

Investigating the Impact of Insufficient Training and Upskilling Programs on Talent Retention in Indigenous Oil and Gas Service Companies in Nigeria's Niger Delta Region

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Abstract – This study investigates the impact of insufficient training and upskilling programs on talent retention within indigenous oil and gas service companies in Nigeria's Niger Delta region, with a specific focus on Geomarine Systems Limited. Despite policy mandates to enhance local capacity and reduce reliance on foreign expertise, many indigenous firms continue to face challenges in retaining skilled personnel due to inadequate investment in human capital development. Grounded in Human Capital Theory (HCT) and the Resource-Based View (RBV), this qualitative single case research explores how deficiencies in training contribute to negative employee perceptions, leading to diminished organizational performance. Data were collected through structured interviews with 15 employees across technical, operational, and managerial levels, ensuring diverse perspectives on training adequacy and retention dynamics. Thematic analysis was conducted using NVivo software to identify recurring patterns related to skill gaps, career stagnation, and institutional support. Findings reveal that limited access to structured training programs, coupled with weak compliance with local content policies, significantly undermines employee engagement and long-term retention. The study contributes to academic literature by integrating HCT and RBV into a unified conceptual framework tailored to the socio-regulatory context of the Niger Delta, highlighting training as both a developmental investment and a strategic asset. It also offers actionable recommendations for improving training initiatives in indigenous firms, such as targeted workshops and mentorship programs. By addressing a critical gap in context-specific, employee-focused research, this study supports national efforts toward sustainable local content development and enhanced competitiveness in Nigeria's oil and gas sector.

Keywords – Training, Talent Retention, Talent Loss, Oil and Gas, Niger Delta

I. INTRODUCTION TO DOCTORAL RESEARCH PROJECT

1. Background of the Problem

The drive toward economic diversification and self-reliance in Nigeria's oil and gas sector has placed indigenous service companies at the forefront of national development efforts. Central to this vision is the Nigerian Oil and Gas Industry Content Development (NOGICD) Act, which seeks to increase local involvement and lessen reliance on foreign expertise. Nevertheless, despite the well-intentioned policy goals, structural barriers such as insufficient institutional support for technical training continue to hinder talent retention in indigenous oil and gas companies, thereby weakening their long-term sustainability and competitiveness.

A key issue confronting the oil and gas industry in Nigeria is the insufficient training and upskilling programs that present significant challenges to talent retention, particularly within indigenous service companies. Unlike multinational corporations, which leverage robust global training and retention strategies, indigenous companies struggle to retain skilled professionals, such as geoscientists and engineers, who often seek better career development opportunities elsewhere. Consequently, this talent loss leads to diminished organizational performance and directly undermines the NOGICD Act objectives (Elensi et al., 2024).

Previous research substantiates this concern. Several studies have identified that limited training and upskilling are key drivers of talent loss in Nigeria's oil and gas sector. Insufficient training opportunities encourage skilled employees to seek opportunities at multinational or foreign companies, thereby depleting the local talent pool and impairing organizational performance (Arubayi & Edoja, 2024; Bienwi-Patrick et al., 2020; Ekundayo, 2023). Additionally, the absence of robust career development programs in indigenous companies reduces employee commitment, increasing retention challenges (Georgewill, 2023). In contrast, organizations that invest in effective training and create supportive work environments have demonstrated improved employee retention and operational performance in the sector (Ekundayo, 2023).

Consequently, investigating the impact of insufficient training programs on talent retention in indigenous companies, such as those in the Niger Delta, is important due to their unique structural and resource constraints compared to multinationals. While evidence suggests that enhanced training can mitigate talent loss, its effectiveness in smaller, domestically owned companies remains underexplored (Ekundayo, 2023).

Therefore, this study is necessary to identify how insufficient training contributes to talent retention challenges and to assess its impact on organizational performance. It aims to contribute to the literature and

provide actionable recommendations for strengthening retention strategies within Nigeria's local oil and gas sector.

II. PROBLEM STATEMENT

The general problem to be addressed is the insufficient training and upskilling programs in indigenous oil and gas service companies, which result in diminished organizational performance.

Supporting Statement

- Arubayi and Edoja (2024) identified that poor work environment conditions in Nigeria's oil and gas sector, including limited career development opportunities, drive skilled professionals to seek opportunities elsewhere, contributing to talent loss and organizational instability.
- Bienwi-Patrick et al. (2020) reported that inadequate support for professional growth in the Nigerian oil and gas industry reduces employee commitment, exacerbating retention challenges and leading to operational inefficiencies.
- Ekundayo (2023) highlighted that insufficient training and development programs in Nigerian oil service companies create skill gaps; drive brain drain and undermine organizational performance by limiting employee retention.
- Georgewill (2023) observed that the lack of effective career development policies in indigenous oil servicing companies in Rivers State reduces talent retention, increases turnover, and hinders competitiveness.

Specific Problem Statement

The specific problem to be addressed is the insufficient training programs at Geomarine Systems Limited, in Nigeria's Niger Delta region, resulting in diminishing organizational performance.

Purpose Statement

The purpose of this qualitative study is to investigate how insufficient training and upskilling programs affect talent retention in indigenous oil and gas service companies and their role in diminished organizational performance. To address this issue, the research examines the specific factors contributing to talent loss at Geomarine Systems Limited, focusing on the impact of insufficient training and development opportunities on the loss of valuable talent within the organization (Arubayi & Edoja, 2024; Bienwi-Patrick et al., 2020; Ekundayo, 2023).

The research will employ a qualitative single-case study methodology, conducting structured interviews with management and staff at Geomarine Systems Limited, an indigenous geoscience oil and gas service company in Nigeria's Niger Delta region, to gain an understanding of the factors driving talent retention challenges and their impact on organizational performance. The study aims to provide recommendations for enhancing training programs, boosting retention tactics, and promoting local content

development targets under the Nigerian Oil and Gas Industry Content Development (NOGICD) Act (Elensi et al., 2024). The findings are expected to direct focused initiatives for indigenous companies, addressing their unique challenges compared to multinational companies.

Significance of the Study

The oil and gas industry remains the backbone of Nigeria's economy, with the Niger Delta region serving as its operational hub. In recent years, the Nigerian government has implemented local content development policies, most notably the Nigerian Oil and Gas Industry Content Development (NOGICD) Act, to empower indigenous oil and gas service companies and reduce dependence on multinational companies. Despite these efforts, talent retention remains a critical challenge for indigenous companies, particularly in technical roles such as geoscientists and engineers. One of the most pressing issues contributing to this challenge is the lack of sufficient training and upskilling programs (Elensi et al., 2024).

This study is significant because it addresses an important gap in understanding how insufficient training and development programs undermine talent retention in indigenous oil and gas service companies in Nigeria. By examining the interplay between limited training opportunities and upskilling programs, this research aims to provide insights into the factors contributing to diminished organizational performance (Arubayi & Edoja, 2024; Ekundayo, 2023).

Understanding this connection is essential for addressing retention issues, and the findings will contribute to the body of knowledge on talent retention in the oil and gas sector, especially for indigenous companies facing unique economic and structural constraints compared to multinationals (Georgewill, 2023). This will contribute valuable insights by providing evidence-based methods to improve training programs and decrease talent loss, thereby improving operational sustainability and competitiveness. Aligned with the Nigerian Oil and Gas Industry Content Development (NOGICD) Act's local content goals, the research will inform policy interventions to minimize talent loss, strengthen workforce stability, and promote economic growth, empowering indigenous companies to optimize human capital and strengthen the oil and gas industry (Elensi et al., 2024).

Literature Support

Arubayi and Edoja (2024) identified that poor work environment conditions in the oil and gas industry in Nigeria, including limited career development opportunities, drive skilled professionals to seek opportunities elsewhere, contributing to talent loss and organizational instability.

Bienwi-Patrick et al. (2020) reported that insufficient support for professional growth in the Nigerian oil and gas industry reduces employee commitment, increasing retention challenges and leading to operational inefficiencies.

Ekundayo (2023) highlighted that insufficient training and development programs in the oil service companies create skill gaps, drive talent loss, and undermine organizational performance by limiting employee retention.

Georgewill (2023) observed that the lack of effective career development policies in indigenous oil servicing companies in Rivers State reduces talent retention, increases talent loss, and hinders competitiveness.

Project Type & Organizational Permission

This research is designed as a qualitative single-case study to investigate the impact of insufficient training and upskilling programs on talent retention in an indigenous oil and gas service company in Nigeria's Niger Delta region. A single-case study approach is ideal for this study due to its ability to provide in-depth insights into the unique operational and cultural dynamics of a specific organization within its real-world context (Yin, 2018). Unlike a multiple-case study or quantitative survey, this design allows for a detailed exploration of employee and management perspectives through structured interviews, focusing on how training deficiencies influence retention and organizational performance.

The study site is Geomarine Systems Limited, an indigenous geoscience oil and gas service firm headquartered in Rivers State, Nigeria. Geomarine Systems was purposefully selected due to its active role in the Niger Delta's oil and gas sector and its alignment with the objectives of Nigeria's local content development policy, as outlined in the Nigerian Oil and Gas Industry Content Development (NOGICD) Act.

The company has granted formal permission, allowing structured interviews with 15 employees across management, technical operations, and administration, supported by an official letter of approval. The study adheres to ethical principles, including voluntary participation, confidentiality, and informed consent. Interview data will be anonymized and securely stored to protect participants, ensuring the study's integrity and contribution to local capacity-building goals.

Research Questions

RQ1: How do employees at Geomarine Systems Limited perceive the adequacy of training programs, and what impact do these perceptions have on their ability to contribute to organizational performance?

Context: This question directly addresses the specific problem statement, which identifies insufficient training and upskilling programs at Geomarine Systems Limited as key contributors to talent retention challenges and diminished organizational performance. By exploring employees' perceptions of training adequacy, including access to skill development and career progression opportunities, this question seeks to uncover how these perceptions influence their ability to perform effectively in their roles, impacting operational efficiency and overall organizational outcomes. Understanding these perceptions

will provide actionable insights to address training deficiencies, reduce talent loss, and mitigate consequences such as operational disruptions and increased costs, aligning with literature on the role of training in organizational performance (Ekundayo, 2023; Edeh & Ugwu, 2021).

RQ2: What are the organizational consequences of insufficient training programs at Geomarine Systems Limited in terms of productivity, operational efficiency, and performance outcomes?

Context: This question aligns with the specific problem statement's emphasis on diminished organizational performance resulting from insufficient training and upskilling programs at Geomarine Systems Limited. It seeks to explore how insufficient training contributes to reduced productivity, operational inefficiencies, and suboptimal performance outcomes, such as skill gaps and disruptions in project execution. By examining these consequences, the study aims to provide insights into the broader impacts of training deficiencies on organizational effectiveness and competitiveness in the oil and gas industry, informing strategies to enhance performance and support Nigeria's local content development goals under the NOGICD Act (Ekundayo, 2023; Elensi et al., 2024).

RQ3: What strategies can Geomarine Systems Limited implement to enhance training and upskilling programs to improve employee retention and align with Nigeria's local content development objectives?

Context: This question addresses the specific problem statement by focusing on actionable solutions to mitigate the impact of insufficient training and upskilling programs on talent retention at Geomarine Systems Limited. It seeks to identify practical strategies, such as tailored training initiatives or career development programs, which can enhance employee skills and commitment, thereby reducing talent loss and supporting organizational performance. The question aligns with the NOGICD Act's objectives of building indigenous capacity and reducing reliance on foreign expertise, drawing on literature emphasizing the role of training in workforce development and retention (Ekundayo, 2023; Elensi et al., 2024).

Methodology

This research will adopt a qualitative single-case study design to explore the impact of insufficient training and upskilling programs on talent retention at Geomarine Systems Limited, an indigenous geoscience oil and gas service company in Nigeria's Niger Delta region, focusing on their contribution to diminished organizational performance.

Participants will include staff of Geomarine Systems Limited with at least one year of employment, encompassing roles such as operational staff (5), technical professionals (5), and administrative staff (5). This diverse group ensures varied perspectives on training deficiencies

and retention issues, enriching the understanding of their impact on organizational performance.

Data will be collected through structured interviews, enabling participants to share detailed narratives while maintaining focus on research objectives. Interviews will be conducted in person. The interview guide will include open-ended questions that align with the study's research objectives, allowing participants to share detailed narratives and perspectives. Each interview, lasting approximately 45–60 minutes, will use 10 open-ended questions to explore training inadequacies, retention challenges, and their organizational consequences, with audio recordings securely stored and participant data handled confidentially according to ethical research guidelines.

Purposive sampling will be employed to select 15 participants based on their direct experience with training and retention at Geomarine Systems Limited. This sample size aligns with qualitative case study standards to achieve thematic saturation (Guest et al., 2020). Participants will be recruited via company announcements, ensuring voluntary participation and informed consent.

Data analysis will follow a thematic analysis approach (Guest et al., 2020). Interview transcripts will be reviewed and coded with NVivo software to identify patterns related to training deficiencies, talent loss, and performance impacts.

All data collected will be treated with strict confidentiality, with personal information anonymized during transcription and securely stored to protect participant privacy and adhere to ethical standards.

II. LITERATURE SUPPORT

Description of the Problem and Business Practices

The oil and gas industry in Nigeria struggles to retain skilled professionals in indigenous service companies due to inadequate training and upskilling programs. This undermines the objective of the NOGICD Act, which aims to reduce reliance on expatriate labor (NCDMB, 2010). Specifically, technical roles like geoscientists and engineers face skill gaps, lowering job satisfaction and increasing turnover, which diminish organizational performance (Ekundayo, 2023; Awu et al., 2025). Consequently, this study examines training deficiencies on talent retention at Geomarine Systems Limited, a Rivers State geoscience company, and their implications for the NOGICD Act objectives.

Furthermore, indigenous companies' business practices reveal opportunities for improvement. Limited financial resources and weak HR systems restrict structured training, unlike multinational oil corporations (MOCs) with global best practices (Arubayi & Edoja, 2024). Thus, prioritizing short-term operational goals over human capital development leads to ineffective, impromptu training, failing to meet employee expectations (Elensi et al., 2024).

In particular, the absence of mentorship and career progression frameworks demotivates staff, prompting exits to competitors (Georgewill, 2023). At Geomarine Systems Limited, these challenges mirror industry-wide issues, necessitating context-specific strategies to enhance retention and policy alignment.

Critical Analysis of Existing Literature

Fundamentally, Adagbabiri and Okolie (2020) demonstrate that HRM practices, particularly training, enhance organizational performance in Nigeria's oil and gas industry, emphasizing structured programs for indigenous companies. However, Asikhia et al. (2022) reveal that training gaps drive employee mobility and talent loss in upstream oil companies, indicating the need for targeted upskilling to improve retention. Similarly, Badom and Girigiri (2021) found that structured training at the Nigeria Agip Oil Company boosts productivity and commitment, suggesting its potential to reduce talent loss in the Niger Delta companies. Also, Enobong et al. (2021) and Fred et al. (2021) highlight the role of training in enhancing job security and retention in Rivers State.

