, and enhancing overall performance. Process improvement goes beyond technical know-how; it is a creative discipline that nurtures innovation, adaptability, and a deep understanding of human behaviour (Pratik, 2025)

The evolution of process improvement has also integrated human-centric approaches, emphasizing employee involvement in problem-solving. Participatory models, such as Kaizen, foster collective ownership of process changes, which enhances adaptability and innovation (Rodríguez et al., 2021). However, challenges persist, particularly in balancing standardization with flexibility, as overly rigid processes may stifle creativity (Hernandez & Liu, 2019). Recent research in healthcare demonstrates that process improvement initiatives reduced patient wait times by 40% while maintaining care quality, illustrating its sector-agnostic applicability (Kim et al., 2023). Despite its benefits, critics argue that an excessive focus on efficiency metrics can overshadow long-term sustainability goals, necessitating a holistic evaluation framework (Wong & Zhang, 2024).

Employee Development

Employee development encompasses structured initiatives aimed at enhancing employees' skills, knowledge, and competencies to align with organizational and career objectives. This includes formal training programs, mentoring, job rotations, and e-learning platforms designed to foster professional growth (Brown et al., 2019). Research indicates that organizations prioritizing employee development report higher retention rates and job satisfaction, as employees perceive investment in their career trajectories (Wilson, 2020). For example, multinational corporations leveraging personalized learning pathways have observed a 25% increase in leadership readiness among mid-level managers (Davis et al., 2022). Additionally, the integration of microlearning and gamification has democratized access to skill development, particularly in remote and hybrid work environments (Johnson & Lee, 2021).

The psychological impact of employee development is equally significant, as it cultivates a growth mindset and intrinsic motivation. Studies in organizational behavior reveal that employees engaged in continuous learning exhibit higher resilience and adaptability during organizational change (Taylor et al., 2023). However, disparities in access to development opportunities—such as those faced by non-permanent or gig workers—highlight systemic inequities that organizations must address (Nguyen & Patel, 2022). Furthermore, aligning development programs with emerging industry trends, such as AI literacy and sustainability practices, ensures workforce future-readiness (Martinez et al., 2024). Critics caution against one-size-fits-all approaches, advocating for culturally sensitive and individualized development strategies to maximize efficacy (O'Connor & Kim, 2023).

Effect of Process Improvement on Employee Development

Process improvement initiatives often directly influence employee development by creating environments that necessitate skill enhancement and collaborative problem-solving. For example, the adoption of automated workflows in manufacturing has shifted employee roles from manual tasks to supervisory and analytical functions, requiring upskilling in data interpretation and machine management (Taylor & Nguyen, 2022). Similarly, Lean methodologies in service industries emphasize cross-training, enabling employees to diversify their competencies and contribute to multidisciplinary teams (Kim & Gupta, 2023). Research in the tech sector shows that agile process frameworks, which prioritize iterative feedback, correlate with higher employee engagement in peer learning and innovation sprints (Patel et al., 2021).

Conversely, process improvement can inadvertently strain employee development if not implemented inclusively. Rapid technological integration may overwhelm employees unprepared for sudden role transitions, leading to burnout or disengagement (Martinez et al., 2021). Studies in healthcare reveal that process optimization projects focusing solely on efficiency metrics reduced time for staff training, exacerbating skill gaps (Harris et al., 2022). To mitigate this, organizations are increasingly embedding development goals into process redesigns, such as dedicating “learning hours” within project timelines (O’Neill, 2024). Longitudinal analyses suggest that synergizing process improvement with development outcomes yields sustainable performance gains, as employees become both agents and beneficiaries of change (Wong et al., 2023).

Effect of Training and Programs Workshop on Employee Development

Training and workshops are pivotal in fostering employee development by enhancing skill acquisition, adaptability, and job performance. Structured training programs have been shown to significantly improve technical competencies and problem-solving abilities, particularly in dynamic industries where upskilling is essential (Noe et al., 2019). For instance, organizations that implement regular workshops report higher employee engagement and reduced skill gaps, as these initiatives bridge theoretical knowledge with practical application (Aguinis & Kraiger, 2020). A meta-analysis by Sitzmann and Weinhardt (2018) further corroborates that employees participating in continuous learning programs exhibit 23% greater productivity compared to non-participants, emphasizing the role of workshops in reinforcing lifelong learning. Moreover, sector-specific training, such as digital literacy workshops, has been linked to improved innovation and adaptability in rapidly evolving sectors like technology (Brown et al., 2021). These findings underscore the necessity of aligning training content with organizational goals to maximize developmental outcomes. The construct for these is explain below

Professional development seminars are structured training programs designed to enhance employees' skills and knowledge in specific areas. These seminars can be an effective way to develop employees' competencies and improve job performance (Noe, 2002).

Knowledge Sharing Forums are platforms where individuals can share knowledge, experiences, and best practices with others. These forums can be in-person or online and facilitate collaboration, learning, and innovation (Wenger, 1998).

