E-ISSN: 1116 - 2759 P-ISSN: 3027-0111
MPRI-EDIR | INTERNATIONAL JOURNAL OF EARTH DESIGN AND INNOVATION RESEARCH
VOL. 10 NO. 4 – OCTOBER, 2025

ATTRIBUTES OF PLANNING IN BUILDING PROJECT DELIVERY IN AKURE, ONDO STATE, NIGERIA

LAWAL, OLAJUMOKE MARY; & SHITTU, FOLA OLUWAKEMI

Department of Project Management Technology, Federal University of Technology, Akure, Ondo State, Nigeria.

Corresponding Author: lawalolajumoke27@gmail.com

DOI: https://doi.org/10.70382/mejedir.v10i4.057

Abstract

Project planning is a fundamental component of management and execution of project. This study aims to assess the attributes that determine planning in building project delivery in Akure, Ondo State, Nigeria. A survey research design which involves the use of structured questionnaire was used to collect data. The study obtained a sample size of 208 construction professionals from a population of 433 registered construction professional members in the study area based on stratified random sampling technique. Relative Importance Index (RII) was used to analyze the data collected. Findings revealed that the top three attributes that determine planning in building project delivery are sufficient resource capacity (RII = 0.875), availability of resources (RII = 0.857) and satisfactory pre-construction planning (RII = 0.849). The study concludes that sufficient resource capacity is the most important attribute that determines planning in building project delivery in Akure, Ondo State. Hence, this study recommends that every project stakeholder should put in their input towards practices that promote planning in building project as this is crucial for successful performance of building project delivery. Also, clients and contractors should ensure adherence to the top three attributes that determine planning in building project delivery.

Keywords: Planning, building, building project, delivery, project delivery

EDITOR-IN-CHIEF
Prof. W. F. HILL [MALAWI]

Introduction

Planning plays a vital role in the management and execution of project (Irfan et al., 2021). While a well-prepared plan does not always guarantee success, the absence of any plan almost certainly leads to failure (Ashenafi, 2022). Meanwhile, Rezvani et al. (2020) noted that in the delivery of construction projects, private clients tend to commit more resources and effort to project planning than their public counterparts. Successful project delivery is the result of effective construction planning and well-structured schedules established in advance (Akinola et al., 2019). Project delivery refers to a project stage in which the final solution is executed, integrated, and formally handed over to the client (Fischer et al., 2017). Estrellas (2024) defined project delivery as the process of executing and accomplishing all the requirements necessary for a project's completion. This involves meeting the project's goals within the specified schedule, financial limits, and quality benchmarks (Indeed, 2022). During the project delivery process, multiple stakeholders such as clients or owners, designers, project managers, project teams, contractors, subcontractors, and suppliers work together to ensure the successful completion of the project (Scispace, 2023). Successful project delivery depends on thorough planning, effective resource utilization, and strong problem-solving abilities from skilled project professionals (Estrellas, 2024).

The phases that make up project delivery are generally referred to as the project lifecycle, which include initiation, planning, execution, monitoring and controlling, and closing (Project Management Institute, 2021). The planning phase represents the preparatory effort that precedes project execution (PMI, 2021). The significance of planning is comparatively more prominent than the subsequent stages of project development, as they substantially influence the successful delivery of a project (Iqbal et al., 2024).

Statement of the Problem

Planning helps in defining, prioritizing, and allocating the scope, schedule, and cost required to deliver a project within budget and on time (Atlassian, 2024). Unfortunately, Slaeat (2024) observed that many projects are often executed without formal planning, which exposes them to numerous challenges, including excessive design changes, budget overruns, delays in completion, minimal or no profitability, among others. Inappropriate planning of building projects in Nigeria prompt the occurrence of issues such as project delays, spending more than the allocated cost, misuse of materials and a lot more (Ofem et al., 2021). Slaeat (2024) revealed that poor planning and scheduling emerged as the leading causes of cost and time variations in projects. In a study conducted by Yap et al. (2021), out of 20 causes of delay in construction, lack of proper planning and scheduling by the contractor ranked the highest on the severity scale. This is supported by Sanni-

EDITOR-IN-CHIEF
Prof. W. F. HILL [MALAWI]

Anibire et al. (2020) who found that inadequate planning by contractors is a major cause of delay in construction project. Likewise, Ofem et al. (2021) noted that inadequate project planning increases the likelihood of project failure. Addressing this issue is imperative for improving the performance of building project delivery. Therefore, this study assessed planning attributes by providing information on important attributes that determine planning in building project delivery in Akure, Ondo State, Nigeria.

