International Journal of Applied Review
www.multiappliedjournal.com
ISSN: 3107-8443
Received: 18-11-2025, Accepted: 17-12-2025, Published: 01-01-2026
Volume 2, Issue 1, 2026, Page No. 1-4

An evaluation of task distribution methods in project management; A case study of some construction companies in Abuja

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Abstract
This research evaluates task distribution methods in project management with a particular focus on construction companies in Abuja. The study investigates how tasks are allocated, monitored, and executed, while analyzing their effects on project performance. Using surveys, interviews, and direct observation, data were collected from selected construction companies. The methodology involved both qualitative and quantitative approaches, including descriptive statistics, correlation analysis, and hypothesis testing. The results indicate that the application of systematic task distribution significantly improves efficiency, reduces delays, and enhances project delivery outcomes. Furthermore, it was found that many firms rely on traditional manual methods, while only a few utilize advanced project management tools. The findings highlight gaps between recommended practices and actual implementation in the Nigerian construction sector. This research provides practical insights for project managers, construction stakeholders, and policymakers on how structured task distribution can improve productivity and accountability.

Keywords: Evaluation, task, distribution, project, management, construction, companies

Introduction

Project management is a critical discipline that ensures the systematic planning, organization, and execution of resources in order to achieve specific objectives within defined constraints of time, cost, and quality. In construction projects, where complexity and interdependence of activities are common, the effective distribution of tasks plays a vital role in the success of the project. Task distribution refers to the process of allocating responsibilities, duties, and activities among team members to ensure that project objectives are met efficiently. According to [1], poor task distribution can lead to duplication of efforts, delays, cost overruns, and even project failure. Conversely, effective allocation enhances collaboration, accountability, and productivity.

In Nigeria, the construction industry is one of the major contributors to the economy, employing a large proportion of skilled and unskilled labor [2]. Despite its potential, the industry is plagued by inefficiencies, delays, and mismanagement, often caused by poor planning and ineffective task distribution methods [3, 4]. Studies have shown that many construction firms in Abuja rely heavily on traditional management techniques such as manual task assignments and verbal instructions [5]. However, with the advent of modern project management tools and software, task distribution can now be automated, monitored, and optimized to improve project outcomes [6]. This study focuses on evaluating the task distribution methods employed by construction companies in Abuja, with the objective of identifying best practices, gaps, and challenges. It seeks to answer the following research questions;

1. What task distribution methods are currently used by construction companies in Abuja?
2. How effective are these methods in ensuring project success?
3. What are the major challenges associated with implementing modern task distribution methods in the Nigerian construction sector?

The significance of this research lies in its potential to contribute to improved project management practices in Nigeria. By highlighting the strengths and weaknesses of current methods, the study provides insights that can guide construction managers, policymakers, and stakeholders toward more effective and sustainable practices. Project management is the application of knowledge, skills, tools, and techniques to project activities in order to meet project requirements [7]. It involves balancing competing demands such as scope, time, cost, quality, resources, and risk. In the construction industry, project management provides a structured framework for coordinating labor, materials, and equipment toward successful project completion [8].

Task distribution refers to assigning responsibilities and duties to individuals or teams to achieve project deliverables. Effective task distribution ensures that work is clearly defined, appropriately assigned, and efficiently executed [9]. According to [10], clarity of roles and responsibilities enhances accountability, reduces duplication of efforts, and minimizes conflicts among team members. Traditional methods of task distribution in construction projects include direct supervision, manual delegation, and verbal instructions [11]. While these methods are widely

practiced, they are often inefficient and prone to miscommunication. Recent studies highlight the benefits of modern methods such as digital project management systems, which provide automated scheduling, task tracking, and performance monitoring [12]. The success of construction projects depends heavily on how well tasks are allocated and coordinated. Poor task distribution has been linked to delays, cost overruns, and reduced quality of output [13]. Conversely, structured task allocation enhances collaboration, timely delivery, and adherence to budget [14]. For example [15], showed that companies that adopted formal task allocation frameworks experienced improved productivity and reduced disputes among workers. Similarly [16], emphasized that when tasks are distributed based on workers' skills and experience, efficiency is significantly enhanced. Despite the recognized importance of effective task allocation, several challenges hinder its practice in Nigeria's construction sector. These include inadequate planning, lack of skilled project managers, resistance to change, and limited access to digital tools [17]. Furthermore, cultural and organizational factors such as hierarchical management structures often lead to bottlenecks in decision-making [18]. A study by [19] found that many construction firms in Abuja rely heavily on manual systems of task distribution, which are prone to human error and inefficiency. Another report [20] highlighted that even when digital systems are available, poor training and lack of technical expertise limit their adoption.

Empirical evidence on task distribution in Nigeria is limited, but available studies reveal recurring challenges of inefficiency and mismanagement. For example [21], examined project delivery in Lagos and found that ineffective task allocation contributed significantly to project delays. Similarly, [22] reported that construction firms in Northern Nigeria suffered from poor productivity due to unclear task assignments. The literature therefore underscores the need for improved methods of task distribution in the Nigerian construction industry. While advanced digital systems have shown promise globally, their adoption in Nigeria remains low due to financial and technical constraints [23].

Methodology

1. Research Design

This study adopted a descriptive survey research design to evaluate task distribution methods used in construction companies in Abuja. Both qualitative and quantitative data were collected to provide a comprehensive understanding of the subject.

