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HUMAN CAPACITY DEVELOPMENT AMONG THE WORKFORCE AT ONNE SEAPORT, RIVERS STATE

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ABSTRACT

This article develops Objective One of the uploaded study on human capacity development and workforce challenges at Onne Seaport, Rivers State. The objective was to assess the level of human capacity development among the workforce. The study treats human capacity as a combination of training, retraining, professional certification, technical competence and continuous development. The Chapter Four analysis reports 303 valid observations. Descriptive results show a mean of 2.6 for regular training and retraining, 3.0 for improvement in operational efficiency from human-capacity programmes, 3.3 for availability of professional certification opportunities, 3.9 for training enhancement of technical competence, and 3.0 for workforce development's contribution to faster cargo handling and service delivery. The first hypothesis test reports a Pearson correlation of $r = 0.151$, $p = 0.008$, $N = 303$ between regular training/retraining and workforce-development outcomes. The relationship is weak but statistically significant. The article interprets the result through Human Capital Theory and Systems Theory and relates it to the study's cited Nigerian and international literature. It concludes that workforce development is relevant to port performance, while the regularity and institutionalisation of training require improvement.

KEYWORDS: Human Capacity Development; Workforce Training; Onne Seaport; Port Operations; Maritime Transport; Competence; Human Capital Theory; Systems Theory.

1. INTRODUCTION

Seaports are critical interfaces between maritime transport and national economies. They connect vessels, cargo owners, terminal operators, customs, freight forwarders, logistics providers and inland transport systems. The efficiency of such a system depends not only on physical infrastructure but also on the competence of the people who operate and coordinate it.

Human capacity development involves education, training, technical competence, professional certification, experience, mentoring and continuous learning. In maritime transport, these capabilities are especially important because workers operate specialised equipment, process cargo documentation, respond to safety requirements and increasingly interact with digital logistics systems.

Onne Seaport provides a useful case because its operations involve multiple organisations and occupational groups. The source study therefore examines whether workforce development is sufficiently regular and whether respondents associate it with operational outcomes.

2. Problem Statement

The study identifies a mismatch between the increasing sophistication of maritime technology and the preparedness of the workforce to use such systems effectively. Modern ports require digital documentation, cargo tracking, specialised equipment and coordinated information flows. Without corresponding human skills, technology investments may not deliver their intended benefits.

The source study also identifies limited structured training, professional-development gaps, turnover and labour-management issues as relevant workforce concerns. Existing literature has frequently emphasised infrastructure and port congestion, while comparatively less attention has been given to the integrated role of human capacity at Onne Seaport.

3. Objective, Question and Hypothesis

Objective One: assess the level of human capacity development among the workforce at Onne Seaport, Rivers State. The research question asks: What is the level of human capacity development among the workforce at Onne Seaport?

The first null hypothesis states that there is no significant relationship between human capacity development and workforce challenge at Onne Seaport. The Chapter Four test

operationalises the issue through the association between regular training/retraining and workforce-development contribution to faster cargo handling and service delivery.

4. Conceptual Review

Human capacity development is the systematic development of knowledge, skills, competence and professional capability. It can include formal training, practical learning, certification, mentoring, leadership development and continuous professional development.

Regular training maintains competence as equipment, procedures, regulations and technology change. Retraining is particularly important in ports because new digital systems and automated processes can alter job requirements.

Professional certification provides formal recognition of competence. However, certification should not be treated as a substitute for continuous learning. Competence must be maintained and updated throughout an employee's working life.

5. Human Capital Theory

Schultz (1961) and Becker (1964) conceptualise education and training as investments in human capital. Skills acquired through training can increase productivity by improving workers' knowledge and capabilities. Applied to Onne Seaport, the theory suggests that relevant training can improve employees' capacity to handle cargo, operate equipment, process documentation and provide services.

The theory also implies that training quality and relevance matter. An organisation may spend resources on training without obtaining large performance gains if the training is poorly targeted or workers lack opportunities to apply new skills.

6. Systems Theory and Resource-Based View

Systems Theory views a port as an interconnected system in which people, equipment, technology, management, finance and external institutions interact. Bertalanffy (1968) provides the foundation for understanding why one subsystem cannot be isolated from the whole.

Barney's (1991) Resource-Based View complements this perspective by treating valuable organisational capabilities as potential sources of competitive advantage. Employee knowledge, experience and technical competence can therefore be strategic resources, but their value depends on organisational support and complementary resources.