Aims and Objectives

The general objective of the study is to assess the attributes of planning in building project delivery with a view to improving the performance of building project delivery in Akure, Ondo State, Nigeria.

The specific objective of the study is to:

i. assess the attributes that determine planning in building project delivery in Akure.

Concept of Planning

Planning consists of identification of the project management group's intention regarding the methods and procedures they intend to employ towards the management of the project's time function (PMI, 2021). In other words, it includes a statement depicting what the project management group intends to do, how it will be done, and what will be used to do it (Sima, 2022). However, the effort spent in planning can save countless hours of confusion and rework during project execution (Praveen and Khaton, 2016). Planning could be classified into short-term (daily and weekly), medium-term (monthly and quarterly), and long-term (yearly, such as one to ten years).

Key process involved in planning

According to Armitree (2022), the key process involved in planning are:

i. Identify the stakeholders: Identify individuals or group who has an interest in the project outcome and can either affect or be affected by the project. Examples of project stakeholders are clients, end users, community, contractors, suppliers, etc.
ii. Define roles and responsibilities: Define the roles and responsibilities of the listed stakeholders to achieve the project objectives.
iii. Hold kick off meeting: Hold the first meeting with all the project stakeholders to meet, establish good working relationship, discuss the purpose of the project, and make their roles and responsibilities known to them.
iv. Define project scope, budget and timelines: Establish the project objectives, the project timeline, the resources that are needed to meet project objectives, the total cost of the resources, and project budget.

EDITOR-IN-CHIEF
Prof. W. F. HILL [MALAWI]

v. Set goals and prioritize tasks: Determine all the in-between tasks and goals that will help to achieve the project by ensuring the goals are SMART and CLEAR, and tasks are prioritized.
vi. Define the project deliverables: Define those products, result or capability to perform a service that needs to be produced in order to complete a project.
vii. Create the project schedule: Develop a project schedule that include a detailed project's timeline, resources allotted for each tasks and any instruction needed to complete the tasks.
viii. Complete a risk assessment: Take a realistic look at what might go wrong during the project and work out some proactive steps to minimize or avoid them.
ix. Communicate project plan: Communicate the plan to the stakeholders involved in the project.

Benefits of effective planning to achieve timely completion of project

Chaudhry et al. (2022) highlighted four main benefits that make planning worthwhile which include:

i. Planning provides a clear understanding of what tasks should be done and when they should be done: Without effective planning, projects may be carried out at the wrong time or in an improper manner, leading to poor outcome.
ii. It helps mollify and manage crises, ensuring smoother implementation: While unforeseen circumstances are inevitable in projects, proper planning reduces their likelihood and prepares the team to address them effectively.
iii. It improves focus on priorities, promoting the efficient use of time, money, and other resources: Having a defined plan or roadmap enables the allocation of limited resources to key activities that are most likely to deliver the intended change.
iv. It helps define what success looks like: Proper plan helps individuals and team members to evaluate whether the achieved results aligned with the initial objectives and to assess any disparities.

Empirical Review

The study of Akinola et al. (2019) on factors influencing construction project planning and implementation revealed that type of client and type of project are the top two factors influencing project planning in Nigerian construction industry while insufficient finance and changes in client requirement are the top two factors influencing implementation of project plans. The study also established that the importance attached to project planning varies between different types of client. The study concluded that the knowledge of the factors influencing project planning and implementation will assist construction

stakeholders in re-evaluating their project planning endeavors and methods in order to enhance the performance of construction projects. A total of 108 respondents were selected through random sampling technique. The study adopted questionnaire survey, data were collected from professionals working in construction firms in South Western Nigeria. The study employed descriptive statistics and ANOVA to analyse the data.