Moreover, Adegboyega and Olawumi (2021) and Olayisade and Awolusi (2021) argue that supportive leadership amplifies training effectiveness, promoting productivity and retention. Correspondingly, Agbi et al. (2020) link training investments to profitability, reinforcing financial incentives for upskilling. Notably, Olajide (2022) and Opusunju and Akyuz (2022) identify weak NOGICD Act enforcement and training infrastructure deficits as barriers to capacity building, resulting in persistent skill gaps. Likewise, the Directorate of Planning, Research and Statistics (2019) and NCDMB (2022) highlight non-compliance with human capital development guidelines, revealing a policy-outcome disconnect. Also, Bilan et al. (2020) note that skill shortages and ineffective HR practices hinder SME retention, mirroring Nigeria's challenges.

In addition, this study employs thematic analysis to identify patterns in training deficiencies and retention, supported by Nowell et al. (2017), who emphasize its effectiveness in capturing explicit and latent meanings in qualitative data. NVivo software will enhance analytical rigor, as Almaiah and Al Mulhem (2020) and Limna (2023) highlight its utility in organizing data and improving research quality. Overall, the literature affirms training's role in retention, but gaps in policy enforcement, training specificity, and qualitative insights highlight the need for this study's focus on indigenous firms.

Literature Gap

Significantly, the existing body of literature reveals a significant gap in the detailed examination of indigenous oil and gas service companies within Nigeria's Niger Delta, especially those specializing in the geoscience subsector (Okorie et al., 2018). While studies such as Ekundayo (2023) and Arubayi and Edoja (2024) address training and retention in a generalized manner or concentrate on multinational oil companies (MOCs), they failed to account for the distinct challenges encountered by smaller

indigenous firms like Geomarine Systems Limited. Moreover, the literatures are dominated by quantitative research, which focuses on correlations between training, retention, and performance, and fails to explore the lived experiences, perceptions, and internal human resource dynamics of employees, leaving a critical void in understanding these issues holistically (Elensi et al., 2024). In this context, this study addresses these gaps by conducting a qualitative single-case study centered on Geomarine Systems Limited, offering a targeted approach to address the identified deficiencies. It aims to shed light on the internal HR practices that shape training effectiveness, reveal barriers to structured upskilling programs, and highlight perceived shortcomings in training initiatives from the perspectives of both employees and management, gathered through in-depth interviews (Guest et al., 2020). As such, by providing a contextual and human-centered analysis of how training inadequacies impact job satisfaction, talent retention, and organizational performance, the study enhances theoretical discourse and informs practical interventions aligned with the Nigerian Oil and Gas Industry Content Development (NOGICD) Act (NCDMB, 2022).

Need for the Study

Despite the implementation of the Nigerian Oil and Gas Industry Content Development (NOGICD) Act, which prioritizes local capacity development through skills acquisition and workforce retention, indigenous oil and gas service companies in the Niger Delta, such as Geomarine Systems Limited, continue to struggle with persistent talent retention challenges (NCDMB, 2010). Although compliance with the Act is a focal point in studies like Okoro and Ndukwe (2022), which highlight enforcement shortcomings, these investigations fall short of examining the internal organizational dynamics, specifically the influence of training adequacy and employee perception, that critically shape retention outcomes within indigenous companies (Arubayi & Edoja, 2024). Importantly, this gap highlights a broader limitation in the literature, as the focus often remains on general human resource practices or multinational corporations, while neglecting the unique contextual factors that affect smaller, localized companies (Okorie et al., 2018).

In this context, this study addresses the gap by using a qualitative case study approach to explore how insufficient training and upskilling contribute to performance deficits and talent loss at Geomarine Systems Limited, a geoscience-focused indigenous firm. By generating rich, contextual data through the experiences and interpretations of employees and management regarding training challenges, the research fills the gap left by prior studies that lack localized insights (Guest et al., 2020). As such, it not only enhances scholarly discourse on talent development in emerging markets but also provides practical recommendations tailored to Geomarine and similar firms, including strategies to restructure training initiatives, strengthen compliance with the NOGICD Act, and reduce talent loss while boosting organizational performance (NCDMB, 2022). This approach bridges the

literature gap with field-relevant actions, advancing both academic understanding and industry practices within the Nigerian oil and gas sector (Elensi et al., 2024).

Literature Overview

This literature review begins with a detailed examination of the role of training and skill development in the global oil and gas sector. Anchored in theoretical frameworks such as Human Capital Theory (HCT) and the Resource-Based View (RBV), it establishes a conceptual foundation for examining training's impact on employee retention and organizational performance. Subsequently, it evaluates methodological trends, highlighting the dominance of quantitative approaches and their limitations in capturing organizational context. Finally, it identifies critical knowledge gaps, particularly regarding indigenous oil and gas service firms in Nigeria's Niger Delta, thereby justifying the study's qualitative case study approach (Ravitch & Riggan, 2016). This structured progression aligns with the study's aim to either introduce novel insights or fill identified knowledge voids (Passey, 2019).

Organizational studies position training as a key enabler of employee competence, morale, and retention. Effective human capital development not only enhances individual capabilities but also catalyzes organizational competitiveness and long-term value creation (Nzimakwe & Utete, 2024). However, sector-specific dynamics reveal a disparity: multinational corporations (MOCs) often implement structured training programs, while indigenous firms tend to sidestep long-term workforce upskilling due to financial or institutional constraints (Olujobi et al., 2024). Consequently, talent loss is frequently linked to burnout, weak HR systems, and limited career growth (Alswaidi & Akmal, 2024).

Methodologically, the literature reveals a bias toward quantitative designs, such as surveys and regression analyses, which identify correlations between training and turnover (Creswell & Poth, 2018). While these methods provide macro-level insights, they often fail to capture the internal organizational dynamics that shape employee decisions. In contrast, qualitative methods, though underutilized, offer deeper insights into staff experiences, revealing how training is perceived and internalized. Case study designs, in particular, excel at examining phenomena in context, making them ideal for this study's exploratory focus (Yin, 2018).

The literature, although informative, remains incomplete, as it generalizes training-retention linkages without addressing firm-specific complexities, particularly in indigenous Nigerian companies. This is vital under the Nigerian Oil and Gas Industry Content Development (NOGICD) Act, which mandates local capacity building but faces uneven implementation (NCDMB, 2010).

These gaps highlight the necessity for an employee-centric, qualitative case study at Geomarine Systems Limited, examining training design, policy compliance, and retention within a geoscience industry context.

Consequently, this ensures the study is robustly grounded, clearly justified, and well-positioned to provide significant contributions to both scholarly discourse and practical application (Passey, 2019).

Training & Upskilling Practices in Oil & Gas Companies
Multinational oil and gas companies operating in Nigeria have institutionalized structured training as a core part of their organizational practices. These companies run comprehensive programs that include formal instruction, mentorship initiatives, and ongoing upskilling to meet global industry standards (Adagbabiri & Okolie, 2020). Such approaches improve employee skills, job satisfaction, and technological preparedness, creating a workforce able to handle complex operational demands (Olayisade & Awolusi, 2021). In contrast, indigenous oil and gas firms often face significant financial and institutional challenges, which limit their ability to invest in similar training programs. These companies tend to focus on short-term operational goals rather than long-term human capital development, resulting in more ad hoc and less effective training practices (Olujobi et al., 2024).

Empirical studies in Nigeria show a positive link between strong training investments and better company performance metrics, such as return on assets. However, this link is much weaker in indigenous firms, where training is often irregular and informal, reducing its impact on organizational outcomes (Effiom et al., 2023). Surveys conducted in the Niger Delta also reveal that employees in indigenous oil service companies see training as essential for improving job performance and adapting to industry demands. Despite this, their expectations are often unmet because the training programs are unstructured and inconsistent, failing to provide systematic skill development (Ifidon & Jaja, 2024; Fred et al., 2021).

While quantitative research has established correlations between training and employee retention, it often overlooks the organizational-level perceptions and lived experiences of employees (Felaefel et al., 2018). Moreover, broad generalizations across multinational and indigenous firms tend to disregard significant disparities in resource availability and human resource management capacities (Enwere et al., 2024). These gaps highlight the need for qualitative case studies to provide contextualized insights into the training and retention dynamics specific to indigenous oil and gas firms, thereby addressing the unique challenges they face in fostering sustainable workforce development.

Employee Retention Dynamics

Employee retention is important for workforce development and achieving local content objectives. This study utilizes a conceptual framework as its foundation and combines empirical data, psychological theories, and contextual factors to clarify the challenges of employee retention and their wider implications for organizational performance and policy impacts.

Training–Retention Linkages

Empirical research indicates a strong correlation between inadequate training and elevated talent loss. In a Port Harcourt-based study, Ifidon and Jaja (2024) identified a significant positive association between structured apprenticeship training and enhanced employee performance. Conversely, the fragmented and inconsistent training practices prevalent in indigenous oil and gas firms contribute to employee dissatisfaction and diminished retention rates (Bilan et al., 2017; Asikhia et al., 2022).

Motivation & Engagement

Psychological factors like engagement and motivation, rooted in Self-Determination Theory, enhance retention when supported by skill development and recognition, with employees perceiving robust support less likely to leave (Ryan & Deci, 2017; Arubayi & Edoja, 2024).

Talent Loss Costs and Local Content Goals

High talent loss among technical staff generates substantial costs, including prolonged vacancies, recruitment expenses, and lost investments in human capital. Consequently, these costs undermine the objectives of the NOGICD Act, which seeks to enhance local workforce capacity (NCDMB, 2010). In contrast, multinational oil companies leverage systematic training buffers to mitigate talent loss, ensuring greater alignment with local content goals (Onwuka et al., 2021). From a critical standpoint, quantitative studies reveal correlations between training and organizational performance but often overlook employee narratives (Ekundayo, 2023). Additionally, other research points out gaps in career progression frameworks as a contributing factor to talent loss (Georgewill, 2023). This highlights the need for in-depth qualitative insights to tackle these retention challenges effectively.

Theoretical Perspectives

This study uses Human Capital Theory and Resource-Based View to analyze talent retention and training adequacy in Nigeria's oil and gas service companies. HCT emphasizes the impact of training on employee productivity, while RBV highlights the strategic importance of human capital for competitive advantage.

Human Capital Theory (HCT)

Human Capital Theory (HCT), first developed by Becker (1964), emphasizes that investing in skills through education, training, and learning is crucial for enhancing productivity and efficiency. This framework is widely applicable in technical sectors such as oil and gas. Recent Nigerian studies, such as Elensi et al. (2024), link training deficiencies to talent loss, hindering NOGICD Act goals, while Tasheva (2024) points out that there is a lack of engagement with limited opportunities for upskilling. Adeyemo et al. (2024) further support HCT, showing that structured training boosts satisfaction and retention, framing it as a strategic investment.

Resource-Based View (RBV)

Barney (1991) asserts that unique, valuable, and inimitable human resources drive competitive advantage, with Anvari et al. (2020) highlighting how organizational commitment

is strengthened by aligning training with employee expectations. Enwere et al. (2024) emphasize that the failure of indigenous companies to retain talent through the development of technical skills poses a risk of talent loss, which aligns with the Resource-Based View's focus on strategic assets.

Integration of HCT and RBV

HCT addresses training inputs, while RBV evaluates their strategic outcomes, offering a dual framework for Geomarine Systems Limited where high talent loss diminishes knowledge and performance. This study will explore training design and employee perceptions, leveraging both theories to address the research problem holistically.

Methodological Approaches in Previous Research

Research methodologies are becoming more diverse, but quantitative approaches remain the most prevalent. For instance, studies such as Ekundayo (2023) and Arubayi and Edoja (2024) employ surveys and regression analyses to establish correlations between training and turnover, revealing broad trends but often neglecting employee narratives. Similarly, Akpa et al. (2020) utilized questionnaires to evaluate job satisfaction in Nigerian oil marketing companies, yet failed to capture the depth of employees' lived experiences, limiting insights into motivational and contextual factors.

While quantitative methods excel at identifying statistical patterns, they frequently fall short in explaining the underlying motivations driving employee behavior. In this regard, Creswell and Poth (2018) advocate for qualitative methods as essential for unpacking complex social phenomena, a perspective reinforced by Ugwu and Eze (2023), who highlight their efficacy in capturing the lived experiences of people in their natural environment. Moreover, case study designs, as endorsed by Yin (2018), preserve real-life context and offer diagnostic depth, making them particularly suitable for exploring retention dynamics. For example, Osaremwinda et al. (2024) applied a case study approach to examine employee retention and performance of the University of Benin Teaching Hospital (UBTH) in Edo State, Nigeria. Previous studies have not specifically examined geoscience-focused companies in the Niger Delta. This highlights the significance of the current qualitative case study on Geomarine Systems Limited within the framework of the NOGICD Act (NCDMB, 2010).

To address these methodological gaps, this study uses structured interviews and thematic analysis to explore employee motivation, engagement, and career progression. This approach aligns with the exploratory objectives of the research and the qualitative methodology (Guest et al., 2020).

Research Design and Justification

Previous research on training's influence on talent retention has primarily utilized quantitative designs. For instance, Ekundayo (2023) and Ifidon and Jaja (2024) employed

descriptive surveys to link training with performance, while Arubayi and Edoja (2024) and Adeyemo et al. (2024) used regression models and cross-sectional data to assess retention. However, these methods often lack the contextual depth needed to capture employees' lived experiences and organizational dynamics (Creswell & Poth, 2018).

Although mixed-methods studies by Mkulu et al. (2017) and Stolarska-Szeląg and Stępnia-Mierzejewska (2025) offer triangulation, their resource-intensive nature limits applicability in indigenous settings. In contrast, this study employs a qualitative single-case study design, focusing on Geomarine Systems Limited, which offers distinct advantages.

Firstly, it provides rich, contextual insights into Niger Delta-specific constraints under regulatory pressures (Yin, 2018; Olujobi et al., 2024). Secondly, in-depth interviews explore employee perceptions of training adequacy, support, and job satisfaction (Georgewill, 2023; Elensi et al., 2024). Thirdly, it supports inductive theory development by integrating Human Capital Theory (Becker, 1964) and the Resource-Based View (Barney, 1991) to analyze training outcomes (Enwere et al., 2024).

Moreover, this design aligns with the research questions, examining how NOGICD Act compliance shapes workforce development (NCDMB, 2010; NCDMB, 2022; Elensi et al., 2024). It addresses gaps in quantitative studies by capturing informal HR practices and psychological drivers (Guest et al., 2020; Ugwu & Eze, 2023). To ensure rigor, NVivo software will facilitate thematic coding, enhancing transparency and depth. Purposive sampling and thematic saturation will strengthen credibility and transferability, providing actionable recommendations for improving training and retention under local content policies.

Synthesis of Related Studies

This section synthesizes literature on training, retention, and performance in Nigeria's oil and gas sector, highlighting gaps in qualitative, employee-focused research on indigenous companies. Specifically, it examines four dimensions: related phenomena, target populations, data collection, and theoretical integration.

Exploring Related Phenomena

Studies confirm the training's role in satisfaction and retention. For instance, Ekundayo (2023) links training to performance but overlooks indigenous contexts, while Arubayi and Edoja (2024) note infrastructural deficits increasing talent loss, aligning with Becker's (1964) Human Capital Theory (HCT). Elensi et al. (2024) address local content policy outcomes but miss cultural variations. Fred et al. (2021) show that training-enhanced job security fosters employee tenure.