7. Empirical Literature

Akinola and Usman (2022) found that structured technical training and professional development improved employee productivity, equipment handling, documentation and problem-solving in Nigerian seaports. Akinola and Usman (2023) examined human-capacity and motivational practices among terminal operators. Nwachukwu and Okechukwu (2022) linked human-resource development with organisational commitment.

Nwachukwu, Ndikom and Jibiri (2021, 2023) examined indigenous maritime manpower development and continuing gaps in advanced competencies and certification. Okoro and Eke (2022, 2023) addressed workforce competency and workforce challenges in Nigeria's maritime sector and ports.

International sources including ILO (2022, 2023), UNCTAD (2024, 2025) and WEF (2023, 2024) reinforce the importance of workforce development, skills adaptation and reskilling in changing transport and logistics environments.

8. METHODOLOGY

The study adopted a quantitative survey design. The Chapter Four analysis reports 303 valid observations. The questionnaire covered demographic characteristics, human capacity development, workforce challenges and operational performance. Expert review was used for content and face validity, while a pilot test involving 30 respondents supported reliability assessment.

Data were analysed using SPSS through descriptive statistics and Pearson Product Moment Correlation. Hypotheses were tested at the 5% significance level, with $p < 0.05$ treated as statistically significant.

9. Objective-One Descriptive Results

Respondents disagreed that employees receive regular training and retraining programmes (mean = 2.6). They also disagreed that human-capacity programmes had improved operational efficiency (mean = 3.0).

Respondents agreed that professional certification opportunities were available (mean = 3.3). They agreed more strongly that training programmes enhanced technical competence (mean = 3.9). They also agreed that workforce development contributes to faster cargo handling and service delivery (mean = 3.0).

The pattern indicates a distinction between perceived value of training and perceived regularity of training. Workers recognise the benefits of development while indicating that continuous opportunities are not sufficiently established.

10. HYPOTHESIS-ONE RESULT

The PPMC result reports $r = 0.151$, $p = 0.008$ and $N = 303$ between regular training/retraining and workforce development's contribution to faster cargo handling and service delivery. Because p is below 0.05, the null hypothesis was rejected in the source study.

The correlation is weak in magnitude. It demonstrates a statistically significant association, not a causal effect. Other factors such as equipment, infrastructure, management, technology and institutional coordination can influence port performance.

11. DISCUSSION

The descriptive findings are consistent with Human Capital Theory: respondents recognise that training improves technical competence. However, the low mean for regular training suggests that the challenge is not simply whether training is useful but whether it is sufficiently regular and institutionalised.

The positive correlation is consistent with the expectation that investment in employee capabilities can contribute to performance. The weak magnitude is also consistent with Systems Theory because training is only one subsystem within a port's wider operational system.

The result aligns with Akinola and Usman (2022) and related Nigerian maritime workforce literature. It also supports the wider emphasis on continuous learning and reskilling in technology-intensive industries.

12. Practical Implications

Port management should institutionalise annual and periodic training plans. Training should be practical and directly related to cargo handling, documentation, equipment operation, safety and digital systems.

Professional certification should be complemented with continuing professional development. Competency assessments can identify skill gaps and allow management to target resources effectively.

Technology deployment should be accompanied by digital-skills development. Employees need opportunities to practise new systems and receive support during implementation.

13. CONCLUSION

Human capacity development constitutes an important component of workforce effectiveness at Onne Seaport. The study's respondents recognised the contribution of training to technical competence and workforce development, while expressing concern about the regularity of training and its perceived operational impact.

The significant positive correlation supports the relevance of training and retraining, but its weak magnitude demonstrates that human capacity is only one part of port performance. Workforce development should therefore be integrated with equipment, technology, management, infrastructure and organisational processes.

14. Recommendations and Future Research

Institutionalise continuous training and retraining. Expand professional certification and specialised development. Conduct periodic competency-gap assessments. Align training with new technologies and operational changes. Monitor training outcomes using documentation accuracy, equipment utilisation, service time, safety and customer-service indicators. Integrate workforce planning with port technology and process-improvement programmes.

Future research should examine training expenditure, training frequency, competency assessments and objective operational indicators. Comparative studies across Nigerian ports could determine how institutional and operational contexts influence the return from workforce development.

15. Limitations

The article follows the analysis contained in the uploaded dissertation. The frequency output contains 400 cases with 303 valid observations and 97 system-missing cases. Some source table labels and hypothesis numbering are inconsistent; the article follows the substantive Objective One variables and reported PPMC result. The analysis is therefore presented transparently and should be read within the source study's data limitations.

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