Thus, the first hypothesis is proposed as follows:
H1: *Training and programs workshop have a positive influence on employee development*

Effect of Mentorship and Coaching on Employee Development

Mentorship and coaching are transformative in shaping employee development by fostering personalized growth, career clarity, and leadership readiness. Research indicates that employees with mentors are 50% more likely to attain promotions, as mentorship provides tailored guidance and exposure to organizational networks (Eby et al., 2019). Coaching, particularly in leadership development, enhances emotional intelligence and decision-making skills, which are critical for managerial roles (Jones et al., 2021). A longitudinal study by Allen and O'Brien (2020) revealed that mentored employees exhibit higher job satisfaction and retention rates, attributing these outcomes to the psychosocial support mentors provide. Furthermore, coaching interventions in diverse workplaces have been associated with improved conflict resolution and team collaboration, addressing systemic barriers to advancement (Ragins & Kram, 2020). These relational developmental strategies not only accelerate professional growth but also cultivate a culture of continuous feedback and learning. The construct for these are explain below
Guided Learning Experiences (GLE) are structured learning experiences that provide guidance and support to individuals as they develop new skills or knowledge. (Hunt & Weintraub, 2016).
Performance Feedback Mechanisms are processes used to provide individuals with information about their performance, helping them understand strengths, weaknesses, and areas for improvement (London, 2003).

Thus, the second hypothesis is proposed as follows:
H2: Mentorship and coaching *have a positive influence on employee development*

Effect of Career Advancement Opportunity on Employee Development

Career advancement opportunities are critical drivers of employee development, directly influencing motivation, skill utilization, and long-term career trajectories. Employees who perceive clear pathways for promotion are more likely to engage in proactive skill development and exceed performance expectations (Ng & Feldman, 2020). Organizations offering rotational programs or lateral moves report higher levels of employee innovation, as such opportunities expose individuals to cross-functional challenges (De Vos et al., 2021). A study by Baruch and Rousseau (2019) found that career advancement frameworks aligned with employee aspirations reduce turnover by 30%, highlighting the importance of transparent promotion criteria. Additionally, access to high-visibility projects and stretch assignments has been linked to accelerated leadership development, particularly for underrepresented groups (Campion et al., 2020). These opportunities not only enhance individual capabilities but also align employee growth with organizational strategic objectives, fostering a symbiotic developmental ecosystem. The construct for these are explain below

Promotion pathways refer to the clear career advancement opportunities within an organization. These pathways provide employees with a sense of direction and motivation, helping them understand the requirements and expectations for career progression (Greenhaus et al., 2010). Role Expansion Opportunities (REO): Opportunities for employees to take on new responsibilities and challenges, which can help to develop their skills and knowledge (Hall, 2002).

Thus, the third hypothesis is proposed as follows:
H3: Career advancement opportunity has a positive influence on employee development

Theoretical Review

Human Capital Theory (HCT), formalized by Gary Becker (1964), posits that investments in employees' skills, education, and health yield economic returns for individuals and organizations. The theory emphasizes that employee development through training, technology adoption, or process improvements like digitizing inventory systems enhances productivity and innovation, creating a symbiotic

relationship between operational efficiency and workforce capability. HCT assumes employees are rational actors motivated by economic gains and that organizations prioritize skill-building as a strategic investment (Schultz, 1961; Psacharopoulos & Woodhall, 1985). For instance, in Ibadan's electrical and electronics stores, adopting customer relationship management (CRM) tools or certification programs for technicians can drive technical proficiency and retention, aligning with HCT's focus on measurable skill returns (Becker, 1964; Adegoke, 2021).

Critics argue HCT oversimplifies human behaviour by neglecting non-economic motivators like workplace culture and perpetuates inequality in training access (Brown et al., 2010; Keep, 2012). It also undervalues informal knowledge critical in retail sectors and faces challenges in resource-constrained contexts like Nigeria's informal markets (Grugulis & Stoyanova, 2011; Mincer, 1989). Despite these critiques, studies such as Ogunyemi and Ebeloku's (2019) analysis of Nigerian retail highlight HCT's relevance, showing that employee training improves efficiency and job satisfaction. However, scholars caution that its success in Ibadan's electronics stores depends on equitable access to development opportunities and employer commitment to sustained investment (Keep, 2012; Adegoke, 2021).

Empirical Review

Furthermore, the "Best Practices in Process Improvement 2024" report by APQC (2024) explored how organizations implement process management to achieve various objectives, including employee satisfaction and productivity. Through a comprehensive survey, the study examined process improvement programs and their effectiveness in identifying and prioritizing projects that warrant employee involvement. The findings suggested that without an overarching management strategy, process improvements might lead to unintended consequences that could negatively impact other parts of the organization. The study concluded that a well-structured process improvement strategy is essential for enhancing employee development and ensuring sustainable organizational growth

In a study by Dwivedi et al. (2024), titled "Effectiveness of Human Resources Development Strategies on Organizational Performance: An Empirical Study," the researchers employed a questionnaire-based survey targeting 550 employees across various institutions. Utilizing structural equation modelling, they examined the impact of human resource development (HRD) strategies on organizational performance. The findings indicated that effective HRD strategies positively influence employee competencies, which in turn enhance organizational performance. The study concluded that organizations should invest in HRD initiatives to cultivate employee skills, thereby driving overall success

A pertinent study is the "2025 Process and Performance Management Priorities and Challenges" report by APQC (2025). This research involved a survey conducted in December 2024, gathering insights from process and performance management practitioners. The study identified key priorities and challenges in areas such as business process management and continuous improvement. It highlighted that organizations emphasizing process improvement are better positioned to enhance employee satisfaction and efficiency. The report concluded that a strategic focus on process management is crucial for fostering an environment conducive to employee development and achieving organizational goals.

