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**FRAMEWORK FOR THE QUANTITATIVE
ASSESSMENT OF AUTHENTICITY: A CASE STUDY
OF HERITAGE BUILDINGS IN KARACHI**

Ayesha Agha Shah

Registration No.- 218025G

Doctor of Philosophy

Department of Architecture

Faculty of Architecture

University of Moratuwa

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Ayesha Agha Shah

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Thesis/Dissertation submitted in partial fulfillment of the requirements for the degree
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DECLARATION

I declare that this is my own work and this thesis/dissertation does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any other University or Institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text. I retain the right to use this content in whole or part in future works (such as articles or books).

Signature:

Date: 16-07-2025

The above candidate has carried out research for the PhD thesis under our supervision. We confirm that the declaration made above by the student is true and correct.

Name of Supervisors:

Professor D.P.Chanderasekara

Signature of the Supervisor:

Date: 18-07-2025

Professor Anila Naeem

Signature of the Supervisor:

Date: 18-07-2025

DEDICATION

I dedicate this work to my loving husband, Rashid, whose everlasting support, encouragement, and dedication were the driving forces behind my strength and motivation throughout my PhD journey

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ABSTRACT

This research develops a comprehensive framework for assessing authenticity in heritage conservation by addressing the methodological gap between material-based evaluations and experiential, socio-cultural dimensions. Conventional conservation practices have predominantly emphasized the physical preservation of heritage structures, often overlooking the dynamic, perceptual, and community-embedded aspects of authenticity. As a result, assessments tend to remain incomplete, lacking sensitivity to local cultural narratives, spatial experiences, and evolving urban contexts. Building upon a critique of traditional qualitative approaches, this study conceptualizes authenticity as a multi-dimensional and co-constructed phenomenon, shaped by memory, perception, cultural practice, and spatial engagement. In response, the research proposes a new Framework for the Assessment of Authenticity (FAA), developed through case studies of adaptively reused heritage buildings in Karachi, Pakistan. The FAA comprises three interconnected methodological tools: the Heritage Building Inventory Form (HBIF), the Place Authenticity Matrix (PAM), and the Quantitative Authenticity Assessment Matrix (QAAM). Together, these instruments enable the collection of visual, technical, and experiential data, which are synthesized into a structured, quantifiable authenticity grading system. The study employs a mixed-methods design, integrating site surveys, memory recall tasks, card-sorting exercises, and semi-structured interviews to capture both qualitative and quantitative insights. The QAAM, as the culminating tool, translates complex authenticity indicators into measurable outputs, allowing for comparative evaluation across diverse heritage contexts. The framework was tested and validated on twelve heritage buildings in Karachi, with further feedback obtained from international conservation experts in Portugal, India, Bahrain, and Thailand. Findings confirm that the proposed framework provides a replicable, contextually sensitive, and comprehensive tool for assessing authenticity in heritage buildings. It contributes both theoretically by bridging authenticity theory and empirical evaluation and practically by offering heritage professionals, planners, and

policymakers a robust model for conservation assessment.

The research thus enhances existing discourse on authenticity and proposes a meaningful contribution to heritage management practices globally.

Keywords: Authenticity, Heritage Conservation, Assessment Framework, Quantitative and Qualitative Dimensions, Urban Contexts

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LIST OF ABBREVIATIONS

Abbreviation	Description
AKTC	The Aga Khan Trust for Culture
AMC	Ahmedabad Municipal Corporation
AUA	Ahmedabad Urban Agglomeration
CAE	Consensual Authenticity Evaluation
FAA	Framework for Assessing Authenticity
GT	Grounded Theory
HBIF	Heritage Building Inventory Form
HIA	Heritage Impact Assessments
HUL	Historic Urban Landscape
KHBRP	Karachi Heritage Building Resurvey Project
MRT	Memory Recalling Tasks
MST	Multiple Sorting Tasks
NDT	Non-destructive testing
PAM	Place Authenticity Matrix
QAAM	Quantitative Architecture Authenticity Matrix
RLICC	Raymond Lemaire International Centre for Conservation
SPAB	Society for the Protection of Ancient Buildings
SSI	Semi-Structured Interviews
UDRC	Urban Development and Revitalization Company
UNDP	United Nations Development Programme
VBHM	Values-Based Heritage Management
VR	Virtual Reality

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