Considering the study of Ahmed et al. (2018) on factors affecting construction planning, findings revealed that the most important factors influencing construction planning in Egypt are resource capacity, project scope definition, selection of team members, experience and intuition of team members, past experience from last similar projects, accurate work flow planning, financial analysis, material delivery, and resource availability. A list of 66 factors influencing construction planning were first collected using a comprehensive literature review. However, Delphi technique was employed with the participation of a surveyed panel of 29 experienced engineers to minimize the factors to 9.

In United Kingdom, Subbiah (2012) conducted a study on an investigation of the factors influencing the success of construction planning of 2012 London Olympic stadium: An ethnographic study. Findings revealed that factors influencing planning are pre-construction planning, top organization inclination towards planning, project participants, influence of the client and contract, and efficiency of the planning team. The study employed ethnography method to gather participant observation.

Methodology

This study adopted a survey research design which involves the use of structured questionnaire for data collection. The study obtained a sample size of 208 construction professionals from a population of 433 registered construction professional members (engineers, builders, quantity surveyors, and architects) in the study area, the selection of the participants was based on stratified random sampling technique. The questionnaire was made up of two parts which contain questions relating to demography of the respondents and the attributes that determine planning in building project delivery. The indicators for each of the construct employed a 5-point Likert scale, where 1 = strongly disagree, 2 = disagree, 3 = moderate, 4 = agree, 5 = strongly agree. The data collected were analysed using descriptive statistics (Relative Importance Index) on Statistical Package for Social Sciences (SPSS) software Version 20.

Response Rate

A total of 208 copies of questionnaire were randomly administered among the respondents. 190 were retrieved while 169 were dully filled and considered valid for the purpose of this research.

EDITOR-IN-CHIEF
Prof. W. F. HILL [MALAWI]

Planning Attributes

Table 1 shows the attributes that determine planning in building project delivery. Sufficient resource capacity (RII = 0.875) is the most important attribute that determines planning in building project delivery. Wilson (2019) described resource capacity as the ability of available resources (human, material, financial, equipment and technological resources) to meet the demands of a project. Having sufficient resource capacity ensures that a project progresses smoothly without delay or disruptions. This is in agreement with the study of Ahmed et al. (2018) who opined that deficit of resource capacity may cause project delay. The second most important attribute that determines planning in building project delivery is availability of resources (RII = 0.857). Resource availability has been described as the extent to which necessary resources (human, material, equipment, financial and technological resources) needed to execute a project are accessible and ready for use (Mosaic, 2024). Identifying and securing key resources needed to execute a project at the early stage helps prevent shortages and delay (Rugiri and Njangiru, 2018).

Satisfactory pre-construction planning (RII = 0.849) is the third most important attribute that determines planning in building project delivery. Pre-construction planning has been regarded as a factor that involves comprehensive assessment and preparation of all aspects of a project before the commencement of actual construction (Larsen et al., 2018). Satisfactory pre-construction planning establishes clear project scope, accurate budget and timelines based on resource needs and availability; minimizes uncertainties and improves decision making during construction (Abbas et al., 2016). This concurs with the conclusion of Larsen et al. (2018) who revealed that pre-construction planning is very helpful to progress in advance with design, risk analysis, team formation and procurement phase before the commencement of actual construction. Timelines in material delivery (RII= 0.847) closely follows. Promptness in delivering materials exactly when needed on site enhances steady work flow by minimizing risk of downtime, cost increases, storage issues and work interruptions (Koriom et al., 2019). Appropriate definition of scope was ranked fifth (RII = 0.840). Project scope refers to an outline that entails all aspects of the work to be done, including the project's objectives, deliverables, timelines, resources and constraints. Defining project scope appropriately ensures proper resource allocation, reduces scope creep and re-work (Kiyanju et al., 2022). Hence, allowing project stay on schedule and within budget.