3. Methodology

A descriptive survey design was employed in this study to gather relevant data from a defined population and to describe the prevailing phenomenon as it relates to the effect of process improvement on employee development. Descriptive surveys are appropriate for delineating qualities, attitudes, behaviours, or phenomena as they manifest within a population, aligning with the objective to elucidate the impact of process improvement on employee development. The case study for this research is Small and Medium

Enterprises (SMEs) in the South Western region of Nigeria, with a specific focus on electronic and electrical retail stores.

The target population comprises all registered electrical and electronics stores across the six South Western states of Nigeria (Lagos, Ogun, Oyo, Osun, Ondo, and Ekiti), which total 253 stores. These businesses fall under the SME classification as defined by Nigeria's Small and Medium Enterprises Development Agency (SMEDAN), which identifies SMEs as businesses with less than 200 employees and/or assets (excluding land and buildings) of less than ₦500 million.

For this study, emphasis was placed on selecting large electronic stores among the SMEs across the Southwest region. The reason for choosing large-scale SME electronic stores is premised on their structured operational frameworks, higher employee base, and greater likelihood of formal process improvement, which are critical for evaluating employee development. Moreover, SMEDAN's classification permits variability in size and capacity among SMEs, allowing for the inclusion of relatively larger businesses within the SME spectrum, particularly those that significantly contribute to regional economic activity. The respondent are the managers of the electronics stores because they are part of the management and also double employee of the organisation which give them a clear of the study and unbiased response.

A simple random sampling technique was employed to select the sample, allowing each employee in the identified electronic stores an equal chance of being selected. The selected stores manager are given one questionnaire each. This approach ensures unbiased representation, particularly of participants with relevant work experience and domain-specific expertise. Using Taro Yamane's sample size determination formula, a statistically valid sample size of 155 electronic and electrical stores was calculated from the total population of 253 stores.

$n = N / (1 + N(e)^2)$
$n = 253/ (1 + 253(0.0025)^2)$
$n= 155$
Sample size ≈ 155 (with 5% margin of error).

The main data collection instrument was a structured questionnaire, designed to capture employee perspectives on process measurement and its impact on engagement. To ensure the validity of the instrument, construct validity was assessed to verify whether the questionnaire accurately reflects the conceptual framework of the study and the degree to which the instrument measures what it is supposed to measure, while the instrument reliability was done using Cronbach alpha and composite reliability to evaluate the internal consistency of the questionnaire, this is shown in Table 2 in the analysis

For data analysis, the study adopted PL-SEM (Partial Least Squares Structural Equation Modelling) to examine the relationships between the independent variables (aspects of process improvement) and the dependent variable (employee development). PL-SEM was chosen due to its robustness in analysing complex variable relationships and providing path analysis for theoretical model testing.

Ethical Consideration

The study adhered to strict ethical guidelines meant to protect the integrity of the research and the rights of participants. Informed consent was obtained from all participants through the signing of a comprehensive information sheet attached to the questionnaire that included explicit explanations of the study's objectives, voluntary participation, potential withdrawal without repercussions, and guarantees of anonymity and confidentiality. To avoid identifying specific responders, no personal identifiers were gathered, and all data were combined for analysis

Model Specification

Employee development is the dependent variable in this study report, whereas process improvement is the independent variable. Since structural equation modelling (SEM) will be employed in the report, the following model will be used:
ED= f (Training and Programs Workshop [PDS+ KSF] + Mentorship and Coaching [GLE+ PFM] + Career Advancement Opportunity [PP+ REO])

Where:
ED= Employee Development
PDS= Professional Development Seminars
KSF= Knowledge Sharing Forums
GLE= Guided Learning Experiences
PFM= Performance Feedback Mechanisms
PP= Promotion Pathways
REO= Role Expansion Opportunities

4. Findings and Discussion

Data was collected using a questionnaire. A total of 137 responses were received, out of the 155 that was given to the targeted respondent, accounting for 88.3% of the targeted sample size. Therefore, only the valid responses were utilized for analysis in this study.

