

DEVELOPMENT OF AN ELECTRICAL SAFETY INSPECTION CHECKLIST SYSTEM

BY

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DEGREE IN ELECTRICAL ENGINEERING

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Development of an Electrical Safety Inspection Checklist 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 development 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 80 users were purposively selected for the usability evaluation, out of which 76 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 81.6% 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 development of an electrical safety inspection checklist 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.

Few subjects attract as much policy interest in contemporary Nigeria as the question of development. The colonial and post-colonial legacies of the Nigerian state continue to influence contemporary patterns of development. Bamgbose and Famuyide (2020), in a survey of relevant stakeholders, concluded that the benefits of development are unevenly distributed across groups. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. An examination by Ogunlana and Obiora (2019) attributed much of the observed variation in outcomes to institutional capacity and policy continuity. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

Debates on national transformation repeatedly return to the role of development and its attendant dynamics. The Nigerian context presents peculiar challenges, ranging from infrastructural deficits to institutional weaknesses, which shape the manner in which development unfolds. The aggregate picture emerging from Aderemi and Nwosu (2023) points to a modest but consistent association between development and the outcomes of interest. These observations collectively invite a reconsideration of standard assumptions regarding electrical. Findings reported by Nwosu and Adigun (2018) observed that respondents with greater exposure to development recorded markedly different results. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

Scholars have long recognised development as a critical determinant of outcomes in electrical engineering. Globalisation and technological change have intensified both the opportunities and the challenges associated with development. Findings reported by Nwosu and Adigun (2018) observed that respondents with greater exposure to development recorded markedly different results. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Findings reported by Adebayo and Umeh (2018) observed that respondents with greater exposure to development recorded markedly different results. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

The relationship between development and electrical has been the subject of sustained academic interest across several disciplines. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of development. The work of Chukwu and Dauda (2023) extended earlier analyses by demonstrating that electrical reinforces the effects of development. Accordingly,