Other planning attributes that were ranked important are vast experience and intuition of team members (RII = 0.839), suitable selection of team members (RII = 0.830), availability of work flow plan (RII = 0.804), adequate use of past experience from similar projects (RII = 0.786), type of project being handled (RII = 0.781), expertise in financial analysis (RII = 0.766) and type of client involved in the project (RII = 0.709). Having

EDITOR-IN-CHIEF
Prof. W. F. HILL [MALAWI]

experienced team members enhances project efficiency and minimizes costly mistakes as team members can foresee issues even before they arise, they can also implement lessons learned from past projects and solve intending problems (Terzieva and Morabito, 2016). Kinyanjui et al. (2022) revealed that selecting the right team members based on their skills, qualification and experience ensures that task are completed effectively, with each member contributing their expertise to meet project goals within the required timeline and budget. In a similar vein, availability of workflow plan is a well-known attribute that determines planning in building project delivery. A clear workflow plan enhances proper coordination, resource management, speed and project tracking (Hattab and Hamzeh, 2016).

Table 1: Attributes that Determine Planning in Building Project Delivery

Planning Attributes	RII	Rank
Sufficient resource capacity	0.875	1st
Availability of resources	0.857	2nd
Satisfactory pre-construction planning	0.849	3nd
Timeliness in material delivery	0.847	4th
Appropriate definition of project scope	0.840	5th
Vast experience and intuition of team members	0.839	6th
Suitable selection of team members	0.830	7th
Availability of workflow plan	0.804	8th
Adequate use of past experience from similar projects	0.786	9th
Type of project being handled	0.781	10th
Expertise in financial analysis	0.766	11th
Type of client involved in the project	0.709	12th

Source: Researcher's field survey (2024)

Conclusion and Recommendations

This study explored the attributes that determine building project delivery in Akure, Ondo State, Nigeria. Based on the findings, the study concluded that sufficient resource capacity is the most important attribute that determines planning in building project delivery in Akure, Ondo State. Sufficient resource capacity guarantees smooth project progress without delays or disruptions.

Hence, this study recommends that every project stakeholder (clients, contractors, and consultants) should put in their input towards practices that promote planning in building project as this is crucial for successful performance of building project delivery. Also, clients and contractors should ensure adherence to the top three attributes that determine planning in building project delivery.

EDITOR-IN-CHIEF
Prof. W. F. HILL [MALAWI]

References

Ahmed, E. F. E., Hosni, H. E. & Yamany, A. E. (2018). Factors affecting construction planning. *Journal of Al Azhar University, Engineering sector*, *13*(46), 14-19.

Akinola, G. A., Ogunde, A. O., Ogundipe, K. E. & Akuete, E. (2019). Factors influencing construction project planning and implementation: Lessons from South Western Nigeria. *International Journal of Mechanical Engineering and Technology (IJMET)*, *10*(4), 1031-1042.

Armitree (2022). 9 simple steps to improve project planning. https://www.armitree.com

Ashenafi, M. (2022). *An assessment on the practices and challenges of project planning and implementation: the case of federal technical and vocational education training agency (FTVETA) office building expansion project* (Master's Thesis/Dissertation, St. Mary's University Institutional Repository, Addis Abab, Ethiopia).

Atlassian (2024) Project planning like a boss. https://www.atlassian.com/work-management/project-management/project-planning

Chaudhry, N., Ayaz, M. & Wahla, K. (2022). Exploring the relationship between project planning and timely completion of a project through confirmatory factor analysis. *Empirical Economic Review*, *5*(2), 01-26.

Estrellas, L. (2024). Project delivery. https://safetyculture-com/topics/project delivery/

Fischer, M., Ashcraft, H. W., Reed, D. & Khanzode, A. (2017). *Integrating project delivery*. Wiley Publishing. ISBN 978-0470587355, 480 pgs.

Hattab, M. A. & Hamzeh, F. H. (2016). Analyzing design workflow: An agent-based modeling approach. *Procedia Engineering*, *164*, 510-517.

Indeed (2022). Delivering a project: Key elements and how to do it. https://www.indeed.com/career-advice/career-development/delivering-project.

Irfan, M., Khan, S. Z. Hassan N., Hassan, M., Habib, M., Khan, S. & Khan, H.H. (2021). Role of project planning and project manager competencies on public sector project success. *Sustainability*, *13*(3), 1421-1439.

Iqbal, S., Nawaz, M. J., Ali, A. & Osman, E. (2024). Investigating the impact of project planning on construction project success through the mediating role of risk management and safety climate. *International Journal of Organizational Leadership*, *13*(first special issue), 119-139.