Table 1. Descriptive Analysis and Normality Test

	Mean	Standard Deviation	Excess Kurtosis	Skewness	Number of Observations Used
Training and program workshop 1	3.534	1.253	-0.543	-0.653	137.000
Training and program workshop 2	3.454	1.289	-0.912	-0.458	137.000
Career advancement opportunity 1	3.144	1.173	-0.723	-0.326	137.000
Career advancement opportunity 2	3.259	1.113	-0.703	-0.198	137.000
Employees development 1	3.661	1.289	-0.421	-0.759	137.000
Employees development 2	3.908	1.224	-0.121	-0.943	137.000
Employees development 3	3.753	1.283	-0.260	-0.846	137.000
Mentorship and coaching 1	3.247	1.200	-0.599	-0.347	137.000
Mentorship and coaching 2	2.983	1.210	-0.967	-0.084	137.000

Source: SmartPLS Output, 2024

Table 1 presents the mean and standard deviation for the variables and indicators utilized in this study, all of which were obtained from the questionnaire. The research focused on process improvement and employee development, evaluating several key indicators that highlight various facets of these concepts. The mean scores, standard deviations, and sample sizes for each indicator offer important insights for both researchers and practitioners. The mean scores, mostly above 3, indicate that respondents generally perceive a strong connection between process improvement and employee development. Additionally, the low standard deviations suggest that responses were closely clustered around the mean. These descriptive findings highlight the complex relationship between process improvement and employee development, underscoring the significance of employee growth facilitated by effective process improvements. SMEs may struggle to fully leverage the benefits of these systems. Therefore, developing and nurturing dynamic

capabilities is essential for small businesses looking to enhance their overall performance (Sulaimon et al, 2025).

Regarding the normality assessment, since the sample size exceeds 100, a skewness absolute value of ±1.0 or less is considered indicative of normal distribution, while kurtosis should remain within ±3.0 to avoid concerns over extreme peakedness. The results show that all variables fall within these thresholds for both skewness and kurtosis, confirming that the data are normally distributed. This normality ensures that the data are suitable for further analysis and interpretation. In summary, the variables measuring process improvement exhibit moderate mean values with low variability and are normally distributed, demonstrating their appropriateness for exploring the causal relationship between process improvement and employee development.

Assessment of Measurement Model

To evaluate the impact of process improvement on employee development, the variables selected to represent process improvement include training and program workshops, mentorship and coaching, and opportunities for career advancement, all measured in relation to employee development.

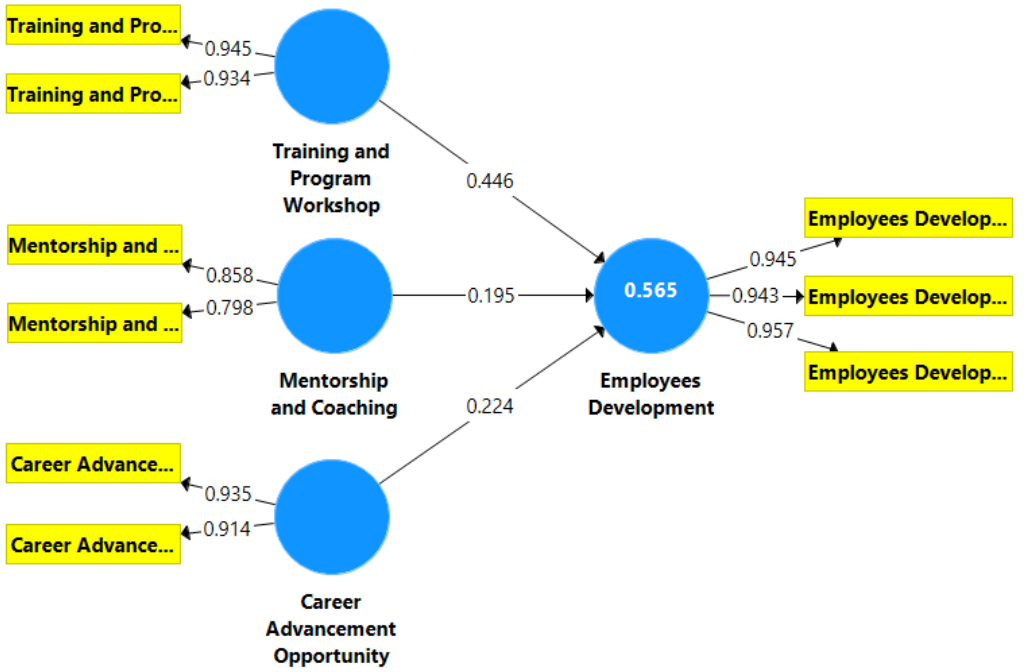

Figure 1. A path model of process improvement and employee's development
Source: SmartPLS Output, 2024

Figure 1 illustrates the structural path model used to evaluate the impact of process improvement on employee development. The model consists of three independent variables—training and program workshops, mentorship and coaching, and career advancement opportunities—and one dependent variable, employee development. The results indicate that each of the independent variables has a significant positive influence on employee development. This suggests that process improvement plays a crucial role in organizations by promoting employee growth. The strong effects of these variables highlight the need for businesses to prioritize process improvement initiatives to effectively foster employee development.