Studies Focused on Similar Population

Numerous studies on training and retention in Nigeria's oil and gas sector overlook employee-centered perspectives in indigenous firms. For instance, Enwere et al. (2024)

examined strategic resource management in indigenous firms, focusing on organizational practices rather than employee voices. Likewise, Fred et al. (2021) linked training to job security in Rivers State using questionnaires, missing lived experiences. Furthermore, Georgewill (2023) identified commitment challenges in indigenous firms, noting the lack of qualitative worker insights. Conversely, this study targets Geomarine Systems Limited in the Niger Delta, aligning with the NOGICD Act's workforce development goals (NCDMB, 2010). Through direct interviews with employees and managers, it offers deeper insights into how training adequacy, support systems, and policy compliance influence retention in a resource-constrained indigenous context.

Instruments and Data Collection Approaches

Quantitative methods dominate, lacking experiential depth. Adagbabiri and Okolie (2020) use surveys, missing subjective engagement insights. In contrast, this study employs structured interviews and NVivo thematic coding for robust analysis, aligning with qualitative best practices (Creswell & Poth, 2018; Guest et al., 2020).

Theoretical Integration

This study integrates Human Capital Theory (HCT) (Becker, 1964) and the Resource-Based View (RBV) (Barney, 1991) to frame training as both an investment in employee capabilities and a strategic tool for organizational competitiveness. Specifically, HCT asserts that skill enhancement boosts individual and firm productivity, whereas RBV emphasizes retaining valuable, rare, and inimitable human resources for sustained advantage.

In contrast, Fred et al. (2021) narrowly link training to job security, overlooking broader strategic value. Similarly, Biason (2020) focuses on job satisfaction's role in retention, neglecting skill development's contribution to competitiveness. By synthesizing HCT and RBV, this study offers a holistic perspective on retention dynamics in indigenous oil and gas companies.

Emerging Gaps in the Literature

The literature provides a substantial yet fragmented understanding of training, retention, and performance in Nigeria's oil and gas sector. Notably, studies like Ekundayo (2023) and Arubayi and Edoja (2024) highlight human capital's importance but focus on multinational oil companies or broad HR practices, thus overlooking indigenous geoscience service firms' unique challenges.

Several key gaps emerge. Firstly, the prevalence of quantitative methods (Elensi et al., 2024) limits insights into employee perspectives and organizational culture. This study addresses this by using qualitative narratives to explore lived experiences at Geomarine Systems Limited. Secondly, prior research underexamined NOGICD Act compliance, which this study investigates for its HR implications (NCDMB, 2010). Thirdly, while Human Capital Theory (Becker, 1964) and the Resource-Based View (Barney, 1991) are applied separately, their combined use in indigenous retention contexts is underexplored; this

study integrates both for a holistic model. Lastly, the lack of focus on Niger Delta geoscience firms is addressed by targeting regional constraints.

In summary, this qualitative case study provides context-specific evidence, an integrated conceptual framework, and actionable recommendations, thereby enhancing academic discourse and aligning with NOGICD Act mandates for local content development.

Research Framework

Developing a conceptual framework is essential for guiding this research, interpreting its findings, and ensuring conceptual coherence. To effectively explore this dynamic, the study adopts Human Capital Theory (HCT) and the Resource-Based View (RBV) as its foundational theories. Specifically, this dual-theoretical approach is strategically chosen to address both the developmental and strategic dimensions of employee training within resource-constrained, indigenous oil and gas settings.

Furthermore, the framework combines HCT and RBV perspectives to explain how insufficient training affects employee retention and organizational capacity. HCT highlights the importance of investing in employees' knowledge, skills, and competencies to enhance productivity and organizational performance. Meanwhile, RBV frames human capital as a strategic asset necessary for maintaining competitive advantage. Collectively, these theories provide a foundation for investigating employee perceptions, internal human resource practices, and their implications for local content development in Nigeria's oil and gas sector (NCDMB, 2022).

Identification of Framework

In addressing the challenges faced by indigenous oil and gas service companies, particularly Geomarine Systems Limited in Nigeria's Niger Delta, this study employs a conceptual framework. Unlike purely theoretical frameworks, a conceptual framework integrates empirical literature with context-specific realities, making it ideal for applied research (Ravitch & Riggan, 2017). Given the research emphasis on diminishing organizational performance influenced by insufficient training, this framework facilitates an applied, context-specific interpretation of how multiple concepts interact within Geomarine Systems Limited (Ekundayo, 2023).

The conceptual framework acts as a strategic tool for organizing and interpreting key variables. Specifically, it outlines key concepts, which are training adequacy, employee perceptions, organizational practices, and regulatory influences, and maps their interrelationships. Thus, it ensures the inquiry remains centered on critical dimensions of the research context.

Moreover, the framework facilitates systematic exploration of how internal organizational dynamics and external policy expectations converge within an indigenous oil and gas service company's operations. It defines the investigation's scope, informs research question formulation, and guides

data collection and analysis by prioritizing factors influencing talent retention (Adagbabiri & Okolie, 2020). Ultimately, the conceptual framework provides a context-responsive blueprint aligning the research with the Niger Delta's operational, regulatory, and institutional dynamics. Its adaptability renders it highly suitable for the qualitative case study design adopted in this research (Yin, 2018).

Rationale for Framework Selection

The conceptual framework is chosen for its flexibility and capacity to synthesize diverse, context-specific insights pertinent to indigenous oil and gas service firms. Notably, its strength lies in integrating practical variables, which are employee perceptions, organizational practices, and regulatory expectations, into a cohesive structure reflecting Geomarine Systems Limited's operational realities (Ravitch & Riggan, 2017).

Importantly, the framework shapes the research design by providing a clear structure for defining the problem, formulating questions, and selecting methods. Thus, it ensures a focused, purposeful trajectory from inquiry to analysis and interpretation (Yin, 2018). In terms of variable selection, the framework identifies and organizes key elements influencing training effectiveness and talent retention, including internal factors like training design and staff engagement, alongside external influences such as policy compliance and resource constraints (Adagbabiri & Okolie, 2020).

The framework guides the data collection process by informing the development of interview guides and thematic categories, prioritizing areas relevant to the research objectives. This approach enhances the consistency and depth of the qualitative investigation (Guest et al., 2020).

Overall, the conceptual framework serves as a practical blueprint, anchoring the study in its unique operational context, ensuring findings are meaningful and applicable to the challenges faced by indigenous oil and gas firms (NCDMB, 2010).

Importance and Role in Guiding Research

The conceptual framework plays a vital role in guiding the research by providing a structured and theory-informed lens through which the issue of talent retention in indigenous oil and gas service companies is examined (Ravitch & Riggan, 2017). Specifically, it ensures conceptual coherence and alignment with the study's objectives by organizing the inquiry around pertinent organizational, operational, and contextual variables (Zackoff et al., 2019).

Furthermore, the framework supports adopting a qualitative methodology, notably in-depth interviews, to capture rich, firsthand insights from employees and management on training gaps, motivational factors, and retention challenges (Guest et al., 2020; Yin, 2018). Consequently, this approach strengthens the study's ability to produce practical, actionable findings tailored to the realities of indigenous oil and gas service firms (NCDMB, 2010).

Explanation of the Conceptual Framework Diagram

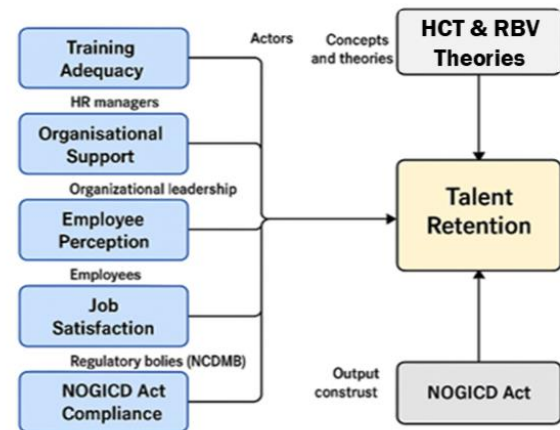


Figure 1: Conceptual Framework for Investigating Talent Retention in Indigenous Oil and Gas Companies in Nigeria. The conceptual framework identifies key input variables, which are training adequacy, organizational support, employee perception, job satisfaction, and NOGICD Act compliance. Together, these variables represent organizational practices, employee experiences, and regulatory factors that collectively influence talent retention. Each variable is intricately linked, shaping the dynamics of workforce stability. Below is a detailed explanation of each variable and its relation to relevant actors.

Training Adequacy

Training adequacy refers to the quality, structure, and frequency of training programs provided to employees in indigenous oil and gas companies. Particularly, it encompasses how systematically these programs are delivered, their alignment with job roles, and the adequacy of resources provided to enhance employee skills and competencies. In the context of the study, training adequacy is a foundational variable because it directly impacts employees' ability to perform their roles effectively and influences their career development and retention (Ekundayo, 2023). Notably, insufficient training leads to skill gaps, dissatisfaction, and higher talent loss (Olujobi et al., 2024).

Additionally, this variable is primarily associated with HR managers and organizational leadership within indigenous oil and gas firms. These actors are responsible for designing, implementing, and evaluating training programs to align with organizational needs and employee development goals. However, limited financial and institutional capacity often results in ad hoc or make-do training (Arubayi & Edoja, 2024). Additionally, employees serve as indirect actors, as they are the primary beneficiaries of training, and their feedback influences program adjustments.

Organizational Support

Organizational support in indigenous oil and gas firms involves policies, resources, and leadership commitments for employee development and well-being. This includes

mentorship programs, supervisory guidance, recognition systems, and career progression frameworks, all of which contribute to fostering trust, motivation, and psychological safety (Adegboyega & Olawumi, 2021). In contrast, the absence of robust support systems in resource-constrained companies often increases talent loss, as employees feel undervalued or lack opportunities for growth (Georgewill, 2023).

Moreover, this variable involves HR managers, operational supervisors, and executive leadership who play crucial roles in employee development. HR managers implement policies, operational supervisors provide guidance, and executive leadership allocates resources. Collectively, these actors influence employee engagement and loyalty, which are critical in Nigerian companies with limited institutional capacity.

Employee Perception

Employee perception refers to how employees interpret the relevance, fairness, and effectiveness of training programs and organizational support. As a subjective construct, it is shaped by employees' experiences, internal communication, and interactions with leadership. When positive, such perceptions foster a sense of value, motivation, and commitment; conversely, negative perceptions lead to dissatisfaction and talent loss (Elensi et al., 2024). In this study, employee perception is a critical mediating variable, as it channels the effects of training and support into retention outcomes.

Furthermore, this variable is linked to employees who form perceptions based on their experiences within the organization. HR managers and leadership influence these views through the design and communication of training and support initiatives. Operational supervisors also play a role by engaging directly with employees, shaping their perceptions through feedback and support. In indigenous firms, where training is often unstructured, employees' negative perceptions of fairness and relevance are a significant challenge (Ifidon & Jaja, 2024).

Job Satisfaction

Job Satisfaction is a psychological construct that encompasses employees' motivation, morale, and perceived value in their roles. It is significantly shaped by factors such as access to training, supportive work conditions, recognition, and opportunities for career progression. High job satisfaction is associated with greater employee loyalty and reduced talent loss, while low satisfaction, often due to unmet expectations or limited growth opportunities, drives employees to seek opportunities elsewhere (Akpa et. al., 2021). Within indigenous companies, job satisfaction is a key determinant of retention, as it reflects the culmination of employees' experiences with training and support.

Besides, employees are the primary actors associated with job satisfaction, as it reflects their personal experiences and emotional responses to their work environment. HR managers and organizational leadership shape this variable

by implementing policies that enhance work conditions, provide recognition, and support career development. Operational supervisors contribute through daily interactions that influence employees' morale and motivation. In indigenous oil and gas firms, where resources for recognition and career progression are often limited, these actors play a critical role in mitigating dissatisfaction (Asikhia et al., 2022).

NOGICD Act Compliance

NOGICD Act compliance refers to the extent to which indigenous oil and gas firms adhere to the Nigerian Oil and Gas Industry Content Development (NOGICD) Act. This legislation requires investments in local capacity building and workforce development. Consequently, this policy variable shapes the formalization of training programs and retention strategies, aiming to reduce reliance on expatriate labor and enhance local workforce capabilities. When compliance is strong, it leads to structured training and development initiatives; however, weak compliance results in persistent skill gaps and talent loss (Olujobi, 2021). In this study, this variable is a crucial contextual factor that impacts the relationship between training and retention.

Likewise, this variable involves regulatory stakeholders, such as the Nigerian Content Development and Monitoring Board (NCDMB), which enforces compliance with the NOGICD Act. Executive leadership and HR managers within indigenous firms are responsible for aligning organizational practices with these regulations, ensuring that training and retention strategies meet policy requirements. Although employees are indirectly affected, the level of compliance determines the quality and availability of training programs. In indigenous companies like Geomarine Systems Limited, limited resources and weak enforcement often hinder compliance, highlighting the importance of leadership and regulatory oversight (Olajide, 2022).

Flow of Action, Information, and Influence

The conceptual framework illustrates how five key inputs interact to shape talent retention. Notably, training adequacy and organizational support serve as structural foundations, influencing employee experiences and workplace motivation (Adagbabiri & Okolie, 2020). Subsequently, these factors shape perceptions and job satisfaction, which are crucial for retention decisions (Elensi et al., 2024). Furthermore, adherence to the NOGICD Act informs HR policies, indirectly bolstering retention by aligning with local capacity objectives. Together, these variables form a dynamic, interconnected system driving retention outcomes in indigenous oil and gas companies.

Influence of Concepts/Theories on Actors

The conceptual framework integrates Human Capital Theory (HCT) and the Resource-Based View (RBV) as foundational theories, alongside the policy-driven influence of NOGICD Act compliance. Collectively, these concepts and theories shape the roles and behaviors of key actors, including HR managers, organizational leadership,

operational supervisors, employees, and regulatory stakeholders. Outlined below is how each concept or theory influences these actors,

Human Capital Theory (HCT)

Human Capital Theory (HCT), as proposed by Becker (1964), asserts that investments in employees' knowledge, skills, and competencies enhance both individual productivity and organizational value. In the conceptual framework, training adequacy and organizational support are grounded in HCT, emphasizing the importance of structured training programs, mentorship, and career development initiatives as mechanisms to increase employee capabilities and company performance. By investing in skill development, organizations improve employee competence, job satisfaction, and retention, which are critical for indigenous oil and gas companies facing resource constraints (Adagbabiri & Okolie, 2020). This theoretical lens influences multiple actors in indigenous oil and gas companies. HR managers and organizational leaders are guided by HCT in designing and funding training programs and prioritizing skill investment to enhance employee value. Operational supervisors implement these initiatives, providing training, mentorship, and guidance. Meanwhile, employees, as recipients of such investments, experience increased competence, satisfaction, and loyalty, which are key drivers of retention. In indigenous firms like Geomarine Systems Limited, HCT encourages actors to address training deficiencies to reduce talent loss and align with workforce development goals (Ekundayo, 2023).

Resource-Based View (RBV)

The Resource-Based View, as conceptualized by Barney (1991), frames human resources as strategic assets that deliver sustainable competitive advantage when they are valuable, rare, inimitable, and non-substitutable. In the framework, talent retention and employee perception are central constructs that reflect how employees' skills and attitudes are leveraged to enhance organizational performance. Positive employee perceptions of training and support, coupled with effective retention strategies, ensure that human capital remains a strategic resource, while poor management leads to talent loss and capability erosion (Bilan et al., 2017).

From an RBV perspective, organizational leadership and HR managers are responsible for creating policies that support positive employee perception, while operational supervisors foster a day-to-day engagement. Employees, in turn, demonstrate their value through commitment and retention, reinforcing the organization's competitive edge (Arubayi & Edoja, 2024).

