

**A STUDY ON ESTABLISHMENT OF A COMPREHENSIVE
SKILL RECOGNITION FRAMEWORK FOR PLUMBERS IN
SRI LANKA**

Welarambe Dedu Wimalasiri

189643T

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Department of Building Economics

University of Moratuwa

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DECLARATION

I declare that this is my own work, and this thesis 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. Also, I hereby grant to the University of Moratuwa the non-exclusive right to reproduce and distribute my thesis, in whole or in print, electronic or in other medium. I retain the right to use this content in whole or as part in future works (such as articles or books).

.....

W.D. Wimalasiri

Department of Building Economics
University of Moratuwa

.....

Date

I hereby acknowledge that W.D. Wimalasiri has followed the dissertation process for the Masters of Science in Project Management set by Department of Building Economics under my supervision.

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Mr P.A.P.V.D.S. Disaratna

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Abstract

The plumbing profession is experiencing rapid growth in Sri Lanka, yet the term "plumber" lacks legal significance in the country. Consequently, anyone can engage in plumbing work, including installations, repairs, operations, maintenance, and planning, without regulation. This absence of proper plumbing legislation has led to unqualified individuals undertaking plumbing tasks, resulting in severe health and environmental hazards, as well as subpar work quality.

To address this pressing issue, this study proposes the development of a skill recognition framework tailored to plumbers, with a primary focus on reforming the plumber licensing system. Employing a mixed-method research approach, the study conducted both a questionnaire survey and semi-structured interviews with the target group.

In summary, this research explores the significance of licensing systems, delineates the challenges arising from the absence of a comprehensive plumber licensing system, investigates existing licensing models in other countries, and offers recommendations for structuring and implementing a plumber skill recognition system in Sri Lanka through introducing plumber licensing system. The study identifies six key components of the licensing system, including their subcomponents.

Within this framework, two licensing categories are proposed: Journeymen plumbers' licenses and Master plumbers' licenses, each with defined eligibility qualifications and experience. Recommendations are provided for the composition of the licensing board, the structure of licensing examinations, and the duration of license validity.

Furthermore, the study identifies potential barriers to implementation and suggests strategies to mitigate these obstacles. Additionally, recommendations are presented to ensure the long-term sustainability of the proposed system.

The findings of this study can serve as a foundational resource for policymakers, practitioners, and future researchers interested in advancing the plumbing profession and its regulation in Sri Lanka.

Key Words: Plumber, Licensing, NVQ, Framework, Master Plumber, Journeyman Plumber

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ABBREVIATIONS

ABLIS	Australian Business License and Information Service
CBT	Competency Based Training
CIDA	Construction Industry Development Authority
CEB	Ceylon Electricity Board
CQS	Chartered Quantity Surveyor
DTET	Department of Technical Education and Training
GED	General Education Development
GOSL	Government of Sri Lanka
GTO	General Technical Officers
HNDE	Higher National Diploma in Engineering
IAPMO	International Association of Plumbing and Mechanical Officials
IESL	Institution of Engineers Sri Lanka
ICC	International Code Council
IPC	International Plumbing Code
LECO	Lanka Electricity Company (Pvt) Ltd
NAITA	National Apprentice and Industrial Training Authority
NCS	National Competency Standards
NCSL	National Conference of State Legislations
NDES	National Diploma in Engineering Sciences
NDT	National Diploma in Technology
NTT	National Trade Test
NVQ	National Vocational Qualification
NWSDB	National Water Supply & Drainage Board
NYSC	National Youth Services Council
OL	Occupational Licensing

OUSL	Open University of Sri Lanka
PCA	Plumbing Code of Australia
PUCSL	Public Utilities Commission of Sri Lanka
RII	Relative Importance Index
RPL	Recognition of Prior Learning
RTO	Registered Training Organization
TAFE	Technical and Further Education College
TVEC	Tertiary and Vocational Education Commission
TVET	Technical and Vocational Education and Training
UPC	Uniform Plumbing Code
USA	United States of America
VTA	Vocational Training Authority of Sri Lanka
WC	Water Closet
WHO	World Health Organization
WPC	World Plumbing Council