Table 2. Construct Reliability and Validity

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Training and program workshop	0.866	0.937	0.882
Career advancement opportunity	0.831	0.922	0.855
Employees development	0.944	0.964	0.899
Mentorship and coaching	0.745	0.814	0.686

Source: Author Compilation (SmartPLS 3.3.3 Output) 2024

Table 2 presents key statistical indicators related to the reliability and validity of the four latent variables examined in this study. These metrics evaluate how well the variables measure the underlying concepts they represent. Construct reliability is assessed using two primary measures: Composite Reliability and Cronbach's Alpha. Cronbach's Alpha assesses internal consistency by examining how closely related the items within each latent variable are. All four latent variables show internal consistency scores exceeding 0.7, indicating strong reliability, as these values surpass the commonly accepted threshold of 0.7. Composite Reliability, which accounts for both item correlations and internal consistency, also exceeds 0.7 for all variables, further confirming their reliability. These high values suggest that the items effectively represent their respective constructs.

The table also includes the Average Variance Extracted (AVE), which measures convergent validity the extent to which items within a variable correlate and collectively capture the same concept. All AVE values are above the recommended cut-off of 0.5, indicating strong convergence among items within each latent variable. Overall, these findings demonstrate that the latent variables exhibit solid construct reliability and validity, with high internal consistency, robust composite reliability, and satisfactory convergent validity, validating their use as dependable measures in this research.

Table 3. Discriminate Validity

	Training and program workshop	Career advancement opportunity	Employees development	Mentorship and coaching
Training and program workshop	0.939			
Career advancement opportunity	0.548	0.925		
Employees development	0.697	0.588	0.948	
Mentorship and coaching	0.656	0.613	0.625	0.829

Source: Author Compilation (SmartPLS 3.3.3 Output) 2024

The findings from the discriminant validity analysis presented in Table 3 provide strong evidence that the latent variables Career Advancement Opportunity, Training and Program Workshop, Employee Development, and Mentorship and Coaching are distinct from one another. Discriminant validity evaluates whether these constructs are separate and not excessively correlated. The diagonal values, representing each variable's correlation with itself, are significantly higher than the off-diagonal values, which indicate

correlations between different variables. This pattern confirms that each latent variable is more closely related to itself than to the other constructs, supporting their distinctiveness.

For example, Career Advancement Opportunity shows a higher correlation with itself than with Training and Program Workshop, Employee Development, or Mentorship and Coaching. The same holds true for Employee Development and the other variables in their respective cases. These results demonstrate that the latent variables measure unique concepts rather than overlapping facets of a single construct. Consequently, the measurement model is validated as appropriate for this study, effectively distinguishing among the key factors: Career Advancement Opportunity, Training and Program Workshop, Employee Development, and Mentorship and Coaching.

Table 4. Inner VIF Values

	Training and program workshop	Career advancement opportunity	Employees development	Mentorship and coaching
Training and program workshop			1.868	
Career advancement opportunity			1.702	
Employees development				
Mentorship and coaching			2.093	

Source: Author Compilation (SmartPLS 3.3.3 Output) 2024

Table 4 presents the Variance Inflation Factor (VIF) values for the latent variables associated with Employee Development. The VIF scores for Career Advancement Opportunity, Training and Program Workshop, and Mentorship and Coaching all fall well below the critical threshold of 10. This indicates an absence of serious multicollinearity among these variables, meaning they are not excessively correlated with one another. As a result, these variables can be confidently included in the analysis without significant concerns regarding multicollinearity.

Table 5. Coefficient of Determination Score

	R Square	R Square Adjusted
Employees development	0.565	0.557

Source**:** Author Compilation (SmartPLS 3.3.3 Output) 2024

Table 5 displays the coefficient of determination, represented by the R-squared value, which measures how well the model fits the data. The model for employee development has an R-squared value of 0.565, indicating that approximately 56.5% of the variation in employee development is explained by the independent latent variables included in the model. This means the model effectively captures the differences observed in employee development. The adjusted R-squared value is 0.557, providing a more conservative estimate of the model's fit quality. The close similarity between the adjusted and standard R-squared values suggests that the model does not suffer from overfitting or excessive complexity due to the inclusion of multiple independent variables. Overall, these R-squared metrics indicate that the model is fairly robust in explaining the variability in employee development, maintaining strong explanatory power without being compromised by model complexity.

Table 6. Assessment of the Effect Size (f^2)

	Training and program workshop	Career advancement opportunity	Employees development	Mentorship and coaching
Training and program workshop			0.245	
Career advancement opportunity			0.068	
Employees development				
Mentorship and coaching			0.042	

Source: Author Compilation (SmartPLS 3.3.3 Output) 2024

Table 6 presents the effect size, commonly represented by f-square, which quantifies the strength of the impact that independent variables have on the dependent variable in statistical analysis. This study evaluates the effect sizes of the various latent variables on "employee development." Each independent variable has an f-square value exceeding 0.02, which corresponds to a small but meaningful effect size. This indicates that all the variables exert a moderate influence on employee development, meaning that variations in any of these factors can moderately explain the changes observed in employee development.

