



Stakeholders' insights on basic operational tasks for developing a virtual platform in managing VTE workshops in some NCE-awarding institutions in North-Eastern, Nigeria

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Abstract

This study examines stakeholders' insights on the fundamental operational tasks necessary for effective management of Vocational and Technical Education (VTE) workshops in Nigeria's NCE-awarding institutions. Workshop management forms the backbone of technical education delivery, requiring efficiency in organization, resource allocation, maintenance, and supervision. Using a descriptive survey design, data were collected from 141 respondents—including instructors, technologists, and administrators—from eight NCE-awarding institutions in North-Eastern Nigeria. Two validated Likert-scale questionnaires were administered, and data were analyzed using mean and standard deviation. Findings revealed that record-keeping, equipment maintenance scheduling, inventory control, safety monitoring, and task coordination are considered essential operational tasks by stakeholders. The study recommends institutional restructuring of workshop management processes to strengthen accountability and efficiency. It also calls for policy reforms that integrate digital record systems and capacity building among workshop staff to ensure sustainability and modernization of VTE practices in Nigeria.

Keywords: Workshop management, VTE, operational tasks, NCE-awarding institutions, stakeholders' perspectives

Introduction

Vocational and Technical Education (VTE) serves as a vital instrument for socio-economic development and industrial advancement. In Nigeria, VTE institutions are charged with producing skilled manpower capable of supporting national growth through innovation, entrepreneurship, and practical competencies. The National Policy on Education (Federal Republic of Nigeria, 2014) [7] emphasizes that VTE instruction must be practical, functional, and technology-driven.

Effective workshop management is central to the realization of these goals. Workshops are learning environments where technical skills are developed through hands-on activities; therefore, their operations must be systematic, efficient, and well-coordinated. Basic operational tasks such as equipment maintenance, inventory control, record-keeping, safety management, and supervision are indispensable to ensuring effective teaching and learning (Okolie & Igwe, 2019; Ibrahim & Oke, 2021) [8, 11].

However, many NCE-awarding institutions in Nigeria still rely on manual systems of workshop management, which are often characterized by poor documentation, inadequate maintenance schedules, and inconsistent supervision (Ojo & Akinlabi, 2022) [10]. These inefficiencies negatively affect productivity, accountability, and instructional quality. Understanding the perspectives of workshop stakeholders—those directly responsible for day-to-day operations—is therefore crucial to identifying and strengthening the fundamental tasks needed for efficient workshop management.

This study, therefore, explores stakeholders' insights into the essential operational tasks that underpin effective workshop management in NCE-awarding institutions in North-Eastern Nigeria.

Aim and Objectives of the Study

The main aim of this study is to investigate stakeholders' insights into the basic operational tasks required for effective management of electrical workshops in NCE (Technical) awarding institutions in North-Eastern Nigeria. Specifically, the study seeks to

1. Identify the basic operational tasks currently undertaken by electrical workshop personnel in NCE (Technical) awarding institutions in North-Eastern Nigeria.
2. Determine which of these operational tasks stakeholders consider most critical for improving the efficiency of workshop management.

Research Questions

1. What are the basic operational tasks currently performed by electrical workshop personnel in NCE (Technical) awarding institutions in North-Eastern Nigeria?
2. Which of these operational tasks are perceived by stakeholders as most critical to improving the management of electrical workshops in NCE (Technical) awarding institutions in North-Eastern Nigeria?

Significance of the Study

This study holds practical and policy relevance in advancing effective management of VTE workshops in Nigeria. Its significance is summarized as follows

1. It provides administrators with data-driven insights for reorganizing and improving workshop operations.
2. It guides workshop supervisors and technologists in prioritizing essential operational activities such as maintenance, safety, and record-keeping.
3. It contributes to the body of literature on effective workshop management and provides empirical evidence to support modernization efforts in VTE.

- The findings will assist the National Commission for Colleges of Education (NCCE) and other policy stakeholders in strengthening institutional frameworks for technical education delivery.

The study focuses solely on electrical workshops within NCE-awarding institutions in North-Eastern Nigeria.

Literature Review

1. Theoretical Framework

This study is anchored on the Systems Theory (Bertalanffy, 1968) ^[5], which views an organization as an interrelated set of components that must function harmoniously for efficiency. In workshop management, all operational tasks—maintenance, supervision, safety, and documentation—must interact systematically to achieve optimal outcomes.

