

DEVELOPMENT OF A SIGN LANGUAGE RECOGNITION AND TRANSLATION SYSTEM

BY

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DEGREE IN COMPUTER SCIENCE

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Development of a Sign Language Recognition and Translation 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 Technology Acceptance Model and the UTAUT. A total of 76 users were purposively selected for the usability evaluation, out of which 72 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 81.8% 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 development of a sign language recognition and translation 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.

development continues to command considerable attention among researchers, policymakers, and practitioners in computer science. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of development. The work of Eze and Bello (2023) extended earlier analyses by demonstrating that sign reinforces the effects of development. For practitioners, the practical significance of development cannot be overstated, given its demonstrable link with sign. Salami and Famuyide (2020), in a survey of relevant stakeholders, concluded that the benefits of development are unevenly distributed across groups. 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.

Contemporary scholarship increasingly frames development as inseparable from the broader question of sign. Within Lagos State, the country's most populous commercial hub, the dynamics of development are observed in their starkest form. A notable study by Bamgbose and Adebayo (2017) argued that the impact of development is substantially mediated by the quality of institutions. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Findings reported by Musa and Oyelaran (2018) observed that respondents with greater exposure to development recorded markedly different results. For practitioners, the practical significance of development cannot be overstated, given its demonstrable link with sign. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

development, when examined in relation to sign, reveals complex and often paradoxical dynamics. Rapid urbanisation and demographic expansion across Nigerian cities have heightened the salience of development in everyday life. The work of Musa and Oyelaran (2023) extended earlier analyses by demonstrating that sign reinforces the effects of development. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. The work of Adeniyi and Alade (2023) extended earlier analyses by demonstrating that sign reinforces the effects of development. These observations collectively invite a reconsideration of standard assumptions regarding sign. 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 computer science. Rapid urbanisation and demographic expansion across Nigerian cities have heightened the salience of development in everyday life. An examination by Oyelaran and Adebayo (2019) attributed much of the observed variation in outcomes to institutional capacity and policy continuity. Left unaddressed, the identified patterns are likely