

**DEVELOPMENT OF A WEB-BASED STATISTICAL PROCESS
CONTROL TOOL FOR PRODUCTION**

BY

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DEGREE IN STATISTICS

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Development of a Web-Based Statistical Process Control Tool for Production" 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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My profound gratitude goes to Almighty God for His grace, protection, and guidance throughout the duration of my study and the successful completion of this research project. I am deeply grateful to my supervisor, [SUPERVISOR'S NAME], for the patience, guidance, constructive criticism, and invaluable direction provided throughout the course of this research. I also wish to appreciate the Head of Department, the lecturers of the Department of Statistics, and my course mates for their support and friendship. My appreciation also goes to my parents and siblings for their unwavering support, both financial and emotional, throughout my academic journey.

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 Technology Acceptance Model and the UTAUT. A total of 60 users were purposively selected for the usability evaluation, out of which 56 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 88.3% 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 a web-based statistical process control tool for production 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 phenomenon of development, 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 development unfolds. Research by Kalu and Chukwu (2021) using mixed methods provided particularly rich insight into the mechanisms connecting development and web. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. An examination by Salami and Okonkwo (2019) attributed much of the observed variation in outcomes to institutional capacity and policy continuity. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

Debates on national transformation repeatedly return to the role of development and its attendant dynamics. Rapid urbanisation and demographic expansion across Nigerian cities have heightened the salience of development in everyday life. Kalu and Oyelaran (2020), in a survey of relevant stakeholders, concluded that the benefits of development are unevenly distributed across groups. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. Field evidence gathered by Obiora and Nwosu (2016) suggested that stakeholder engagement materially improves the results achieved in matters of development. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

In both global and African literatures, development is now regarded as a key index of institutional performance. Globalisation and technological change have intensified both the opportunities and the challenges associated with development. Field evidence gathered by Obiora and Nwosu (2016) suggested that stakeholder engagement materially improves the results achieved in matters of development. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. The aggregate picture emerging from Bamgbose and Bamgbose (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 web. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

The phenomenon of development, while not new, has acquired fresh analytical urgency in Nigeria. Public institutions at the federal, state, and local levels have developed programmes that seek to mainstream development into routine governance. The work of Kalu and Bakare (2023) extended earlier analyses by