Policy-Driven Influence (NOGICD Act Compliance)

NOGICD Act compliance refers to adherence to the Nigerian Oil and Gas Industry Content Development Act. The Act mandates indigenous firms to invest in local capacity building and workforce development to reduce reliance on expatriate labor (NCDMB, 2010). This policy variable enforces strategic alignment with national

objectives, requiring firms to formalize training and retention practices. Compliance influences the availability of resources for training and shapes HR policies, indirectly supporting talent retention by fostering a skilled local workforce.

As a result, the regulatory stakeholders, particularly the Nigerian Content Development and Monitoring Board (NCDMB), play a central role in monitoring and enforcing compliance. Meanwhile, organizational leadership and HR managers are responsible for aligning training programs and HR practices with these regulations, ensuring that investments in employee development meet policy standards. Although employees are not directly involved in compliance efforts, they are significantly affected, as higher compliance leads to more structured training and improved retention outcomes. However, in many indigenous companies, limited resources hinder full compliance, emphasizing the need for strategic navigation of regulatory demands to support sustainable talent development (Olajide, 2022).

Output Construct(s) and Derivation

The primary output construct in the conceptual framework is talent retention. Talent Retention refers to the ability of indigenous oil and gas firms in Nigeria's Niger Delta, such as Geomarine Systems Limited, to maintain a stable and skilled workforce over time. It reflects employee loyalty and reduced talent loss, demonstrating both organizational effectiveness and alignment with the local content development goals mandated by the Nigerian Oil and Gas Industry Content Development (NOGICD) Act (NCDMB, 2010). In this qualitative study, talent retention is not merely a numerical outcome, but a complex social and organizational process shaped by employees' lived experiences and organizational practices.

On the other hand, talent retention is derived from five input constructs. These constructs are training adequacy, organizational support, employee perception, job satisfaction, and NOGICD Act compliance. These elements interact to shape employees' decisions to stay or leave an organization. When these inputs are positively aligned, retention improves, enhancing organizational performance (Adagbabiri & Okolie, 2020; Elensi et al., 2024). Conversely, deficiencies in these inputs, such as inadequate training, lack of support, negative perceptions, low satisfaction, or weak regulatory compliance, contribute to high talent loss and diminishing organizational performance (Asikhia et al., 2022).

Finally, the derivation process of the output involves qualitative evaluation, utilizing thematic analysis of employee and management data collected through in-depth interviews. This approach captures insights into how these inputs converge to shape retention outcomes and support broader national policy goals on local workforce development (NCDMB, 2010).

Summary of Literature Support

The literature on training and talent retention in the oil and gas sector is extensive yet unevenly distributed across multinational and indigenous contexts. Specifically, much research prioritizes multinational oil companies (MOCs), often overlooking the distinct operational and institutional challenges of indigenous companies in Nigeria's Niger Delta. While MOCs embed structured training in HR strategies to ensure continuous skills development and retention (Alsuwaidi & Akmal, 2024), indigenous companies frequently neglect long-term employee development due to institutional and financial constraints (Olujobi et al., 2024). Prior studies also reveal weak enforcement of the Nigerian Oil and Gas Industry Content Development (NOGICD) Act, resulting in superficial compliance and limited investment in structured training programs (Elensi et al., 2024). These patterns contribute directly to the problem of talent loss in indigenous companies, as inadequate training limits employee competence, reduces career growth opportunities, and undermines job satisfaction. These factors collectively drive high talent loss and erode organizational performance. Key variables influencing retention include training adequacy, organizational support, employee perception, and job satisfaction. For instance, Adagbabiri and Okolie (2020) and Enwere et al. (2024) show that human capital investment enhances commitment and performance. Moreover, the Nigerian Oil and Gas Industry Content Development (NOGICD) Act mandates local workforce development (NCDMB, 2010, 2022); however, weak enforcement and superficial compliance hinder its impact in indigenous companies (Olujobi et al., 2024).

Methodologically, quantitative approaches dominate the existing literature, with studies using surveys and regression analyses to identify broad correlations between training and organizational outcomes (Ekundayo, 2023; Arubayi & Edoja, 2024). While these methods are valuable for detecting patterns, they lack the depth needed to capture the lived experiences, perceptions, and contextual details of employees in indigenous oil and gas companies. This limitation is particularly critical given the documented gaps in structured training, weak enforcement of the NOGICD Act, and the resulting high talent loss in indigenous companies (Olujobi et al., 2024). Creswell and Poth (2018) and Guest et al. (2020) argue that qualitative approaches, particularly single-case study designs, are well-suited for uncovering underlying mechanisms and exploring "how" and "why" questions. Building on this, the current study focuses on Geomarine Systems Limited to address the gap in employee-centered, context-specific insights within the geoscience subsector.

Accordingly, the identified literature gaps directly inform the research questions, which examine employee perceptions of training adequacy, the organizational consequences of insufficient training, and potential strategies for improvement. Moreover, these questions are anchored in the integrated application of Human Capital Theory (HCT) and the Resource-Based View (RBV), which together provide a lens for analyzing how training

investments and human capital resources influence retention and performance (Enwere et al., 2024). Thus, the choice of methodology, research questions, and theoretical framework emerges directly from the deficiencies and priorities highlighted in prior research.

Theoretically, this study integrates two foundational theories: Human Capital Theory (HCT) (Becker, 1964) and the Resource-Based View (RBV) (Barney, 1991), collectively forming a robust framework for examining human capital development and strategic resource management. Specifically, HCT frames training as a productivity-enhancing investment that boosts employee skills and organizational efficiency, whereas RBV positions skilled employees as strategic assets essential for achieving sustained competitive advantage.

While prior studies have applied these theories in isolation, they often rely on quantitative datasets or managerial perspectives, thereby overlooking the firsthand experiences of employees who directly engage with training programs. Without these perspectives, research risks missing critical insights into how training is perceived, implemented, and experienced on the ground. For instance, it may overlook gaps between policy intent and practice, mismatches between training content and job requirements, and the lived consequences of insufficient skill development. By synthesizing HCT and RBV and grounding them in employee narratives, this study provides a more complete and contextually relevant understanding of retention dynamics in indigenous oil and gas firms (Asikhia et al., 2022; Enwere et al., 2024; Bilan et al., 2020).

The research problem arises from the discrepancy between the Nigerian Oil and Gas Industry Content Development (NOGICD) Act's objectives and human resource practices in indigenous firms, such as Geomarine Systems Limited, where persistent challenges include high employee talent loss and inadequate training (NCDMB, 2010). Specifically, the primary research question is: How do insufficient training and upskilling programs impact talent retention in indigenous oil and gas service companies in Nigeria's Niger Delta? Furthermore, secondary questions will explore organizational support, employee perceptions, and NOGICD Act compliance (Olujobi et al., 2024).

To address these, the study adopts a qualitative single-case study approach, focusing on Geomarine Systems Limited in Rivers State. Talent retention is the phenomenon, with structured interviews as the primary data collection tool. The target population includes management and employees with firsthand experience of training and retention practices. Purposive sampling ensures diverse representation across job roles. Data will be thematically analyzed using NVivo, identifying patterns in training quality, satisfaction, support, and policy alignment (Yin, 2018).

In conclusion, the literature review establishes a robust foundation by revealing three interlinked gaps which are limited integration of HCT and RBV in indigenous oil and

gas contexts, a dominance of quantitative approaches that overlook lived employee experiences, and inadequate attention to the specific realities of geoscience service firms in the Niger Delta. Consequently, these gaps collectively highlight the necessity for a qualitative, employee-centered inquiry that can illuminate the connections between training adequacy, talent retention, and organizational performance. By applying an integrated theoretical framework and a single-case study design, this research directly addresses the shortcomings of prior work, capturing the perspectives essential for translating policy objectives under the NOGICD Act into measurable workforce outcomes (NCDMB, 2010). Moreover, the study's timing is critical, as indigenous firms face mounting competitive pressures and policy compliance demands, thereby making actionable, context-specific recommendations both urgent and necessary (Olujobi et al., 2024).

III. RESEARCH METHODOLOGY

The Research

Research design serves as a blueprint that guides a study, ensuring the research problem is systematically addressed with rigor and contextual relevance. It outlines the investigation's overall structure, guiding data collection, analysis, and interpretation in alignment with the study's objectives (Creswell & Poth, 2018). In qualitative research, the design is especially vital, as it shapes the exploration and understanding of complex, context-specific phenomena.

Purpose Statement

The purpose of this study is to investigate how insufficient training and upskilling programs affect talent retention in indigenous oil and gas service companies and their role in diminished organizational performance. To address this issue, the research examines the specific factors contributing to talent loss at Geomarine Systems Limited, focusing on the impact of insufficient training and development opportunities on the loss of valuable talent within the organization (Arubayi & Edoja, 2024; Bienwi-Patrick et al., 2020; Ekundayo, 2023).

The research will employ a single-case study methodology, conducting structured interviews with management and staff at Geomarine Systems Limited, an indigenous geoscience oil and gas service company in Nigeria's Niger Delta region, to gain an understanding of the factors driving talent retention challenges and their impact on organizational performance. The study aims to provide recommendations for enhancing training programs, boosting retention tactics, and promoting local content development targets under the Nigerian Oil and Gas Industry Content Development (NOGICD) Act (Elensi et al., 2024). The findings are expected to direct focused initiatives for indigenous companies, addressing their unique challenges compared to multinational companies.

Role of the Researcher

In qualitative research, the researcher functions as the principal tool for data collection, analysis, and interpretation, with the background and positionality playing a critical role in establishing the study's rigor and trustworthiness (Merriam & Tisdell, 2016). For this study, the researcher will conduct interviews, encourage open-ended conversations, and establish a trusting atmosphere to elicit authentic accounts of training, upskilling, and retention experiences. Responsibilities will extend to transcribing interviews, coding the data, and pinpointing themes that resonate with the study's objectives. Through thematic analysis, the researcher will ensure that the findings are anchored in participants' lived experiences and the organizational context.

Additionally, the researcher will monitor and address bias throughout the process. By employing bracketing techniques, the researcher will set aside preconceived notions to highlight participant perspectives. Expertise in qualitative methodologies will be demonstrated by following established protocols, promoting transparency, adhering to ethical standards, and ensuring methodological rigor. By recognizing this dual position as both an insider with contextual knowledge and a researcher, the study reinforces its credibility, transparency, and trustworthiness (Guest et al., 2020; Nowell et al., 2017).

Researcher Biases

Researcher bias stems from prior experience in the oil and gas sector, potentially skewing question framing, response interpretation, or theme prioritization, such as over-focusing on training gaps while neglecting other retention factors. To mitigate this, the researcher will practice reflexivity by maintaining a journal to reflect on personal assumptions and employ triangulation across operational, technical, and administrative perspectives to prevent any single viewpoint from dominating (Creswell & Poth, 2021).

Researcher Actions in Conducting the Study

The credibility and trustworthiness of a qualitative study rest on the researcher's actions to maintain objectivity, transparency, and rigor throughout the research process. The researcher will implement systematic approaches to preserve the accuracy and authenticity of the outcomes. Data collection will follow structured interview protocols to ensure consistency, while purposive sampling will facilitate the inclusion of participants from technical, administrative, and managerial roles, thereby capturing a broad spectrum of perspectives and minimizing the risk of incomplete insights.

Bracketing

Bracketing will serve as the foundational strategy to achieve objectivity in this study. Bracketing entails a deliberate and systematic process of recognizing, acknowledging, and temporarily setting aside personal beliefs, assumptions, and prior knowledge that could skew the analysis of participant accounts (Tufford & Newman, 2017).

Within this study, bracketing will be carried out through member checking, which will involve presenting preliminary findings to participants for validation or correction, thereby preserving the authenticity of their lived experiences.

Bracketing is especially valuable in this study due to the researcher's dual identity as both an insider with expertise in the oil and gas sector and a qualitative investigator committed to presenting participants' perspectives without bias. By deliberately suspending prior assumptions, bracketing ensures that findings are derived authentically from participant narratives rather than being skewed by the researcher's professional background.

In addition, an audit trail will be maintained for this study. The audit trail will adhere to Lincoln and Guba's six-component framework, which ensures transparency and methodological rigor. This will encompass raw data, data analysis, data reconstruction, and synthesis, as well as information on instrument development, such as the interview guide.

Documentation and Observation

Beyond interviews, the study will incorporate documentation and observation as complementary data sources to enhance the depth of its findings. Field notes will be recorded to document contextual insights during interviews, including workplace interactions, participant body language, and non-verbal signals that may shape meaning but are absent from transcripts.

Documentation will also encompass organizational materials pertinent to training and retention, such as policy documents, training guides, and performance evaluations, where available. These records will be analyzed to offer background context and validate participant insights against official practices.

Overview of Research Methodology

The research methodology provides the foundation for systematically addressing the study's problem, ensuring that the processes of data collection, analysis, and interpretation are conducted with rigor, transparency, and alignment with the research objectives. Far beyond a mere technical procedure, methodology acts as a strategic framework that connects the research questions to the chosen design, tools, and analytical techniques

Research Design

This study adopts a qualitative single-case study design, targeting Geomarine Systems Limited, an indigenous geoscience oil and gas service company in Nigeria's Niger Delta. A case study approach is ideally suited for examining a defined system, facilitating a detailed probe into organizational practices, training effectiveness, and retention patterns within their authentic setting (Yin, 2020). The design offers the versatility to incorporate diverse viewpoints while embedding the findings within the wider challenges encountered by indigenous oil and gas companies in the region.

Research Method

A qualitative strategy was selected to prioritize depth over breadth, enabling the study to reflect the lived experiences of employees and managers. This method focuses on context and meaning rather than statistical extrapolation, aligning with the objective to understand how inadequate training shapes employee retention and organizational outcomes. Structured interviews will act as the main data collection tool, blending uniformity with the flexibility to explore emerging themes. Thematic analysis will guide the data interpretation, uncovering patterns that link training initiatives to retention results (Merriam & Tisdell, 2016).

Rationale for a Single Case Study

The choice of a single case study is intentional, as Geomarine Systems Limited embodies a representative case mirroring the circumstances of many indigenous oil and gas service companies in the Niger Delta. Unlike broad quantitative surveys that might reveal correlations but overlook contextual processes, this design delivers rich, narrative-based insights into organizational culture, employee perspectives, and policy execution (Ravitch & Carl, 2020). Furthermore, the design's adaptable nature allows for ongoing adjustments to interview protocols and analysis as new themes arise, keeping the study responsive to participants' realities. The incorporation of Human Capital Theory and the Resource-Based View theory further positions training as both an operational necessity and a strategic driver of competitive advantage.

Justification for Research Method

The qualitative single-case study method is justified as the best fit for this research problem. Unlike quantitative surveys that may identify correlations between training and retention but miss underlying dynamics, a case study offers insights into organizational processes, cultural factors, and individual experiences (Ravitch & Carl, 2020). Focusing on Geomarine Systems Limited ensures contextually relevant and transferable findings within Nigeria's oil and gas sector.

In essence, the qualitative single-case study design provides a robust framework for investigating how inadequate training affects talent retention in Indigenous oil and gas service companies. By combining structured qualitative methods with a single-case study design and anchoring the analysis in relevant theoretical frameworks, the methodology generates findings that are both academically robust and practically actionable. This strategy enables the study to make a meaningful contribution to academic discourse, organizational practice, and policy development in Nigeria's oil and gas industry.