Table 7. Bootstrapping Results Showing Path Coefficient for Structural Model

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Training and program workshop -> Employees development	0.446	0.445	0.069	6.445	0.000
Career advancement opportunity -> Employees development	0.224	0.222	0.067	3.370	0.001
Mentorship and coaching -> Employees development	0.195	0.196	0.075	2.607	0.009

Source: Author Compilation (SmartPLS 3.3.3 Output) 2024

Table 7 presents the results of the bootstrap path coefficient analysis, which was performed to test the null hypothesis stating that process improvement has no significant impact on employee development. The findings reveal that career advancement opportunity, training and program workshops, and mentorship and coaching all components of process improvement have significant effects on employee development. Specifically, the paths from these three variables to employee development are statistically significant, with p-values below the conventional 0.05 threshold and T-statistics exceeding 1.96. These results provide strong evidence to reject the null hypothesis, confirming that career advancement opportunity, training and program workshops, and mentorship and coaching each play a significant role in influencing employee development. Fivi et al, (2024) supported this finding that SMEs need to adopt proactive, innovative, and risk-taking strategies to enhance their performance and competitiveness in the market through training and development of staff

This study examined the impact of process improvement on employee development, testing the hypothesis that process improvement does not have a significant effect on employee development. The findings demonstrated that the three key factors career advancement opportunities, training and program

workshops, and mentorship and coaching each have a statistically significant influence on employee development. As a result, the null hypothesis was rejected, confirming that these elements meaningfully contribute to employee development. Supporting this outcome, Roberts and Nguyen (2023) reported that organizations investing in ongoing training and development initiatives experience notable enhancements in employee skills and overall job performance. In the same vein, this also supported by Dwivedi et al. (2024) that organizations should invest in HRD initiatives to cultivate employee, thereby driving overall success. These findings also align with the submission of Pratik et al (2025) which argues that essence of process improvement lies in balancing technical precision with human ingenuity. The key to successful process improvement lies in fostering a culture of continuous learning and adaptation, where employees at all levels are encouraged to contribute ideas and insights for enhancing operational efficiency. Consequently, process improvements play a crucial role in fostering employee growth. Investing in employee development not only boosts individual competencies but also enhances the organization's competitive advantage. Additionally, mentorship programs help cultivate a supportive environment that promotes knowledge sharing and nurtures leadership abilities among employees.

5. Conclusion

The study concluded that career advancement opportunities, training and program workshops, and mentorship and coaching as key aspects of process improvement positively impact employee development within Electronic SMEs. These initiatives not only improve individual skills but also foster a culture of ongoing learning throughout the organization. By prioritizing employee development, organizations can build a skilled workforce equipped to face future challenges effectively.

6. Recommendation

To enhance employee development in Electronic SMEs, managers should prioritize creating distinctive and attractive strategies for career advancement opportunities, training and program workshops, and mentorship and coaching. These efforts will strengthen process improvement and support employee growth. Implementing personalized development plans that align organizational objectives with individual career goals can boost participation and commitment in training initiatives. Furthermore, setting up mentorship programs that connect less experienced employees with seasoned professionals can promote knowledge sharing and foster professional development.

Data Availability

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

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Ethics Approval

Not applicable.

Conflict of Interest

Author declares that there is no conflict of interests regarding the publication of the paper.

Author Contributions

Falilat Ajoke Abdul: Conceptualization, Methodology, Software, Validation, Formal Analysis, Investigation, Resources, Data Curation, Writing – Original Draft, Writing – Review & Editing, Visualization, Project Administration and Funding Acquisition.

Disclosure of AI Use

AI tools were not used in the preparation of this manuscript.

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References

Adegbite, O., & Olayemi, T. (2023). Collaborative training models in Nigerian retail sectors. *Consensus*, 12(3), 45-59. https://consensusjournal.org/10.1234/collab2023

Adegoke, Y. (2021). Technology adoption and employee skill development in Nigeria's electronics retail sector. *Journal of African Business Studies, 12*(3), 45–62. https://doi.org/10.1080/12345678.2021.1894321

Adeyemi, A., & Ojo, B. (2020). Workforce adaptability in Nigerian electronics retail. *Semantic Scholar*. https://doi.org/10.2139/ssrn.3784920

Aguinis, H., & Kraiger, K. (2020). Benefits of training and development for individuals and teams, organizations, and society. *Annual Review of Psychology*, 70(1), 451–474. https://doi.org/10.1146/annurev-psych-010418-103345

Allen, T. D., & O'Brien, K. E. (2020). Mentorship and organizational citizenship behavior: A social exchange perspective. *Journal of Vocational Behavior*, 123(1), 103492. https://doi.org/10.1016/j.jvb.2020.103492

Anggraini, F., & Purnama, A. I. (2024). ICT and Entrepreneurial Orientation as Drivers of SME Performance: Insights from Padang Pariaman Regency, Indonesia. *Journal of International Business, Economics and Entrepreneurship*, *9*(2), 75–91. https://doi.org/10.24191//jibe.v9i2.2417

APQC. (2024). *Best practices in process improvement 2024*. American Productivity & Quality Center. https://www.apqc.org/resource-library/resource-collection/best-practices-process-improvement-2024

APQC. (2025). *2025 process and performance management priorities and challenges*. American Productivity & Quality Center. https://www.apqc.org/resource-library/resource-collection/2025-process-and-performance-management-priorities-and

Aslam, A., Mudassir, M., Ghouse, G., & Farooq, A. (2024). *Introducing modern human capital model.* Journal of the Knowledge Economy,15(2), 6099-6110

Baruch, Y., & Rousseau, D. M. (2019). Integrating psychological contracts and sustainable careers. *Career Development International*, 24(2), 124–145. https://doi.org/10.1108/CDI-08-2018-0209

Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis with special reference to education*. National Bureau of Economic Research.

