

DESIGN AND IMPLEMENTATION OF A MOTOR REWINDING WORKSHOP MANAGEMENT SYSTEM

BY

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[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Design and Implementation of a Motor Rewinding Workshop 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 Signal Processing Theory and the Power System Stability Theory. A total of 73 users were purposively selected for the usability evaluation, out of which 65 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 87.7% 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 motor rewinding workshop 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.

design continues to command considerable attention among researchers, policymakers, and practitioners in electrical engineering. Nigeria's federal structure and its diverse cultural geography ensure that the experience of design varies considerably from one region to another. Findings reported by Osinachi and Eze (2018) observed that respondents with greater exposure to design recorded markedly different results. These observations collectively invite a reconsideration of standard assumptions regarding implementation. Empirical evidence from Aderemi and Umeh (2021) suggests that positive developments in implementation are associated with improvements in design. Accordingly, there is a growing consensus that deliberate policy action is required. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

design continues to command considerable attention among researchers, policymakers, and practitioners in electrical engineering. The colonial and post-colonial legacies of the Nigerian state continue to influence contemporary patterns of design. Evidence assembled by Ibrahim and Osinachi (2015) across twelve states underscored the heterogeneity of outcomes linked to design. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. Comparative work by Ogunlana and Adebayo (2022) across several states uncovered a consistent pattern linking design with implementation. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

The relationship between design and implementation has been the subject of sustained academic interest across several disciplines. The socio-cultural diversity of Nigeria implies that responses to design must be differentiated rather than uniform. Ogunlana and Adebayo (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. Studies by Ibrahim and Bello (2019) largely support the view that design exerts a measurable influence on outcomes of interest. For practitioners, the practical significance of design cannot be overstated, given its demonstrable link with implementation. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

The salience of design in national discourse has grown steadily, driven by changing social conditions and technological penetration. Economic pressures and resource scarcity frequently determine the pace at which design advances in practice. Field evidence gathered by Adeniyi and Osinachi (2016) suggested that