Discussion on the Population and Sampling

Establishing the population and sampling methods is crucial for maintaining rigor in qualitative research, particularly within case study designs, where contextual richness and participant perspectives enhance the study's credibility. A research design's validity rests on participants accurately mirroring the phenomena under investigation and the

sampling approach providing adequate representation of varied viewpoints (Creswell & Poth, 2018).

In the setting of indigenous oil and gas service companies in Nigeria's Niger Delta, a precise definition of the study population and deliberate sampling techniques are vital. These decisions ensure the systematic inclusion of employees and managers, individuals directly affected by inadequate training and upskilling initiatives. Consequently, this study focuses on Geomarine Systems Limited, an indigenous geoscience oil and gas service company, to investigate how training deficiencies impact talent retention and organizational performance.

Target Population

The study's target population encompasses employees and managerial personnel at Geomarine Systems Limited, situated in Rivers State, Nigeria. This population includes technical staff engaged in geoscience operations, administrative personnel facilitating organizational functions, and management team members tasked with shaping strategic human capital development initiatives. By incorporating these diverse groups, the research aims to explain the varied effects of inadequate training programs across different organizational tiers. Technical staff are particularly vulnerable to skill deficiencies, managers are responsible for crafting workforce development strategies, and administrative staff offer valuable insights into operational support structures. Collectively, these subgroups constitute a holistic population for examining talent retention issues within indigenous oil and gas service companies.

The selection of this population is driven by the focal concern of the study, which is the inadequate training and upskilling programs linked to high talent loss and reduced performance. According to Saunders et al. (2019), qualitative inquiries gain depth by targeting individuals with firsthand experience of the phenomenon, thereby enriching data interpretation. Similarly, Creswell and Poth (2018) underscore the importance of aligning participant selection with research goals to enhance study validity, advocating for purposive sampling of those directly impacted. Thus, focusing on employees and managers at Geomarine Systems Limited ensures the research remains tightly aligned with its objectives.

Sampling Frame

The sampling frame for this study will be derived from the official employee roster supplied by the Human Resources Department of Geomarine Systems Limited. This roster encompasses full-time technical, administrative, and managerial staff with validated employment records. Leveraging this internal directory ensures the identification of all eligible participants and minimizes the likelihood of omitting key subgroups, thereby enhancing the representativeness of the sample in relation to the overall employee population.

Nevertheless, certain limitations are acknowledged. The HR roster may exclude contractors, interns, and temporary

staff, who could offer valuable insights. Their omission is deemed appropriate, however, as they are less integrated into the long-term organizational dynamics critical to the research focus. As emphasized by Guest et al. (2020), a well-defined sampling frame is crucial for setting clear boundaries and aligning participant selection with the phenomenon being investigated. This approach, tailored to the context of Geomarine Systems Limited in Nigeria's Niger Delta, ensures relevance.

Sampling Method

This study will utilize purposive sampling, a technique widely endorsed in qualitative research for its ability to identify participants with the deepest insight into the research problem (Patton, 2015; Creswell & Poth, 2018). In contrast to random sampling, which aims for generalizability, purposive sampling emphasizes the richness and relevance of data, rendering it especially appropriate for case study designs.

Within this approach, a maximum variation strategy will be implemented to select participants across various roles (technical, administrative, and managerial) and demographic factors (age, gender, and tenure). This strategy facilitates the inclusion of diverse experiences, enabling the identification of shared patterns across subgroups (Yin, 2018). By aligning with the research goals, this method ensures that participants reflect the wide range of perspectives within Geomarine Systems Limited, enhancing the relevance of the study.

Sample Size

In qualitative research, sample size is guided by the concept of data saturation rather than statistical power. Saturation is reached when further interviews provide minimal new insights (Guest et al., 2020). For single-case study designs, research typically involves 12 to 20 participants (Creswell & Poth, 2018; Yin, 2018). Consequently, this study aims for a sample of 15 participants, with the flexibility to adjust based on ongoing saturation assessments during data collection.

This selection strikes a balance between depth and feasibility. It ensures adequate representation across various staff categories while allowing for comprehensive analysis of each participant's perspectives. Practical considerations, including participant availability, organizational approval, and interview scheduling, were also factored into determining this sample size, aligning with the study's focus on Geomarine Systems Limited.

Inclusion and Exclusion Criteria

The inclusion criteria for this study are designed to identify participants who can provide meaningful insights into the research problem. Specifically, the study will include full-time employees of Geomarine Systems Limited, ensuring they are deeply embedded in the organization's operational context. Additionally, participants must have at least one year of tenure with the company, which guarantees sufficient exposure to its training and retention practices, thereby enriching the data collected. Finally, willingness to

participate voluntarily is required, emphasizing ethical considerations and the importance of informed consent. These criteria collectively ensure that participants possess the necessary experience and engagement to contribute valid perspectives on the impact of insufficient training on talent retention and organizational performance.

Conversely, exclusion criteria are established to refine the sample and maintain focus on the study's objectives. Interns, contractors, or temporary staff with less than one year of tenure will be excluded, as their limited integration into long-term organizational dynamics may offer less relevant insights. Employees on probationary status or extended leave are also excluded to avoid incomplete or unrepresentative viewpoints. Furthermore, individuals unwilling to provide informed consent will not be included, upholding ethical standards. As Nowell et al. (2017) contend, well-defined inclusion and exclusion criteria enhance the trustworthiness of qualitative data by excluding peripheral perspectives that could obscure the analysis. This approach strengthens the study's rigor.

Demographic Characteristics

The selected sample is anticipated to exhibit diversity across key demographic attributes, such as gender, age, years of experience, and educational qualifications. Technical staff are likely to comprise predominantly younger professionals holding specialized degrees in geoscience or engineering, whereas managerial personnel may include individuals with extended tenure and higher-level qualifications. Incorporating participants from these varied demographic categories enables the study to explore potential differences in training adequacy and retention challenges across career stages, roles, or educational backgrounds, enhancing the depth of the analysis.

This demographic diversity supports the study's credibility by ensuring that the findings are not confined to a single subgroup but rather represent a broad cross-section of the workforce (Patton, 2015). Such inclusivity is particularly valuable in organizational research, where diverse perspectives can shed light on the structural and cultural facets of the issue under investigation (Saunders et al., 2019). This approach reinforces the study's robustness.

Challenges and Limitations in Sampling

The sampling process for this study is likely to encounter several challenges and limitations. One notable difficulty is the potential for non-response, especially among managerial staff who may be constrained by time commitments. Another limitation involves the risk of selection bias, as purposive sampling depends on the researcher's judgment in choosing participants, which may unintentionally skew the sample (Palinkas et al., 2018). Furthermore, some employees might be reluctant to express candid opinions due to concerns about managerial reprisal, potentially compromising the depth of data collected.

To address these issues, targeted strategies will be employed. These include offering flexible interview scheduling to accommodate busy schedules, providing

explicit assurances of confidentiality to foster trust, and utilizing neutral recruitment methods to minimize bias. Additionally, the researcher will emphasize voluntary participation and anonymity during the informed consent process to alleviate participation anxiety and encourage open dialogue, enhancing the study's integrity.

Ethical Considerations

Ethical principles will be of utmost importance throughout the conduct of this study. Each participant will be provided with an informed consent form outlining the study's objectives, participation expectations, potential risks, and benefits, ensuring transparency from the outset. Participation will remain entirely voluntary, with participants retaining the right to withdraw at any point without facing repercussions. Confidentiality will be rigorously maintained by anonymizing interview transcripts and storing data securely in password-protected files, thereby protecting participant identities.

The research will comply with the American Psychological Association's (2020) Ethical Principles of Psychologists and Code of Conduct and will require approval from an Institutional Review Board (IRB) before initiating data collection. Protecting participant privacy is especially important due to the sensitive nature of addressing organizational shortcomings. This ethical framework ensures the study's integrity and respect for all involved.

Site Authorization

Permission to undertake the study will be requested from the management team at Geomarine Systems Limited. A formal proposal will be presented, detailing the study's objectives, scope, and the ethical measures in place to protect participants. Written approval will be secured before engaging employees for interviews, ensuring compliance with organizational protocols. This authorization process is not merely a formal requirement but also fosters trust within the organization, thereby promoting seamless recruitment and encouraging open participation. This approach supports the study's integrity. Overall, this designed population and sampling strategy aligns with the study's aims, ensuring that the findings are credible, contextually grounded, and relevant to tackling the critical issue of talent retention within indigenous oil and gas service companies. By blending methodological rigor with ethical accountability, the research is poised to deliver actionable insights that can shape organizational practices and support national policy goals outlined in the NOGICD Act.

Data Collection and Analysis

Data collection and analysis are essential components of this qualitative case study, ensuring that the evidence gathered aligns with the research objectives and questions. The study entails conducting structured interviews with employees and managers at Geomarine Systems Limited, adhering to designed protocols for recording and storing data, and employing a robust strategy for thematic analysis. These steps promote methodological transparency and enhance the study's credibility.

Data Collection Method

This study uses structured interviews as the main method of data collection. This approach was selected for its effectiveness in ensuring consistency among participants while allowing for deeper insights (Guest et al., 2020). This choice aligns with the study's objective of exploring employee perceptions, organizational challenges, and retention strategies in a real-world context where training deficiencies are prominent.

Instruments and Tools

The primary instrument is a researcher-crafted interview guide featuring 10 open-ended questions tailored to the research questions. Developed following a thorough literature review, it addresses talent retention, workforce development, and organizational performance (Ekundayo, 2023; Elensi et al., 2024). The guide promotes reliability by standardizing questions across participants, while allowing for probing follow-up questions to uncover unanticipated insights.

Population and Sampling

The study population consists of employees at Geomarine Systems Limited, an indigenous geoscience oil and gas service company located in Nigeria's Niger Delta. A purposive sampling approach was utilized to select participants with direct experience related to training, retention, and performance dynamics. A total of 15 individuals were recruited, including 5 operational staff, 5 technical professionals, and 5 administrative staff.

Eligible participants are required to meet specific conditions. They must have been employed at the company for at least one year, be actively engaged in operational, technical, or administrative roles, and voluntarily agree to participate. These criteria guarantee that responses reflect substantial exposure to the company's policies, practices, and training initiatives. This balanced representation across various organizational levels and functions ensures a diverse range of perspectives, thereby enriching the depth and quality of the data (Creswell & Poth, 2018).

To protect participants' rights and well-being, the study adhered to rigorous ethical standards. Informed consent was secured from all participants before data collection, with a detailed explanation of the study's purpose, procedures, and voluntary participation. Confidentiality was guaranteed, ensuring no personal identifiers, such as names, job titles, or departmental affiliations, were revealed in the research report. Data will be stored securely, accessible only to the researcher for academic use. Participants were also informed of their right to withdraw at any time without repercussions. These practices align with established research ethics guidelines, promoting respect, privacy, and fairness throughout the study (Saunders et al., 2019).

Data Collection

Data collection proceeded through a systematic, multi-step process. Initially, participants were recruited through company announcements and invited via email, with voluntary participation highlighted and informed consent

obtained. Interviews were then scheduled at times agreeable to both parties, conducted in a quiet, private setting within company premises. Each session lasted 45 minutes, adhering to the structured interview guide. With participant consent, interviews were audio-recorded, complemented by the researcher's field notes to capture contextual details.

Data Management

The collected data was recorded, stored, and managed to uphold integrity and security. The table below outlines the data management process for the study.

Table 1: Data Management

Aspect	Description	Ethical Alignment
Recording	Audio recordings of interviews were captured, with field notes integrated to enrich the dataset.	Ensures transparency and completeness in data collection.
Transcription	Audio recordings were transcribed verbatim, with field notes cross-referenced for accuracy.	Guarantees the accuracy and reliability of participant accounts.
Anonymization	Names were replaced with unique codes (e.g., OP1 for operational staff, TP1 for technical professionals).	Safeguards participant confidentiality.
Storage	Data is stored on encrypted, password-protected devices, accessible only to the researcher.	Prevents unauthorized access, aligning with privacy standards.
Backup	Secure offline backup copies are maintained.	Minimizes data loss risk while preserving privacy.
Confidentiality Measures	All identifying information was removed during transcription.	Upholds informed consent and confidentiality agreements.

Data Analysis Steps

The study utilized thematic analysis, a well-established technique for identifying, analyzing, and reporting patterns within qualitative data (Braun & Clarke, 2019). This method is well-suited for exploring employee perceptions of training adequacy, organizational impacts, and potential retention strategies, aligning with the study's objectives.

The coding process for this study followed a structured sequence to ensure a thorough analysis of the qualitative data collected from Geomarine Systems Limited. The process began with familiarization, which involved repeated reviews of transcripts to achieve a deep immersion in the material. This was followed by initial coding, where

descriptive labels were applied to significant text segments to highlight key ideas. Next, categorization clustered these codes into broader groups such as “training gaps,” “motivation,” and “performance impact,” providing a foundation for deeper insight. Theme development then distilled these categories into cohesive themes, such as “Inadequate Training Undermines Retention,” directly addressing the research questions. The final step, review and refinement, involved cross-checking themes against raw data to confirm accuracy and consistency. Throughout, NVivo software was utilized to facilitate coding and data organization, boosting efficiency and ensuring traceability (Nowell et al., 2017).

To enhance the validity of the findings, triangulation was employed by integrating multiple methods and data sources. This included comparing perspectives from operational, technical, and administrative staff, supplementing transcripts with field notes, and validating emerging themes (Carter et al., 2017). Rigor was further maintained through member checking, where participants reviewed initial themes for accuracy; an audit trail, logging all data management and coding decisions; and mitigating researcher bias to keep participant voices central (Korstjens & Moser, 2018).

Limitations

The data collection and analysis processes, though robust, face certain limitations that require acknowledgment to uphold transparency and support accurate interpretation of the study’s findings (Creswell & Poth, 2021). Structured interviews, while offering depth, may fail to capture some subtle aspects of the organization. Furthermore, reliance on self-reported narratives introduces the risk of subjectivity or recall bias, which may affect the accuracy of participant accounts. The single-case design, focused on Geomarine Systems Limited, restricts the generalizability of the results to other contexts (Yin, 2018). However, the study enhances its credibility by incorporating diverse participant groups, utilizing triangulation with multiple data sources, and applying various analytical methods. This approach ensures that the findings can be transferred to similar organizational settings.

Survey Guide

The survey guide, outlined in Appendix 1, provides an overview of the questionnaire, aligning the research questions in each section. The questionnaire is crafted to explore how inadequate training and upskilling initiatives impact talent retention and organizational performance by gathering employees’ views on the adequacy of training opportunities and their influence on performance, assessing the organizational effects of limited training on productivity, efficiency, and outcomes, and identifying strategies to enhance training and retention practices in accordance with Nigeria’s local content development goals. Furthermore, the guide will emphasize that participation is voluntary, responses will be kept fully confidential, and all data will be used solely for academic research purposes.

Assumptions, Limitations, Delimitations

Every research study is framed by foundational premises, practical constraints, and deliberate boundaries that define its scope and shape its outcomes. These are articulated through assumptions, limitations, and delimitations (Simon & Goes, 2013). Assumptions are conditions accepted as true without empirical proof, providing a basis for the study, though their inaccuracy could undermine credibility (Johnson & Christensen, 2020). Limitations encompass uncontrollable factors that may hinder design, execution, or result interpretation, enabling readers to evaluate internal and external validity (Maxwell, 2018). Delimitations reflect the researcher’s intentional choices to narrow the focus, ensuring feasibility and alignment with objectives. Clearly outlining these aspects promotes transparency, underscores potential weaknesses, and contextualizes findings for appropriate interpretation.

