

**IMPLEMENTATION OF AN INTEGRATED SENSORY
APPROACH IN THE DESIGN OF A CENTER FOR AUTISM IN
UDU, DELTA STATE**

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JULY, 2022

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UDU, DELTA STATE**

By

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**A DISSERTATION SUBMITTED TO THE SCHOOL OF
POSTGRADUATE STUDIES IN PARTIAL FULFILLMENT OF
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SCIENCE (M.Sc) DEGREE IN ARCHITECTURE IN THE
DEPARTMENT OF ARCHITECTURE, COLLEGE OF SCIENCE
AND TECHNOLOGY, COVENANT UNIVERSITY**

JULY, 2022

ACCEPTANCE

This is to attest that this dissertation is accepted in partial fulfillment of the requirements for the award of the degree of Master of Sciences (M.Sc) in the Department of Architecture, College of Science and Technology, Covenant University, Ota, Nigeria.

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DECLARATION

I, **OGBONDEMINU JOY ENIOLA (16CA021163)**, declare that this thesis was conducted entirely by me under the supervision of Dr. Bukola A. Adewale of the Department of Architecture, Covenant University, Ota, Ogun State, Nigeria. I attest that this research has not been presented either wholly or partly for any degree elsewhere before. All scholarly information sources used in this thesis were duly acknowledged and referenced.

OGBONDEMINU JOY ENIOLA

Signature and Date

CERTIFICATION

We certify that this dissertation titled “**IMPLEMENTATION OF AN INTEGRATED SENSORY APPROACH IN THE DESIGN OF A CENTER FOR AUTISM IN UDU, DELTA STATE**” is an original research work carried out by **OGBONDEMINU JOY ENIOLA (16CA021163)**, in the Department of Architecture; College of Science and Technology, Covenant University, Ota, Ogun State, under the supervision of Dr. Bukola A. Adewale. We have examined and found this work acceptable as part of the requirements for the award of Master of Science in Architecture.

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DEDICATION

This thesis is dedicated to God; My Father, Savior, my Lord and the Lover of my Soul and my parents; Pastor and Mrs. Ogbondeminu for their unrelenting love and support. I am eternally grateful.

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LIST OF ABBREVIATIONS

ADLs -Activities of Daily Living
ADHD - Attention Deficiency/Hyper-activity Disorder
ASD - Autism Spectrum Disorder
CDC - Center for Disease Control
CNS - Central Nervous System
DSC - Delta Steel Company
ICT - Information and Communication Technology
ID - Intellectual Disability
LED - Light Emitting Diode
NDD - Neuro-Developmental Disorder
NGOs - Non Governmental Organizations
PDD - Pervasive Developmental Disorder
PNS - Peripheral Nervous System
SDD - Sensory Discrimination Disorder
SI-Sensory Integration
SMD - Sensory Modulation Disorder
SP-Sensory Processing
SPD - Sensory Processing Disorder
TCA - Thematic Content Analysis
TS - Tourette's' Syndrome
WC - Water Closet
WHB. - Wash Hand Basin
WHO - World Health Organization

ABSTRACT

Sensory Processing Disorder (SPD) is a co-morbidity with Autism that makes varied and complex its symptoms. Its presence has also been noted to impair skill acquisition and generalization for individuals with Autism. In catering for this, intervention measures; which may be therapeutic and/or environmental, are applied to mitigate its impact. The environmental intervention measures are based on two major design approaches; the sensory sensitive approach and the neurotypical approach; each with its own benefits and shortcomings. This study integrates and implements the two design approaches in the design of a center for Autism in Udu, Delta state to create a more holistic design approach in view of improving skill acquisition and generalization. The objectives of this study include the identification of the sensory design approaches adopted in centers for autism, determination of the effectiveness of approaches adopted and identification of the limitations of the measures. The research method is both qualitative and quantitative employing observation guides and interview guides as data collection instruments. The quantitative data collected was analyzed using the descriptive statistical tools for frequency and percentage for Statistical Product for Services and Solutions (SPSS) and was presented using tables while the qualitative data was analyzed using Thematic Content Analysis (TCA) with the data presented using text and tables. The results of the study showed a correlation between SPD and academic difficulties. The environmental interventions adopted, their effectiveness and limitations were also identified; which formed the background from which the recommendations were provided. To this end, recommendations were given to serve as guidelines in adopting the integrated sensory approach in achieving the aim of this study.

Keywords: Autism, Neuro-Developmental disorder, Sensory design, Design Integration, Inclusive Design, Delta state, Nigeria.