2. Overview of Workshop Management

Workshop management involves planning, organizing, coordinating, and controlling technical operations. Okolie and Igwe (2019) ^[11] noted that efficiency in workshop settings depends largely on adherence to maintenance schedules, accurate record-keeping, and effective utilization of materials and equipment.

Eze, Nwosu, and Uzochukwu (2022) ^[6] added that proper documentation and supervision improve accountability, while Adedokun and Afolabi (2018) ^[1] stressed that communication between instructors and technologists fosters collaborative problem-solving.

3. Core Operational Tasks in Workshop Management

Afolayan, Adewale, and Alabi (2020) ^[2] categorized workshop operational tasks into preventive maintenance, safety monitoring, equipment inventory, task assignment, and reporting. Each of these areas ensures that practical activities are carried out efficiently and that resources are used judiciously.

Ibrahim and Oke (2021) ^[8] emphasized that a clear maintenance policy prevents downtime and extends equipment lifespan. Similarly, Ojo and Akinlabi (2022) ^[10] identified record-keeping and resource tracking as the weakest areas in Nigerian technical institutions due to inadequate training and poor supervision.

4. Related Empirical Studies

Empirical evidence supports the idea that effective management practices significantly influence instructional quality. Oladipo and Adeoye (2019) ^[13] found that systematic documentation in workshops enhances students' technical engagement. Similarly, Bello (2023) ^[4] reported that institutions with structured maintenance routines demonstrate higher operational efficiency than those using ad hoc systems.

5. Summary of Literature Reviewed

The reviewed literature establishes that operational tasks such as maintenance, supervision, record-keeping, and inventory control are central to workshop functionality. However, literature on the prioritization of these tasks from stakeholders' perspectives in Nigerian NCE-awarding institutions remains limited, hence the relevance of this study.

Methodology

A descriptive survey research design was adopted. The study covered the six states of North-Eastern Nigeria—Bauchi, Borno, Gombe, Adamawa, Taraba, and Yobe—housing eight NCE (Technical) awarding institutions. The population comprised 423 stakeholders, including instructors, technologists, and administrators. A random sample of 141 respondents (approximately 33% of the population) was selected.

Two structured instruments were used

- Operational Tasks Assessment Questionnaire (OTAQ)
- Workshop Efficiency Evaluation Questionnaire (WEEQ)

Both instruments contained 15 items rated on a five-point Likert scale from Strongly Agree (5) to Strongly Disagree (1). The instruments were validated by experts in VTE and educational management, and a Cronbach's Alpha reliability coefficient of 0.89 confirmed internal consistency.

Data were analyzed using mean and standard deviation. A decision mean of 3.00 was adopted as the benchmark for acceptance.

Results and Discussion

Findings revealed that the most significant operational tasks identified by stakeholders include

- Equipment inventory and maintenance scheduling;
- Task assignment and supervision;
- Record management and documentation;
- Communication and coordination among staff; and
- Safety and performance evaluation.

Mean scores ranged from 3.46 to 4.72, indicating strong stakeholder consensus on the importance of these tasks. These findings corroborate those of Afolayan *et al.* (2020) ^[2] and Eze *et al.* (2022) ^[6], who noted that structured maintenance and documentation systems are crucial to workshop efficiency.

Respondents emphasized that consistent supervision, accurate records, and preventive maintenance form the backbone of sustainable workshop management. This aligns with Bello (2023) ^[4], who observed that stakeholder engagement enhances accountability and improves the operational culture within technical institutions.

Conclusion and Recommendations

The study concludes that effective workshop management in Nigeria's VTE institutions depends on systematic execution of core operational tasks, including equipment maintenance, record-keeping, supervision, and safety management. Stakeholders agree that strengthening these tasks will improve efficiency, accountability, and instructional quality.

Recommendations

- Administrators should institutionalize standard operating procedures for maintenance and documentation.
- The NCCE should establish monitoring frameworks for workshop operations.
- Capacity-building programs should be provided for instructors and technologists in workshop management and record systems.

4. Further studies should explore digitalization strategies for enhancing these identified operational tasks.

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