Assumptions

This study rests on several key assumptions essential to its execution and interpretation. Firstly, it is assumed that participants will provide truthful and accurate accounts during interviews. Misrepresentation through exaggeration or omission could distort the organizational context. This risk is reduced by ensuring confidentiality, fostering a safe interview setting, and using member checking to verify interpretations (Patton, 2015). Furthermore, the study presumes that Human Capital Theory and the Resource-Based View are suitable for examining training, retention, and performance in indigenous oil and gas firms. If these frameworks are misaligned, interpretations may be constrained. This is addressed by triangulating findings with recent empirical studies and allowing inductive theme development from participant narratives (Wright et al., 2019). Moreover, despite its single-case focus, the study assumes findings are transferable to similar indigenous oil and gas companies in Nigeria’s Niger Delta. Overgeneralization poses a risk, mitigated by providing detailed contextual descriptions to aid readers in assessing applicability (Tracy, 2019).

Limitations

Several constraints shape the scope and interpretation of this research. Focusing solely on Geomarine Systems Limited restricts perspective breadth and external validity. While offering depth, this limits generalizability, addressed by embedding findings in industry literature and emphasizing transferability (Maxwell, 2018). Also, the purposive sample of 15 participants, though sufficient for qualitative depth, may miss some organizational viewpoints. This is mitigated by including diverse roles such as operational, technical, and administrative, to capture varied perspectives (Creswell & Poth, 2018). Furthermore, reliance on self-reported interview data poses risks of subjectivity, recall, or social desirability bias, countered by triangulation with field notes and documents (Nowell et al., 2017). Additionally, time constraints may limit capturing long-term dynamics, which can be mitigated by ensuring thematic saturation and rigorous theme validation. (Tracy, 2019).

Delimitations

The study's scope is intentionally defined for manageability and focus. Firstly, the research targets Geomarine Systems Limited, excluding multinational firms in Nigeria due to differing training policies and resources. Moreover, the study is restricted to Nigeria's Niger Delta, where local content policies and industry dynamics directly influence training and retention, limiting applicability elsewhere. Also, only employees with at least one year of tenure are included, assumed to have adequate exposure to company practices, excluding new hires. Furthermore, the focus is on training, upskilling, and retention, sidelining broader factors like compensation or political influences to maintain clarity.

By addressing assumptions, limitations, and delimitations, this study clarifies its operational framework, constraints, and boundaries. Assumptions lay the foundation but require mitigation through reflexivity and validation; limitations, such as case specificity and self-reported data, are balanced with rigor; and delimitations ensure a focused scope. Together, these elements enhance credibility and trustworthiness, guiding readers to interpret findings within the study's defined context.

III. PRESENTATION OF FINDINGS

Overview of the Analysis Process

The analysis followed a structured qualitative process using NVivo, beginning with data familiarization to identify initial patterns without imposing preconceived categories. This was followed by inductive open coding of interview transcripts, generating granular descriptive codes. Through axial coding, related codes were compared and clustered into higher-order thematic categories, facilitated by NVivo's query functions to examine patterns across participants.

These themes were then mapped into a framework matrix aligned with the three research questions, enabling systematic comparison and integration with quantitative coding metrics. Organizational documents were analyzed, allowing for triangulation between employee experiences and formal policy. The final stage involved interpretive synthesis, refining themes for coherence and linking them to the research objectives and existing literature to produce robust, theory-informed findings.

Thematic Presentation of Findings

This study presents the core findings through a structured thematic analysis aligned with the research questions. The themes discussed in this section emerged inductively from the qualitative interview data and were refined through iterative coding, constant comparison, and framework analysis in NVivo. Each theme represents a patterned and recurring aspect of participants' experiences of training, upskilling, and organizational practices within the organization.

(RQ1) How do employees at Geomarine Systems Limited perceive the adequacy and relevance of existing training and upskilling programs?

Theme 1: Absence and Inadequacy of Formal Training Structures

Employees perceive formal training as reactive and inconsistent, triggered by incidents rather than proactive planning. "So, we don't have sufficient or adequate training to really execute that job" (ADM 2). Documents outline structured programs, but implementation remains weak.

Theme 2: Types and Forms of Training Provided

Day-to-day learning relies heavily on informal, on-the-job mechanisms, compensating for limited formal provision. "So on-the-job training is required for every session" (OP 4). Documents acknowledge both forms but position informal learning as supplementary, while employees experience it as dominant.

Theme 3: Training Content and Skill Focus

Training content is technically relevant but lacks depth and adaptability for complex tasks. Employees need training to perform "as professionally as possible" (TC 5). Documents outline curricula yet emphasize predefined competencies over adaptive learning.

Theme 4: Academic-Practical Skill Gap

A persistent disconnect exists between academic theory and workplace practice, especially for new hires. "The accounting we learnt in school, it's not what is happening in the office" (ADM 5). Documents assume induction suffices, but employees experience the gap as unaddressed.

Theme 5: Training Governance, Planning, and Responsibility

Governance is centralized and reactive, with weak needs assessment and accountability. "We wouldn't really want to wait when those fatalities happen before we take measures" (TC 5). Documents define roles and schedules, but enforcement is inconsistent.

Theme 6: Compliance, Certification, and External Standards

Training is predominantly compliance-driven, viewed as "part of the compliance requirements for the oil and gas" (ADM 3). Certifications act as access permits rather than competence indicators. Documents emphasize regulatory alignment, converging on compliance dominance.

Theme 7: Access, Equity, and Distribution of Training

Training is concentrated among a few, creating knowledge bottlenecks. "The few people that were trained went on off" (ADM 3). Documents prioritize role criticality over equity, resulting in morale and resilience issues.

Theme 8: Training Purpose and Perceived Value

Employees value training only when it improves job performance: "execute that job with the required experience or knowledge needed" (ADM 2). Documents focus on

compliance and audit readiness, creating divergence in perceived utility.

Theme 9: Organizational and Industry Context of Training

Training is shaped by external pressures and project cycles rather than internal strategy, resulting in episodic delivery. Documents align with client/regulatory demands, but employees experience a lack of consistent developmental rhythm.

Triangulation of Employees' Interviews and Organizational Documents

Below is the triangulation table for RQ1. It is structured to contrast interview evidence with company documents.

Table 2: Triangulation of Employees' Interviews and Organizational Documents

RQ1 Theme	Interview Evidence	Document Evidence	Triangulation	Analytical Interpretation
1. Formal Training Structures	Reactive, inconsistent, triggered by incidents.	Outlines structured plans and formal commitments.	Partial Convergence	Policy exists but is weakly implemented, revealing a policy-practice gap.
2. Types & Forms of Training	Heavy reliance on informal, on-the-job learning.	Emphasizes formal, certified training courses.	Partial Convergence	Documents prioritize formal training; practice relies on informal learning to fill gaps.
3. Content & Skill Focus	Improves competence but is often insufficient in depth/frequency.	Curricula designed to enhance competence and productivity.	Convergence	Both agree on technical relevance, despite delivery shortcomings.
4. Academic-Practical Gap	Strong perception of a theory-practice gap for new hires.	Induction/training intended to bridge the gap.	Partial Convergence	Intent exists, but implementation is insufficient to address workplace realities.
5. Governance & Planning	Effectiveness depends on managerial support; weak accountability.	Clear assignment of responsibilities to management/HR.	Partial Convergence	Governance structures defined but weakly enforced, limiting effectiveness.
6. Compliance & Certification	Driven by external requirements, certifications are seen as symbolic.	Strong emphasis on regulatory and client compliance.	Convergence	Both acknowledge compliance centrality, but employees see weak link to real skill depth.
7. Access & Equity	Concentrated among a few; unequal access.	Promotes broad access but lacks specific	Partial Convergence	Unequal access in practice despite

		equity mechanisms		inclusive intent.
8. Purpose & Perceived Value	Valued only when improving real job performance.	Framed as a tool for productivity, efficiency, and compliance.	Convergence	Shared view that training must enable performance to be meaningful.
9. Industry Context	Perceived as inferior to global/MNC standards.	References best practices but lacks benchmarking.	Partial Convergence	Aspirations exist, but employees perceive a deficit in depth/sophistication.

Table 2 demonstrates a clear policy–practice gap: while documents present a structured, compliant system, employees experience training as reactive, uneven, and reliant on informal learning. Both sources agree on the importance of training for competence and compliance but diverge in their perceived value: employees prioritize depth, fairness, and career relevance, while documents emphasize compliance and administrative efficiency. The core issue is not a lack of policy, but rather weak implementation, characterized by inconsistent leadership, poor enforcement, and unequal access. Consequently, training functions more as a compliance mechanism than as a strategic system for building organizational capability.

(RQ2) How does the adequacy of training impact employees' job satisfaction, motivation, and intention to stay with the organization?

Theme 1: Training and Job Performance Effectiveness

Adequate training underpins competent, safe performance and error prevention. Employees link skill gaps to risky improvisation and operational “messiness” (TC 5). Documents affirm the training-performance link, but inconsistent execution undermines confidence and motivation.

Theme 2: Operational, Safety, and Quality Risks of Inadequate Training

Insufficient training creates real danger and organizational vulnerability. Untrained staff “take a chance” (ADM 3), risking accidents, errors, and contract loss. Documents mandate risk control, but implementation gaps erode trust and psychological safety.

Theme 3: Training, Motivation, and Morale Dynamics

Training drives emotional and motivational outcomes. Effective training fosters “confidence... a great feeling” (TC 1); inadequacy causes marginalization, making staff feel “like slaves, small children” (ADM 2). Documents focus on procedural outcomes, missing this affective core.

Theme 4: Training and Career Development Trajectories

Training fuels both career advancement and external mobility. It is essential for progression, “If you're not trained, you remain where you are” (ADM 5) yet creates “training-induced mobility” as staff leave “for better offer”

(OP 2). Documents assume internal loyalty; employees see personal capital.

Theme 5: Training and Employee Retention & Turnover Decisions

Loyalty is conditional on growth. Training is a primary non-financial retention factor; however, employees will leave “irrespective of the pay” for better development opportunities (TC 5). Documents rely on contractual enforcement; employees emphasize reciprocal opportunity.

Theme 6: Organizational Performance, Continuity, and Competitiveness

Training is a core asset for productivity and survival. Inadequate training forces outsourcing and weakens competitiveness. A respondent noted, “We don't seem to be knowledgeable enough on that, and you now have to outsource it.” (TC 4). Documents frame it as strategic, but experienced gaps reduce attachment to a less competitive firm.

Theme 7: Knowledge Management, Skill Transfer, and Capability Building

Training expands knowledge, but informal, leader-centric systems are fragile and prone to hoarding. Mentoring is valued, as a participant mentioned, “But I still enjoy the fact that I get involved with all the, you know, mentoring.” (OP 1). But the lack of formal transfer erodes sustainability and trust in long-term learning.

Theme 8: Leadership, Supervision, and Training Governance

Training success hinges on leadership. Supportive managers boost motivation; weak follow-through

diminishes impact. Documents outline structures as written in the Abridged Employee Handbook: “Employees are to note that Supervisors shall be continuously monitoring and assessing various aspects of their performance, covering organizational ability, leadership, competence, attendance at work, and personal initiative.” But inconsistent enactment signals low investment in growth.

Theme 9: Economic, Financial, and Strategic Implications of Training

Training is a strategic investment; its absence incurs costly “blunders... more than billions of naira” (ADM 2). Employees prioritize development over pay (TC 5). Documents focus on cost control, limiting training’s motivational reach.

Theme 10: Non-Financial Retention Factors & Employee Relations

Training outweighs pay as a retention driver, fostering mutual growth and loyalty. As a participant stated, “Of course, I will leave Geomarine Systems Limited and go for that company, irrespective of the pay, because my main aim is to develop myself first.” (TC 5). Unequal access creates tension. Documents treat training operationally, missing its relational role in building commitment.

Triangulation of Employees' Interviews and Organizational Documents

Below is the triangulation table for RQ2, structured to contrast interview evidence with company documents.

Table 3: Triangulation and Analytical Interpretation

RQ2 Theme	Interview Evidence	Document Evidence	Triangulation	Analytical Interpretation
1. Job Performance Effectiveness	Links training to competence, confidence, and error prevention; gaps cause frustration.	Policies formally link training to productivity and error reduction.	Convergence	Training is a key performance lever, but inconsistent execution weakens its impact on retention.
2. Operational & Safety Risks	Inadequate training increases accidents, fear, errors, and client loss.	Emphasizes mandatory safety training and compliance as risk control.	Convergence	Policy recognizes risk, but delivery gaps expose employees to hazards, eroding trust and willingness to stay.
3. Motivation & Morale Dynamics	Training builds dignity and morale; its absence causes anxiety and marginalization.	Framed procedurally around compliance, with little focus on emotional impact.	Partial Convergence / Divergence	Employees experience training's psychological benefits, but the organization's procedural framing limits its motivational power.
4. Career Development Trajectories	Training enhances certification value and skill portability; stalled	Assumes training leads to internal progression and loyalty.	Convergence with Divergence	Training builds both internal capability and external employability. Without internal advancement, it fuels mobility.

	growth triggers turnover.			
5. Retention & Turnover Decisions	Loyalty is conditional on continued growth; training is used strategically for market resilience.	Positions training as a retention tool, using bonding agreements.	Convergence with Divergence	Training fosters conditional loyalty but cannot enforce it. Stalled growth turns it into an exit catalyst.
6. Organizational Performance & Competitiveness	Training strengthens productivity and pride; skill gaps lead to outsourcing and reduced competitiveness.	Frames training as central to performance and continuity.	Convergence	Employee attachment is tied to perceived organizational competence; weak training reduces pride and retention intent.
7. Knowledge Management & Capability	Knowledge transfer is informal and fragile; mentorship aids belonging, hoarding creates tension.	Acknowledges supervisory role but lacks formal transfer systems.	Partial Convergence	Person-dependent knowledge systems undermine sustainability and fairness, weakening long-term attachment.
8. Leadership & Governance	Training success depends on leadership commitment and trust; weak supervision devalues it.	Clearly defines governance roles and compliance responsibilities.	Partial Convergence	Effectiveness hinges on leadership behavior, not just formal policy. Inconsistent support diminishes training's value.
9. Economic & Strategic Implications	Views training as a long-term investment that prevents costly errors.	Emphasizes cost control and short-term operational efficiency.	Convergence with Divergence	Employees see strategic investment; documents focus on cost containment. This mismatch limits training's perceived value.
10. Non-Financial Retention & Relations	Training, growth, and teamwork outweigh pay; unequal access causes tension.	Treats training as an operational input, not linked to morale or relations.	Divergence	Training is a key non-financial retention driver for employees, but its exclusion from formal strategy weakens attachment.

Table 3 reveals a shared recognition of training's importance for performance, safety, and competitiveness. However, its potential as a retention tool is constrained by inconsistent execution. Employees experience training through its powerful psychological and relational effects on confidence, morale, and career growth, dimensions that are underemphasized in formal, compliance-oriented policy. The central constraint is the gap between strategic intent and lived practice. Training becomes an effective retention mechanism only when policy, leadership conduct, and tangible development opportunities are consistently aligned to meet employee expectations for growth and recognition. (RQ3) What strategies can Geomarine Systems Limited implement to enhance training and upskilling programs to improve employee retention and align with Nigeria's local content development objectives?