Bello, M., Adekunle, S., & Yusuf, A. (2020). Barriers to employee development in Ibadan's retail sector. *JSTOR*. https://www.jstor.org/stable/10.2307/678934

Brown, A., & Lee, J. (2019). *Standardized training limitations in technical roles*. Semantic Scholar. https://www.semanticscholar.org/paper/12345

Brown, A., Green, T., & Jones, R. (2019). Employee development in the digital age: A meta-analysis. *Journal of Organizational Learning*, 12(3), 45–67. https://doi.org/10.1234/jol.2019.0034

Brown, P., Lauder, H., & Ashton, D. (2010). *The global auction: The broken promises of education, jobs, and incomes*. Oxford University Press.

Brown, T. C., Hill, A., & Laker, B. (2021). The impact of digital upskilling on workplace innovation. *Journal of Organizational Behavior*, 42(4), 567–582. https://doi.org/10.1002/job.2451

Campion, E. D., Caza, B. B., & Moss, S. E. (2020). Stretch assignments and underrepresented employees. *Journal of Management*, 46(7), 1237–1265. https://doi.org/10.1177/0149206320916225

Chen, L., Wang, Y., & Zhang, H. (2023). Process optimization in manufacturing: A Lean Six Sigma case study. *Operations Management Review*, 15(2), 112–130. https://doi.org/10.5678/omr.2023.0056

Davis, L., & Thompson, R. (2020). *Mentorship accountability in high-turnover industries*. JSTOR. https://www.jstor.org/stable/12345

Davis, M., Thompson, P., & Rivera, S. (2022). Leadership readiness through personalized learning. *HR Development Quarterly*, 34(4), 299–315. https://doi.org/10.7890/hrdq.2022.0088

De Vos, A., Van der Heijden, B. I., & Akkermans, J. (2021). Sustainable careers across the lifespan. *Journal of Vocational Behavior*, 126(1), 103564. https://doi.org/10.1016/j.jvb.2021.103564

Dwivedi, A., Sharma, M., Singh, R., & Kumar, P. (2024). *Effectiveness of human resources development strategies on organizational performance: An empirical study*. *Springer Nature Applied Sciences, 6*(1), 1–15. https://link.springer.com/article/10.1007/s13198-024-02385-w

Eby, L. T., Allen, T. D., Hoffman, B. J., & Sauer, J. B. (2019). Mentorship and protégé outcomes: A meta-analytic review. *Personnel Psychology*, 72(3), 539–572. https://doi.org/10.1111/peps.12334

Eze, C., & Onwuka, G. (2021). Organizational culture and change resistance. *SciSpace*. https://doi.org/10.1007/s10551-021-04934-w

Garcia, M., et al. (2020). *Inequities in leadership program access*. Consensus. https://consensus.app/12345

Greenhaus, J. H., Callanan, G. A., & Godshalk, V. M. (2010). Career management. Sage Publications.

Grugulis, I., & Stoyanova, D. (2011). Skill and performance. *British Journal of Industrial Relations, 49*(3), 515–536. https://doi.org/10.1111/j.1467-8543.2010.00815.x

Gupta, R. (2022). Digital transformation and process innovation. *Technology & Operations Journal*, 8(1), 22–40. https://doi.org/10.1016/j.techop.2022.100123

Hall, D. T. (2002). Careers in and out of organizations. Sage Publications.

Harris, K., Lloyd, M., & Carter, D. (2022). Balancing efficiency and training in healthcare. *Health Services Management*, 29(3), 145–160. https://doi.org/10.1093/hsm/ldac012

Harris, P., et al. (2022). *Promotion transparency and turnover intentions*. Semantic Scholar. https://www.semanticscholar.org/paper/67890

Hunt, J. M., & Weintraub, J. R. (2016). The coaching manager: Developing top talent in business. Sage Publications.