2. Population and Sample Size

The population of the study consisted of registered construction companies operating in Abuja. A purposive sampling technique was employed to select companies actively involved in building and civil engineering projects. A total of 15 companies were selected, and within each company, project managers, supervisors, and workers were surveyed. This yielded a sample size of 120 respondents.

3. Data Collection Instruments

Data were collected using the following instruments:

1. **Structured Questionnaire:** Designed to gather information on current task distribution methods, their effectiveness, and challenges faced.
2. **Interviews:** conducted with project managers to gain deeper insights into organizational practices.
3. **Direct Observation:** used to assess actual project sites and verify responses provided by participants.

Data Analysis Techniques

Data were analyzed using both descriptive and inferential statistical methods. Percentages, means, and standard deviations were employed to summarize responses. Correlation and regression analyses were used to test hypotheses and determine relationships between task distribution methods and project outcomes.

The hypotheses were tested using the student's t-test and chi-square (x^2) at a 0.05 level of significance, given the chi-square formula;

$$x^2 = \sum_1 \frac{(O-E)}{2E}$$

Where

O = Observed frequency

E = Expected frequency

This test was used to determine whether there was a significant relationship between task distribution methods and project performance.

1. Validity and Reliability of Instruments

The questionnaire was subjected to expert review by professionals in project management to ensure content validity. A pilot study was also conducted in two construction companies outside Abuja, and Cronbach's Alpha was used to test reliability. The reliability coefficient obtained was 0.82, indicating high internal consistency.

2. Ethical Considerations

The study adhered to ethical standards by ensuring informed consent, confidentiality of responses, and voluntary participation of all respondents.

Results and Discussion

This section presents the findings from the field survey, interviews, and observations conducted in the selected construction companies in Abuja. Results are discussed in line with the research objectives and supported with relevant literature.

1. Demographic Characteristics of Respondents

Table 3.1 presents the demographic information of respondents such as gender, age, educational qualification, and work experience.

Table 1: Demographic Characteristics of Respondents

Variable	Frequency	Percentage (%)
Male	95	79.2
Female	25	20.8
Age (20–30 years)	32	26.7
Age (31–40 years)	48	40.0
Age (41–50 years)	28	23.3
Age (51 years and above)	12	10.0
OND/HND	20	16.7
B.Sc./B.Eng.	72	60.0
M.Sc./M.Eng.	28	23.3
Work Experience < 5 years	35	29.2
Work Experience 5–10 years	54	45.0
Work Experience > 10 years	31	25.8

The results show that the majority of respondents were male (79.2%), reflecting the male dominated nature of the construction industry in Nigeria. Most respondents were between 31– 40 years of age, indicating that the workforce is relatively young.

2. Task Distribution Methods Used by Companies

The study revealed that most companies employed traditional task distribution methods such as manual delegation and verbal instructions. Table 4.2 shows the distribution of methods.

Table 2: Task Distribution Methods

Method	Frequency	Percentage (%)
Manual delegation (verbal)	60	50.0
Written instructions (memos, letters)	28	23.3
Project management software	20	16.7
Hybrid approach (manual + software)	12	10.0
		100%

It is evident that manual delegation dominates, accounting for 50% of responses, while only 16.7% of companies use modern project management software.

3. Effectiveness of Task Distribution

Respondents rated the effectiveness of their task distribution methods based on timeliness, clarity, and productivity.

Table 3: Effectiveness Ratings of Task Distribution

Rating	Frequency	Percentage (%)
Very Effective	24	20.0
Effective	38	31.7
Fairly Effective	40	33.3
Ineffective	18	15.0
		100%

The results indicate that only about half of the respondents rated their task distribution methods as effective or very effective, suggesting room for improvement.

4. Hypothesis Testing

The chi-square test was used to examine the relationship between task distribution methods and project performance. The calculated chi-square value ($X^2 Cal$) was 18.62, which is greater than the critical value ($X^2 Crit$ = 11.07 at 0.05 significance level, df = 5).

Therefore, the null hypothesis (that there is no significant relationship between task distribution methods and project performance) is rejected. This implies that task distribution methods significantly affect project outcomes in construction companies in Abuja.

Discussion of Findings

The findings align with [13, 15], which emphasized that effective task distribution enhances productivity and project delivery. The predominance of manual delegation reflects the slow adoption of technology in Nigerian construction firms, similar to observations by [19].

While traditional methods provide some level of flexibility, they are prone to errors and inefficiency. Companies that used project management software reported better monitoring, accountability, and timeliness, consistent with the results of [12].

The implication is that modern task distribution tools should be integrated more widely to improve project management practices in Nigeria.

Conclusion

This study evaluated task distribution methods in project management, focusing on selected construction companies in Abuja. The findings revealed that while traditional methods such as manual delegation and verbal instructions remain dominant, their effectiveness is limited. Companies that adopted modern project management tools experienced greater efficiency, accountability, and timely delivery of projects. Statistical analysis showed a significant relationship between task distribution methods and project performance, confirming that structured allocation of tasks enhances productivity. However, challenges such as inadequate training, resistance to change, and limited access to technology hinder the adoption of modern methods.

Recommendation

The study recommends;

1. Construction firms in Abuja should adopt digital project management tools to enhance efficiency.
2. Training programs should be organized for project managers and workers on modern task allocation systems.
3. Policymakers should support the construction sector by providing incentives for technological adoption.

By improving task distribution practices, the Nigerian construction industry can achieve better project outcomes, reduced delays, and increased competitiveness.

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