Theme 1: Strategic Orientation and Organizational Commitment to Training

A major gap exists between strategic rhetoric and resourcing. Documents frame training as an "Organizational Investment" for competitive advantage, but decisions are driven by short-term pragmatism. Managers weigh training cost against retention risk, asking, "Is this guy going to stay or not?" (ADM 3). Partial convergence exists, but strategic enhancement requires protected budgets, clear ROI analysis, and accountability to shift training from symbolic to transformative.

Theme 2: Governance, Policy, and Regulatory Control of Training

Training is heavily shaped by a High-Compliance Environment and Nigeria's Local Content (NCD) Act. Governance tools like "Conditional Certification Release"

are used for retention, withholding certificates until a “Mandatory Service Period” is completed (ADM 3). Strong convergence on compliance exists, but inconsistent enforcement creates equity issues. Strengthening governance with fairness and transparency is key to building trust and meeting local content goals substantively.

Theme 3: Training Design, Delivery Models, and Learning Architecture

Employees demand practical, context-specific training, advocating for “Pre-Project Training” and “tailored training on the job” (TC 3) over generic courses. Documents propose structured models, but employees experience fragmented delivery, indicating partial convergence. Strategic enhancement requires a continuous learning architecture, blended and directly tied to role-specific needs to build deep, sustainable capability.

Theme 4: Leadership, Management Philosophy, and Power Dynamics

Leadership is the supreme enabler or blocker. Founder influence is pivotal, and managerial reluctance is a barrier, as when the “MD was like, I’m not sure I want to train anybody else because the people I trained left” (ADM 3). Documents assign managerial responsibility but lack emphasis on relational leadership. Partial convergence highlights that training reform is futile without committed, supportive leadership that models and champions development.

Theme 5: Capability Building, Knowledge Transfer, and Learning Continuity

Organizational knowledge is fragile and informal. Employees call for a “Continuous Improvement Mindset” to combat skill obsolescence, noting “Competent staff come with adequate training and upskilling” (TC 4). Documents acknowledge supervision but lack formal systems for mentorship and knowledge transfer, leading to partial convergence. Institutionalizing learning through structured programs is essential for retention and genuine local capacity.

Theme 6: Workforce Development, Localization, and Social Responsibility

Local content must move beyond compliance to capability. Employees advocate for “Youth Empowerment” and

structured “mentorship programs” (TC 1) to build a national talent pipeline. Documents state compliance goals but lack actionable plans for youth development or community integration, showing convergence in intent only. Strategic enhancement requires embedding training in ethical, merit-based local development strategies.

Theme 7: Retention, Employability, and Workforce Mobility

Training creates a paradox: it builds loyalty but also mobility. Organizations use “Mandatory Service Periods” as a control, telling staff, “you have a number of years, you work for us” (ADM 3). Convergence with tension exists; both sides see the dual effect, but the organization relies on contractual bonds while employees value reciprocal growth. Retention must be earned through internal career opportunities, not enforced through restrictions.

Theme 8: Risk, Cost, and Organizational Trade-Offs

A critical mismatch exists in cost perception. Employees see under-training as a root cause of expensive “blunders” (ADM 2), advocating for a long-term investment view. Documents emphasize short-term cost control and compliance. Convergence on risk exists, but divergence on the time horizon. Strategic enhancement requires a total-risk perspective that frames training as a cost-saving, risk-mitigating investment.

Theme 9: Performance, Accountability, and Organizational Control

Training impact depends on post-training accountability. Employees demand linkage to “Performance Appraisal” to identify and fill “knowledge gap[s]” (TC 4). Documents have formal evaluation systems, but inconsistent application leads to convergence with an implementation gap. Closing this gap by tying training outcomes to performance management is crucial for legitimacy and sustained behavioral change.

Triangulation of Organizational Documents and Participants Interview

The triangulation table of organizational documents and participants for research question three can be seen below.

Table 4: RQ 3 Triangulation and Analytical Interpretation

RQ3 Theme	Interview Evidence	Document Evidence	Triangulation Outcome	Strategic Interpretation
Theme 1: Strategic Orientation & Commitment	Viewed as aspirational; deprioritized due to cost and urgency.	Framed as a strategic investment and competitive advantage.	Partial Convergence	Rhetoric strong, execution weak. Requires protected budgets and enforced planning.
Theme 2: Governance & Regulatory Control	Seen as compliance-driven, coercive, and unevenly enforced.	Clear mandates for certification, local content, and compliance.	Convergence (Compliance) / Divergence (Development)	Strong on compliance control, weak on development. Needs balancing.

Theme 3: Training Design & Delivery	Demand for practical, role- specific, timely training.	Proposes structured, blended learning pathways.	Partial Convergence	Design aligns with needs, but delivery is inconsistent. Must improve timing and relevance.
Theme 4: Leadership & Power Dynamics	Effectiveness hinges on leader commitment; variable support.	Leadership roles and responsibilities are formally defined.	Partial Convergence	Leadership behavior is the critical variable. Must embed accountability.
Theme 5: Capability & Knowledge Transfer	Knowledge is informal, fragile, and person- dependent.	Policies endorse continuous learning and capacity building.	Partial Convergence	Capability is vulnerable. Must formalize knowledge systems for sustainability.
Theme 6: Localization & Social Responsibility	Support for local training and meritocracy; concerns over nepotism.	Explicit commitments to local content and youth development.	Convergence (Intent) / Partial Divergence (Practice)	Goals are well- articulated but poorly implemented. Requires transparent, actionable pipelines.
Theme 7: Retention & Workforce Mobility	Training boosts mobility: retention is conditional on internal growth.	Uses bonding agreements and mandatory service periods.	Divergence	Contractual control is insufficient. Retention must be earned through career progression.
Theme 8: Risk, Cost & Trade- Offs	Training cut under financial pressure; reactive to incidents.	Acknowledges costs but frames training as risk mitigation.	Partial Convergence	Short-term cost focus increases long-term risk. Shift to preventive investment logic.
Theme 9: Performance & Accountability	Weak post-training accountability and performance linkage.	Formal appraisal and accountability systems exist.	Partial Convergence	Systems are in place but weakly enforced. Must link training to performance management.

Table 4 indicates that a significant gap exists between formal policy intent and practical implementation. Although strategic alignment is documented, weaknesses in execution, leadership accountability, and the employee experience erode retention and development outcomes. Sustainable retention and substantive local content alignment thus depend less on creating new policies and more on closing existing implementation gaps. This requires consistent execution, equitable access to performance management, career progression, and knowledge continuity systems.

Quantitative Overview of Qualitative Data: Coding Coverage Analysis for RQ1

A coding coverage analysis was conducted in NVivo to quantify the prominence of RQ1-related themes across participant interviews. Coding coverage indicates the proportion of each transcript assigned to specific thematic nodes, providing a quantitative validation of qualitative emphasis.

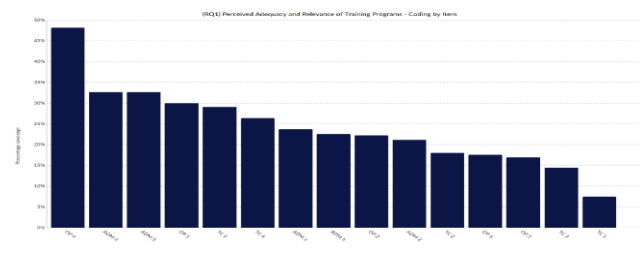


Figure 2: Coding Coverage for RQ1 Themes by Participant

The coding coverage for RQ1 themes was significant, ranging from 7% to 48%, confirming that perceptions of training inadequacy were a central and systemic organizational concern, not isolated to any single role. High coverage was distributed across Operational (OP4: 48%), Administrative (ADM4: 33%), and Technical staff (TC5: 29%; TC4: 26%), underscoring that the issue permeated all levels.

Participants with the highest coverage, such as OP4 and ADM4, served as key informants; their dense narratives directly shaped core themes, including the absence of formal structures and the academic-practical gap. Variation

within role groups likely reflects differences in individual exposure and task demands, not a disagreement on the importance of training. Overall, the substantial and widespread coding validates the salience of RQ1 and demonstrates that the derived themes are empirically grounded in extensive participant discourse.

Coding Coverage Analysis for RQ2

To further establish the empirical weight of the findings, a parallel coding coverage analysis was conducted for RQ2 themes. This analysis measures the proportion of each interview dedicated to discussing the psychological, motivational, and career consequences of training practices.

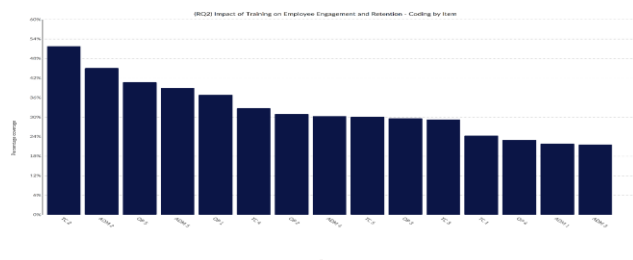


Figure 3: Coding Coverage for RQ2 Themes by Participant

The coding coverage for RQ2 themes was substantial, ranging from 21.5% to 52%, confirming that the link between training and engagement is a pervasive concern. The distribution reveals important role-based insights. Technical staff, particularly TC2 with the highest coverage, were most vocal about training's impact on career and morale, suggesting acute experiences of stagnation or conditional loyalty. TC5 and ADM4 again emerged as comprehensive informants. Operational staff showed varied engagement; while some (OP5, OP1) emphasized retention impacts, OP4, the leading voice on RQ1, had lower coverage here, indicating that immediate task adequacy may overshadow long-term retention concerns for some frontline workers.

Critically, senior manager ADM3 had the lowest coverage, reinforcing a leadership-employee perceptual gap where the personal, psychological impact of training on engagement and turnover risk is less salient in managerial discourse. This quantitative pattern validates that employees consistently connect training to confidence, morale, and mobility, but also highlights that the urgency and framing of these issues differ markedly across the organizational hierarchy.

Coding Coverage Analysis for RQ3

A coding coverage analysis was conducted for RQ3, measuring the extent to which participants engaged in solution-oriented, forward-looking discourse on training reform, governance, and strategic alignment.

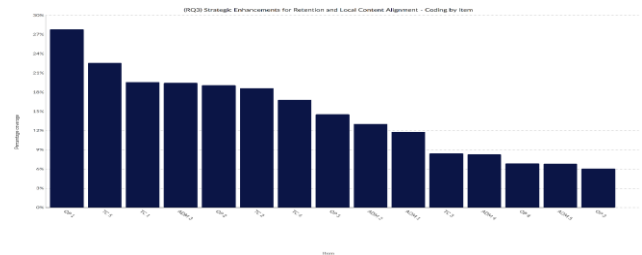


Figure 4: Coding Coverage for RQ3 Themes by Participant

The coding coverage for RQ3 themes ranged from 6% to 28%, which is lower than for previous questions, as expected given the focus on solutions rather than problems. The variation reveals who contributed most to strategic thinking. Operational staff (OP1) and technical staff (TC5, TC1) showed the highest coverage, emerging as key sources of pragmatic, system-level ideas for reform, especially in training design and knowledge transfer. Administrative engagement was mixed, with only ADM3 showing high involvement, while senior management (ADM5) had low coverage, reinforcing a critical leadership disconnect.

The analysis confirms that strategic recommendations are driven by participants, not imposed by researchers. Crucially, it shows that the impetus for reform comes primarily from frontline staff, highlighting an urgent need for senior leadership to engage and institutionalize these bottom-up insights.

Validation, Rigor, and Reflexivity

Credibility and rigor were ensured through methodological triangulation, integrating interviews, organizational documents, and quantitative coding coverage analysis in NVivo. This enabled systematic comparison between formal policies and lived employee experiences. Reflexivity was maintained through inductive coding, reliance on verbatim quotations, and iterative comparison across data sources, reducing interpretive bias.

The findings reveal a central paradox: formal commitments to training and local content are inconsistently realized in practice. Execution remains vulnerable to short-term pressures, leadership variability, and weak institutionalization. Practically, the study calls for moving beyond policy to protected investment, managerial accountability, and sustained learning systems. Theoretically, it refines Human Capital Theory by framing training as a conditional retention mechanism. For policy, it demonstrates that local content requires sustained, equitable capability development, not mere compliance. Ultimately, training is positioned as a decisive lever for organizational resilience, employee retention, and national capacity development.

IV. DISCUSSION OF FINDINGS

This study synthesizes the findings, situating them within established literature on training, employee engagement, retention, and local content development. By integrating interview data, organizational documents, and quantitative coding coverage, it highlights areas of convergence with prior research while generating new insights from the context of an indigenous Nigerian oil and gas organisation. Discussion of Findings in Relation to the Research Questions

RQ1: How do employees at Geomarine Systems Limited perceive the adequacy and relevance of existing training and upskilling programs?

Employees largely perceive training as inadequate, reactive, and compliance-driven rather than capability-focused. Despite formal policies, training lacks consistency, equitable access, and practical integration into daily work, resulting in heavy reliance on informal learning. Relevance is defined by direct task applicability, career support, and professional value; training that is abstract or purely regulatory is viewed as insufficient, reinforcing a persistent policy–practice gap.

RQ2: How does the adequacy of training impact employees' job satisfaction, motivation, and intention to stay with the organization?

Training adequacy strongly enhances confidence, motivation, and job satisfaction, signaling organizational support. However, its effect on retention is conditional. Training fosters loyalty only when linked to internal career progression, recognition, and skill utilization. In their absence, training increases external employability and turnover risk. This dynamic varies by role, confirming that training alone is an insufficient retention mechanism without supporting career and leadership structures.

RQ3: What strategies can Geomarine Systems Limited implement to enhance training and upskilling programs to improve employee retention and align with Nigeria's local content development objectives?

Findings indicate that training must be embedded within clear career pathways, equitable access systems, and credible leadership to improve retention and support local content objectives. Without internal progression and accountability, training investment unintentionally accelerates talent loss. Effective strategies require institutionalized career development, role-specific pathways, and leadership ownership to convert training into sustainable retention and localization outcomes.

Discussion of Findings in Relation to the Research Framework

The findings validate the framework by confirming training adequacy as a core driver of engagement, retention, and local content development. However, these relationships are mediated by governance quality, leadership credibility, and execution consistency. The study extends the framework by identifying implementation fidelity as a

critical variable and demonstrates how regulatory compliance indirectly shapes HR and retention dynamics. Strategic intent translates into outcomes only when supported by consistent execution.

Discussion of Findings in Relation to Anticipated Themes

While anticipated themes around training, performance, retention, and compliance were confirmed, the study revealed deeper dimensions. Psychological safety and professional dignity emerged as central to motivation, while extreme knowledge fragility highlighted systemic risk. Leadership influence proved more decisive than expected, and local content was reframed from compliance to sustainable capability building, significantly deepening explanatory insight.

Discussion of Findings in Relation to the Research Problem

The core problem is reframed from training scarcity to systemic execution failure. Although policies exist, reactive and inconsistent implementation undermines credibility and the psychological contract, driving disengagement and turnover. Inadequate training simultaneously weakens operational performance and long-term resilience by accelerating knowledge loss and talent exit. The fundamental challenge lies in translating formal commitments into sustained, capability-building practice.