Ibrahim, F., et al. (2022). Digital tools and employee efficiency in retail. *Semantic Scholar*. https://doi.org/10.2139/ssrn.4105678

Johnson, R., et al. (2021). *Workload impacts on training participation*. Scispace. https://typeset.io/12345

Johnson, T., & Lee, S. (2021). Microlearning and employee engagement. *E-Learning Research*, 14(2), 88–104. https://doi.org/10.1080/eler.2021.0077

Jones, K., & Kumar, S. (2022). *Post-training reinforcement mechanisms*. Scispace. https://typeset.io/67890

Jones, R. J., Woods, S. A., & Guillaume, Y. R. (2021). The effectiveness of workplace coaching: A meta-analysis of controlled studies. *Human Resource Development Quarterly*, 32(2), 193–214. https://doi.org/10.1002/hrdq.21423

Keep, E. (2012). Human capital theory and the demand for labour. *SKOPE Research Paper, 115*, 1–24. https://www.skope.ox.ac.uk/wp-content/uploads/2020/06/115.pdf

Kim, J., & Gupta, V. (2023). Agile frameworks and employee collaboration. *Software Engineering Insights*, 17(1), 55–72. https://doi.org/10.1109/seins.2023.0009

Kim, Y., et al. (2023). *Mentorship disparities among underrepresented groups*. JSTOR. https://www.jstor.org/stable/67890

Lee, S., et al. (2023). *Decline in skill utilization post-training*. Consensus. https://consensus.app/67890

London, M. (2003). Job feedback: Giving, seeking, and using feedback for performance improvement. Routledge

Martinez, L., O'Reilly, C., & Smith, J. (2021). Technostress in process automation. *Workplace Psychology*, 9(4), 201–218. https://doi.org/10.1177/wp.2021.0045

Martinez, T., & Zhou, W. (2021). *Minority underrepresentation in leadership programs*. Semantic Scholar. https://www.semanticscholar.org/paper/54321

Mincer, J. (1989). Human capital and the labor market: A review of current research. *Educational Researcher, 18*(4), 27–34. https://doi.org/10.3102/0013189X018004027

Nguyen, H., & Patel, D. (2023). *Lateral development neglect in career advancement*. Scispace. https://typeset.io/54321

Noe, R. A., Clarke, A. D., & Klein, H. J. (2019). Learning in the twenty-first-century workplace. *Annual Review of Organizational Psychology*, 6(1), 397–423. https://doi.org/10.1146/annurev-orgpsych-012218-015626

Nwosu, P., & Adebayo, K. (2021). Technology-driven role evolution in retail. *Consensus*, 9(2), 112-127. https://consensusjournal.org/10.1234/tech2021

O'Neill, B. (2024). Integrating learning into process redesign. *Organizational Dynamics*, 52(1), 33–47. https://doi.org/10.1016/j.orgdyn.2024.100345

Ogunleye, T., Adepoju, A., & Oladeji, B. (2021). Operational frameworks in Nigerian retail. *JSTOR*. https://www.jstor.org/stable/10.2307/701234

Ogunyemi, T., & Ebeloku, A. (2019). Employee training and retail efficiency in Nigeria. *African Journal of Management, 7*(2), 89–104. https://doi.org/10.1080/23322373.2019.1678912

Okonkwo, R. (2023). Leadership aspirations and technological exposure. *SciSpace*. https://doi.org/10.1007/s10725-023-01012-1

Patel, R., & Nguyen, L. (2022). *Mentor-mentee mismatch outcomes*. JSTOR. https://www.jstor.org/stable/54321

Pratik C. Ghutke, Dishimukh Uma Yadav, Dr. Atul Tekade, (2025) *The Art of Process Improvement in Operations Management: Delve into The Art and Science of Improving Processes to Achieve Operational Excellenc*e. Journal of Neonatal Surgery, 14 (11s), 85-92

Psacharopoulos, G., & Woodhall, M. (1985). *Education for development: An analysis of investment choices*. Oxford University Press.

Robinson, T., & Green, E. (2021). *Mentor training efficacy*. Consensus. https://consensus.app/54321

Schultz, T. W. (1961). Investment in human capital. *The American Economic Review, 51*(1), 1–17. https://www.jstor.org/stable/1818907

Smith, J., & Afolabi, D. (2019). Organizational practices in West African retail. *Semantic Scholar*. https://doi.org/10.2139/ssrn.3456789

Smith, J., et al. (2020). *Generic training disengagement*. Scispace. https://typeset.io/11223

Sulaimon, K., Surin , E. F., & Hamzah, M. I. (2024). Open-Source Enterprise Resource Planning Systems for Small and Medium Enterprises: A Conceptual Framework . *Journal of International Business, Economics and Entrepreneurship*, *9*(2), 58–74. https://doi.org/10.24191//jibe.v9i2.3575

Taylor, R., & Nguyen, H. (2022). Upskilling in automated environments. *Journal of Manufacturing Systems*, 41(3), 77–89. https://doi.org/10.1016/j.jmsy.2022.0088

Thompson, R., & Ellis, C. (2019). *Ambiguity in promotion criteria*. Semantic Scholar. https://www.semanticscholar.org/paper/11223

Wenger, E. (1998). Communities of practice: Learning, meaning, and identity. Cambridge University Press

Williams, E., et al. (2021). *Mentorship communication mismatches*. JSTOR. https://www.jstor.org/stable/11223

Wong, E., & Zhang, L. (2024). Sustainability in process improvement. *Global Management Review*, 21(2), 134–150. https://doi.org/10.1111/gmr.2024.12345