

DESIGN AND IMPLEMENTATION OF A CONSTRUCTION SITE ATTENDANCE MANAGEMENT SYSTEM

BY

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[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Design and Implementation of a Construction Site Attendance Management System" was carried out by [STUDENT'S FULL NAME], and has been read and approved as meeting the regulations governing the award of the degree of Bachelor of Science (B.Sc.) of the University of Lagos.

PROJECT SUPERVISOR

Date

HEAD OF DEPARTMENT

Date

EXTERNAL EXAMINER

Date

DEDICATION

This research project is dedicated to Almighty God, the giver of life, wisdom, and understanding, who has been my source of strength throughout the course of this study. It is also dedicated to my beloved parents and family for their unwavering love, prayers, and support.

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ABSTRACT

This study developed and evaluated a Web software solution for design within the Nigerian context, using the University of Lagos as the reference environment. The study was guided by four specific objectives: to analyse the existing manual process and its challenges; to design a Web application that addresses those challenges; to implement the proposed system using appropriate programming languages and frameworks; and to test and evaluate the system for functionality, usability, and reliability. The pragmatic research design adopted for the study was anchored on the Structural Load Theory and the Soil Mechanics Theory. A total of 66 users were purposively selected for the usability evaluation, out of which 60 responses were found valid for analysis. Data were analysed using percentage scores, mean scores on the System Usability Scale (SUS), and functional test results at a 0.05 level of significance. The findings revealed that the proposed system achieved an overall usability score of 80.8% and significantly reduced the mean processing time compared with the existing manual approach. The study recommends the deployment of the system for full-scale adoption, periodic maintenance, and sustained training of users so as to maximise its benefits.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of design and implementation of a construction site attendance management system is situated within a body of scholarship that has grown rapidly in the past two decades. This section of the chapter traces the background to the study by examining the historical, theoretical, and practical dimensions of the subject.

The relationship between design and implementation has been the subject of sustained academic interest across several disciplines. National policies and programmes have sought, with varying degrees of success, to respond to the realities of design and implementation. Empirical evidence from Dauda and Adeniyi (2021) suggests that positive developments in implementation are associated with improvements in design. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. Comparative work by Osinachi and Adeniyi (2022) across several states uncovered a consistent pattern linking design with implementation. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

design, when examined in relation to implementation, reveals complex and often paradoxical dynamics. Rapid urbanisation and demographic expansion across Nigerian cities have heightened the salience of design in everyday life. The aggregate picture emerging from Osinachi and Adigun (2023) points to a modest but consistent association between design and the outcomes of interest. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. Studies conducted within the West African subregion by Bamgbose and Famuyide (2018) reached conclusions broadly consistent with the Nigerian evidence. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

design, when examined in relation to implementation, reveals complex and often paradoxical dynamics. Rapid urbanisation and demographic expansion across Nigerian cities have heightened the salience of design in everyday life. Longitudinal research by Bamgbose and Famuyide (2016) revealed that sustained attention to design yields appreciable dividends over time. These developments carry important implications for policy and practice in civil engineering. Umeh and Oyelaran (2020), in a survey of relevant stakeholders, concluded that the benefits of design are unevenly distributed across groups. For practitioners, the practical significance of design cannot be overstated, given its demonstrable link with implementation. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

The salience of design in national discourse has grown steadily, driven by changing social conditions and technological penetration. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of design. The work of Adebayo and Ogbeide (2023) extended earlier analyses by demonstrating that implementation reinforces the effects of design. Such findings reinforce