

DESIGN AND IMPLEMENTATION OF A STEEL FABRICATION QUOTATION SYSTEM

BY

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[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Design and Implementation of a Steel Fabrication Quotation 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 Thermodynamics Laws and the Tribology Theory. A total of 74 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 86.2% 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 steel fabrication quotation 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.

A growing corpus of literature draws attention to the pivotal role of design in shaping developmental trajectories. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of design. The work of Umeh and Ogbeide (2023) extended earlier analyses by demonstrating that implementation reinforces the effects of design. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Empirical evidence from Adigun and Nwosu (2021) suggests that positive developments in implementation are associated with improvements in design. 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.

The phenomenon of design, while not new, has acquired fresh analytical urgency in Nigeria. Economic pressures and resource scarcity frequently determine the pace at which design advances in practice. The aggregate picture emerging from Nnamdi and Ekwueme (2023) points to a modest but consistent association between design and the outcomes of interest. Accordingly, there is a growing consensus that deliberate policy action is required. Comparative work by Obiora and Osinachi (2022) across several states uncovered a consistent pattern linking design with implementation. These observations collectively invite a reconsideration of standard assumptions regarding implementation. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

The phenomenon of design, while not new, has acquired fresh analytical urgency in Nigeria. The Nigerian context presents peculiar challenges, ranging from infrastructural deficits to institutional weaknesses, which shape the manner in which design unfolds. Obiora and Osinachi (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. Empirical evidence from Osinachi and Adigun (2021) suggests that positive developments in implementation are associated with improvements in design. 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.

A growing corpus of literature draws attention to the pivotal role of design in shaping developmental trajectories. Nigeria's federal structure and its diverse cultural geography ensure that the experience of design varies considerably from one region to another. A notable study by Adeniyi and Adebayo (2017) argued that the impact of design is substantially mediated by the quality of institutions. The practical import of these