Kiyanjui, P. M., Ngugi P. K. & Ombui, K. (2022). Project scope definition and performance of government construction projects in Kenya. *African Journal of Emerging Issues*, *4*(11), 92-98.

Kobusingye, B., Mungatu, J. K., & Mulyungi, P. (2017). Influence of stakeholders involvement on project outcomes. A case of water, sanitation, and hygiene (wash) project in Rwanda. *European Journal of Business and Social Sciences*, 6(6), 195-206.

Koriom, N. K., Brahim, J., Zakaria, I., Kaish, ABM A. & Moshen, M. (2019). The state of the art of materials management research in the construction industry. *MATEC web of Conferences*, *266*, 05103.

Kuhil, A. M. & Seifu, N. (2019). Causes of delay in public building construction projects: A case of Addis Ababa administration, Ethiopia. *Asian Journal of Managerial Science*, *8*(2), 4-9.

Larsen J. K., Lindhard S. M., Brunoe T. D. & Jensen, K. N. (2018). The relation between pre-planning, commissioning and enhanced project performance. *Construction Economics and Building*, *18*(2), 1-14.

Mosaic (2024). What is resource availability? www.mosaicapp.com/glossary/resource availability.

Ofem P. E., Wofai, E. & George, S. U. (2021) Construction Project Management in the Niger-Delta: Delays and Consequences. *Quest Journals Journal of Architecture and Civil Engineering* 6(3), 01-19.

Praveen, R. S. & Khaton, S. (2016). Planning and scheduling of G+4 octagonal shape building using Primavera. *International Journal of Advanced Scientific and Technical Research*, *5*(6), 429-439.

EDITOR-IN-CHIEF
Prof. W. F. HILL [MALAWI]

Project Management Institute (2021). *A guide to the Project Management Body of Knowledge: (PMBOK Guide, 7th Ed.)*. Pennsylvania, USA, Project Management Institute, Inc.

Rezvani, A; Ashkanasy, N and Khosravi, P (2020) Key attitudes: Unlocking the relationships between emotional intelligence and performance in construction projects. *Journal of Construction Engineering and Management*, ***146***(4): 04020025, ISSN 0733-9364. https://doi.org/10.1061/ (ASCE)CO.1943-7862.0001803

Rugiri, M. N. & Njangiru, J. M. (2018). Effect of resource availability on performance of water projects funded by constituency developments fund in Nyeri County, Kenya. *International Academic Journal of Information Sciences and Project Management*, *3*(2), 378-393.

Sanni-Anibire, M. O., Zin, R. M. & Olatunji, S. O. (2020). Causes of delay in the global construction. *International Journal of Construction Management*, *22*(8), 1395-1407.

Scispace (2023). What are the responsibilities of the parties involved in construction projects? https://typeset-io/questions/what-are-the-responsibilities-of-the-parties-involved-in-3l1e0242cl.

Sima, K. (2022). *Planning a project, the right way*. (Ph.D Thesis, LIGS University, Honolulu, Hawaii).

Slaeat, F. (2024). The impact of poor planning on the duration and cost of the projects: The implications of poor planning on the projects. *Mesopotamian Journal of Civil Engineering*, *2024*, 60-81.

Subbiah, A. (2012). An investigation of the factors influencing the success of construction planning for the 2012 Olympic Stadium: *An ethnography study proceedings of the 28th Annual ARCOM conference*, 2, 1035-1045.

Terzieva, M. & Morabito, V. (2016). Learning from experience: The key is the project team. *Business Systems Research*, *7*(1), 1-15.

Wilson, O. O. (2019). How resource capacity influence implementation of market shade construction project in Mageta Island, Siaya County, Kenya. *International Journal of Recent Research in Commerce Economics and Management (IJRRCEM)*, 6(1), 21-28.

Yap, J. B. H., Goay, P. L., Woon, Y. B. & Skitmore, M. (2021). Revisiting critical delay factors for construction: Analysing projects in Malaysia. *Alexandria Engineering Journal*, *60*(1), 1717-1729.

Terzieva, M., Morabito, V. (2016), "Learning from Experience: the Key is the Project Team", Business Systems Research, Vol. 7, No. 1, pp. 1-15.