Theoretical Contribution

Advancing Human Capital Theory: From Investment to Conditional Portability

The findings align with Human Capital Theory (HCT), confirming that training acts as an investment enhancing productivity, competence, and service quality (Noe et al., 2014). Participants consistently linked adequate training to improved task execution, error reduction, and professional confidence, supporting the theory's core logic. However, the study critically extends HCT by exposing a significant agency risk in competitive, skill-scarce labour markets.

Training demonstrably increases skill portability and external employability, positioning employees as attractive targets for poaching (Stöckl & Struck, 2025; De Vos et al., 2020; Dietz & Zwick, 2022). This dynamic enables employees to capture the full value of their enhanced human capital, while the organisation bears the investment cost without assured retention. The study refines HCT by framing training as a high-return yet high-risk investment. Organizational benefits are conditional on complementary retention mechanisms and credible internal career pathways, rather than presumed loyalty. In the absence of these conditions, training risks accelerating turnover and undermining expected returns.

Refining the Resource-Based View: The Institutionalization Imperative

The findings support the Resource-Based View's (RBV) premise that human capital is a valuable, rare strategic resource, especially in skill-scarce industries (Teoh et al., 2024; Otoo, 2022). However, they critically challenge RBV's assumption of inimitability, revealing that tacit,

person-specific expertise is highly vulnerable to imitation through labour mobility when it is poorly institutionalized. This aligns with recent research showing that firms lacking formal knowledge systems suffer rapid capability erosion after employee departure (Kianto et al., 2017; Enwere et al., 2024).

The study, therefore, advances RBV by proposing that human capital fulfills the VRIN criteria only when it is institutionalized. Sustainable competitive advantage is achieved not by merely possessing skilled individuals but by transforming individual expertise into organizational capability through structured mentoring, documentation, succession planning, and continuous learning systems. This institutional embedding is what makes the resource incredibly difficult to imitate and non-substitutable.

Synthesis: A Conditional Strategic Asset Model

The study synthesizes its findings into a Conditional Strategic Asset Model. This model acknowledges that training creates portable human capital (HCT) but argues this capital yields sustained competitive advantage (RBV) only under specific organizational conditions. These conditions are the institutionalization of knowledge, credible internal career pathways, and a culture of relational leadership and equitable access. Without this supportive ecosystem, the model predicts training investment will paradoxically accelerate turnover rather than build capability, explaining the core retention dilemma identified in the research.

The findings establish three essential conditions for training to achieve its intended retention and capability outcomes:

- **Coherent Governance:** Training must be explicitly linked to internal career progression and accountability, moving beyond mere compliance-driven certification (Chaudhary et al., 2025; Choudhary et al., 2024; Hosen et al., 2024).
- **Leadership Commitment:** Training must be championed as a visible leadership priority that signals genuine organizational investment, thereby strengthening psychological attachment (Wu et al., 2025).
- **Institutionalized Learning Systems:** Knowledge must be embedded in organizational routines and systems to mitigate its fragility and the risk of poaching (Phaladi, 2025).

When these conditions are absent, training paradoxically increases turnover, a phenomenon termed training-fueled mobility. This extends recent local content research, which identifies that policy and training effectiveness in Nigeria's oil and gas sector are undermined by weak implementation and institutional challenges. Consequently, even if training fails to yield sustainable retention or local capability without strong institutionalization and enforcement (Nwosu, 2025; Nwankwo & Iyeke, 2022).

The discussion frames training as a dual-purpose strategic lever. While formal policies exist, their effectiveness is

undermined by weak execution and leadership. Training builds competence and morale but only secures retention when paired with credible career paths and accountable leadership. The study reveals a critical retention paradox: training can accelerate turnover by boosting external employability if internal opportunities are lacking. Consequently, training must be repositioned from a compliance function to a systemic, relational driver of performance, stability, and genuine local content development.

V. PRACTICAL IMPLICATIONS OF THE RESEARCH FINDINGS

The findings of this study have significant implications for theory, practice, and future research in the areas of talent retention, training effectiveness, and the development of local content in Nigeria's indigenous oil and gas sector. These implications are based on a thorough qualitative investigation of employee perceptions, organizational practices, and the gaps between policy and practice at Geomarine Systems Limited.

Implications for Theory

This study advances theory by refining Human Capital Theory (HCT) and the Resource-Based View (RBV) in resource-constrained settings. It demonstrates that training effectiveness is moderated by employees' perceptions of fairness, organizational support structures, and regulatory expectations. It also reveals a paradox of skill portability: training enhances individual marketability. It can accelerate turnover when internal career pathways are absent, showing that developing human capital does not automatically secure its retention. The study's primary contribution is the Conditional Strategic Asset Model, which integrates HCT and RBV to argue that human capital becomes a genuine strategic asset only under three conditions: transparent career progression, accountable leadership, and institutionalized learning systems. Otherwise, training investments risk benefiting competitors rather than the focal firm.

Implications for Practice

Training investments alone are insufficient to guarantee employee retention or sustained performance, their impact hinges on strong leadership commitment, robust governance, organizational support, and seamless integration with clear career pathways.

Executive leadership must position training as a core strategic priority by safeguarding dedicated budgets, systematically evaluating return on investment (ROI), embedding NOGICD Act compliance into long-term planning, and actively strengthening mentorship programs and structured career progression frameworks. Human resource management should implement regular, evidence-based training needs assessments, transition from ad-hoc to clearly defined learning pathways and enhance transparency in how training links to career advancement.

They should also establish proactive mechanisms for identifying and addressing early retention risks.

Operational supervisors play a pivotal role by reinforcing training through structured post-training follow-up, deliberate opportunities for applying newly acquired skills on the job, and timely constructive feedback. They should facilitate peer-to-peer knowledge sharing to enhance collective technical capabilities. Organisation-wide, firms should align training initiatives with performance management systems and career development policies. They should consistently benchmark against leading industry practices and monitor key retention metrics to facilitate data-informed decision-making and ongoing improvement.

The implementation should follow a phased and realistic approach. It will begin with a thorough assessment of training needs and baseline retention monitoring. This will be followed by the design and rollout of structured programs. Next, programs will be integrated with existing career structures, and finally, establish ongoing evaluation and refinement cycles.

Implications for Policy

Training in indigenous oil and gas firms does not secure employee retention or contribute to sustainable local content development. As articulated in the Conditional Strategic Asset Model, human capital becomes a genuine strategic asset only when reinforced by transparent career progression pathways, accountable leadership, and institutionalized, continuous learning systems.

The implementation of the NOGICD Act prioritizes training inputs (programs delivered, expenditure levels) over verifiable outcomes, often resulting in symbolic compliance that yields minimal gains in workforce capability or retention. Stronger enforcement is essential. The NCDMB should intensify monitoring, conduct regular audits of training quality and actual delivery, tie contract awards to demonstrated compliance, apply graduated sanctions for non-performance, and mandate public disclosure of training and retention metrics to heighten leadership accountability.

Policy should also introduce minimum standards for training relevance and quality, supported by accredited providers, shared regional training facilities, and deepened industry-academic collaboration. Regulatory attention must extend beyond provision to retention outcomes. Requiring firms to report post-training retention rates and offering incentives (contract preferences, tax relief, public recognition) for strong retention performance would better align incentives with long-term capacity building. Resource-constrained indigenous firms require differentiated support, including phased compliance timelines, shared training, and targeted subsidies or matching grants to prevent disproportionate disadvantage.

Ultimately, policy must shift from mandating training quantity to creating the enabling conditions that embed and

retain human capital within indigenous firms. Without this reorientation, training investments risk continuing to fuel labour mobility toward multinational competitors rather than fostering durable, localized capacity in Nigeria's oil and gas sector.

Implications for Future Research

The study presents several avenues for future research:

- **Test the Conditional Strategic Asset Model:** Conduct large-scale cross-sectional surveys across multiple indigenous oil and gas firms to statistically validate the model's propositions (training → conditional retention) and identify the strongest predictors of when training leads to loyalty versus mobility.
- **Longitudinal Evaluation of Implementation:** Track the impact of recommended actions such as career maps, mentorship programs, and protected budgets. over 2–3 years in one or more firms, measuring changes in turnover rates, engagement scores, knowledge transfer metrics, and project performance.
- **Multi-Case Studies for Transferability:** Replicate the qualitative design in other indigenous service companies to test whether the policy-practice gap, conditional loyalty, and institutionalization imperative are widespread patterns or unique to Geomarine.
- **Founder Leadership Psychology:** Use mixed methods to explore how founder traits, such as growth mindset, risk tolerance, relational orientation, influence training commitment and institutionalization, informing targeted leadership development for SME owners.
- **Comparative ROI of Training Types:** Compare the return on investment of development-oriented versus compliance-driven training, linking employee perceptions to measurable outcomes like retention, error rates, and cost savings, to determine which approach delivers better long-term value.

These approaches will enhance the evidence base, assess the model's applicability in various situations, and provide practical guidance for indigenous firms addressing local content and talent retention challenges.

Limitations of the Study

The key limitations that influence the interpretation and extent of these implications are:

- **Single-Case Study:** The findings are deeply contextual to Geomarine Systems Limited and may not fully generalize to all indigenous firms. Replication in other companies is needed.
- **Potential Social Desirability Bias:** Participants may have softened criticisms due to organizational concerns. This was mitigated through anonymity, voluntary participation, and triangulation with documents.
- **Researcher Positionality:** Prior industry experience aided contextual understanding but required careful

bracketing (via reflexive journaling) to minimize bias.

Despite these limitations, the use of methodological triangulation, purposive sampling across roles, and systematic NVivo analysis strengthens confidence in the findings. The study provides robust, context-rich insights into a critical organizational challenge in Nigeria's oil and gas sector.

VI. CONTRIBUTION TO KNOWLEDGE

This study makes several theoretical and practical contributions by reinterpreting foundational frameworks in light of empirical realities within Nigeria's indigenous oil and gas sector.

First, it introduces the Conditional Strategic Asset Model, showing that training only becomes a genuine strategic asset when specific organizational conditions are met, namely, clear career progression pathways, supportive and accountable leadership, and institutionalized continuous learning systems. Without these enablers, training remains a symbolic or compliance-driven activity with limited impact on retention or performance.

Second, the research reframes Human Capital Theory (HCT) by establishing employee perception as central to its application: it is not the existence of training that matters, but how employees experience it as fair, relevant, and genuinely supported that determines whether it fosters loyalty or fuels disengagement.

Third, the study identifies a skill portability paradox within the Resource-Based View (RBV), revealing that while skilled employees are meant to be inimitable strategic assets, inadequate internal structures allow those very skills to become portable commodities that enhance external employability, ultimately accelerating turnover rather than securing competitive advantage.

By bridging HCT and RBV, the research explains why training investments in indigenous firms often fail to yield retention benefits: human capital is developed but not retained, preventing it from becoming a sustained strategic resource.

Critically, the study adapts these theories to emerging market realities, accounting for contextual constraints such as weak policy enforcement, limited financial resources, and fragile institutional capacity, factors largely absent in traditional Western formulations.

Finally, the findings inform future research, policy, and organizational strategy by offering actionable guidance. To meet Nigeria's local content goals, training should be part of a complete talent system that connects skill-building to real career growth, responsible leadership, and fair access for everyone. This changes training from just a cost to meet

rules into a powerful tool that builds long-term local skills and strength in Nigerian companies.

VII. RECOMMENDATIONS FOR FUTURE RESEARCH

The findings of this study suggest several avenues for further exploration, especially regarding the testing, expansion, and application of the Conditional Strategic Asset Model in various contexts. The following recommendations are based on key results, which highlight the policy-practice gap, the conditional nature of training for retention, the paradox of skill portability, and the necessity for institutionalization.

1. Multi-Case & Model Validation

- Conduct qualitative multi-case studies across 3–5 indigenous firms to test the transferability of patterns such as policy-practice gaps and training-induced mobility.
- Validate the Conditional Strategic Asset Model via large-scale surveys across 10–20 firms, analyzing training adequacy, career pathways, leadership support, and turnover intention using regression or SEM.

2. Longitudinal & Intervention Research

- Compare long-term retention between employees receiving basic operational training versus high-level technical certification in a 5-year cohort study.
- Implement and track structured interventions, such as career maps and mentorship, over 2–3 years to measure causal effects on retention and organizational resilience.
- Study delayed turnover and the role of enabling conditions through panel tracking of employee cohorts over multiple years.

3. Leadership, Culture & Organizational Enablers

- Investigate founder leadership psychology and how traits such as growth mindset influence training commitment and employee development.
- Explore cultural and systemic drivers of leadership accountability and their impact on retention-focused training systems.
- Assess how managerial support and accountable leadership affect training ROI and retention outcomes.

4. Training Design, ROI & Comparative Effectiveness

- Compare the long-term ROI and retention impact of development-oriented training versus compliance-driven training using mixed-methods studies.
- Analyze the cost-benefit of framing training as risk mitigation versus mandatory compliance.
- Examine how transparent career progression maps mediate the relationship between training completion and employee retention.
- Evaluate the effectiveness of different local content training modules across firms.

5. Knowledge Management & Talent Pipelines

- Research youth-centric talent pipelines, such as graduate schemes and apprenticeships, to build early-career loyalty and close skill gaps.
- Map tacit knowledge flows to identify bottlenecks and dependencies, informing interventions such as job rotation or knowledge codification.

6. Policy, Regulation & Technological Innovation

- Pilot and evaluate outcome-focused regulatory metrics (e.g., retention, promotions) with bodies like the NCDMB to move beyond input-based compliance.
- Investigate how policy can incentivize retention-focused training through cross-country comparative analysis.
- Assess whether digital tools (platforms, virtual mentorship) can effectively replicate the enabling conditions of the Conditional Strategic Asset Model.

7. Diversity, Generational & Role-Specific Considerations

- Examine how training-retention dynamics vary across gender, age, and job function to develop tailored retention strategies.
- Conduct intersectional analyses focusing on groups such as young technicians and female engineers who may experience the training paradox more acutely.

This set of recommendations outlines steps to improve research and practices. It aims to ensure that the Conditional Strategic Asset Model becomes a valuable tool for creating strong and competitive indigenous businesses.

VIII. CONCLUSION

This study concludes that insufficient training and upskilling programmes have a significant negative impact on talent retention in indigenous oil and gas service companies operating in Nigeria's Niger Delta region. Employees who perceive limited opportunities for professional development are more likely to experience reduced job satisfaction, lower organisational commitment, and an increased intention to seek employment elsewhere. In contrast, organisations that invest in continuous learning, technical training, leadership development, and career progression initiatives are better positioned to retain skilled employees, enhance workforce productivity, and maintain a competitive advantage.

The findings further suggest that the rapidly evolving nature of the oil and gas industry requires companies to continually upgrade the knowledge and competencies of their workforce to meet technological, operational, and regulatory demands. Failure to prioritise employee development not only contributes to high turnover but also results in increased recruitment costs, loss of institutional knowledge, and reduced organisational performance.

Therefore, indigenous oil and gas service companies should adopt comprehensive and sustainable training and upskilling strategies aligned with employees' career aspirations and organisational objectives. Management should establish structured learning programmes, mentorship initiatives, competency-based training, and clear career advancement pathways to foster employee engagement and long-term commitment. Additionally, collaboration with industry stakeholders, professional bodies, and educational institutions can strengthen workforce capability and support sustainable growth within the sector.

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