

**INTEGRATION OF PROJECT MANAGEMENT
KNOWLEDGE INTO CONSTRUCTION RELATED
TECHNICAL AND VOCATIONAL EDUCATION AND
TRAINING PROGRAMMES IN SRI LANKA**

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MSc / PG Diploma in Project Management

Department of Building Economics

University of Moratuwa

Sri Lanka

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Dissertation submitted in partial fulfilment of the requirements for the
degree of Master of Science in Project Management

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Name of the supervisor: Prof. Y. G. Sandanayake

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ABSTRACT

Integration of Project Management Knowledge into Construction Related Technical and Vocational Education and Training Programmes in Sri Lanka

Construction projects are inherently complex due to their unique nature of scope, cost, duration, quality, multiple stakeholders, activities and processes. Project Management (PM) is a concept, which ensures the completion of all tasks of a construction project within its budget, schedule and quality without failures. Construction site managers play a key role in managing day today activities of construction projects. Hence, they should have knowledge and skills for managing projects. However, according to the literature review, they lack PM knowledge and skills which are essential for managing the projects. Hence, PM knowledge and skills are to be integrated in to construction related Technical and Vocational Education and Training (TVET) programmes in Sri Lanka. However, there is a question on “what project management knowledge and skills are to be integrated into construction related Technical and Vocational Education and Training programmes in Sri Lanka?” In order the address the research problem, the aim of this study set to investigate the project management knowledge and skills needed to be integrated into the construction related Technical and Vocational Education and Training (TVET) programmes in Sri Lanka.

In order to achieve the research aim, qualitative research approach was employed. The research involved collecting data from two groups: site managers, who were experts in the field, and academics, who teach and manage TVET programmes. The data collection process consisted of two phases, with Phase I focusing on the experts and Phase III on the academics. Semi-structured interview guidelines were used for data collection in both phases. Additionally, a comprehensive desk study was conducted in Phase II to compare the TVET curriculum with the areas outlined in the Project Management Body of Knowledge (PMBOK). Data analysis was performed through manual content analysis in all three phases.

The research findings indicate that most of the project managers in the Sri Lankan construction industry do not apply PM concepts due to a lack of awareness and knowledge. The study identified several PMBOK areas and skills that were lacking in the TVET curriculum, including project risk, project stakeholder, project resource and project procurement management, and strategic & business management. Furthermore, TVET academics acknowledged that integrating the PM knowledge and skill gap areas into TVET programs faced numerous challenges, such as time constraints, learner ability, lack of experience, depth of knowledge, finding qualified experts, improper delivery methods, and lack of financial support. The study further revealed that, although there is a need for integrating lacking PM knowledge and skill areas to construction related TVET Diploma and Higher Diploma programmes, it required to rearrange modules according to the areas of knowledge and skills given in PMBOK and also consider the learners ability to grab them in curriculum revision. This study contributes to enhance the PM knowledge and skills of floor/site level managers through TVET Diploma and Higher Diploma programmes, which are necessary for managing construction projects in order to minimise the failures of projects.

Keywords: *Construction Industry; Knowledge; Skills; Project Management (PM); Project Management Body of Knowledge (PMBOK); Technical and Vocational Education and Training (TVET).*

DEDICATION

To My Beloved Husband

and

Loving Son

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
CIOB	Chartered Institute of Building
COVID	Coronavirus Disease
CSS	Construction Site Supervisor
DCC	District Coordination Committee
FET	Further Education and Training
HNDCT	Higher National Diploma in Construction Technology
HNDE	Higher National Diploma in Engineering
ICT	Information Communication Technology
ISO	International Standard Organisation
IT	Information Technology
NCAT	National Certificate for Accounting Technicians
NCED	National Certificate in Engineering Draughtsmanship
ND	National Diploma
NDA	National Diploma in Accountancy
NDCT	National Diploma in Construction Technology
NDQS	National Diploma in Quantity Surveying Technology
NDT	National Diploma in Technology
NVQ	National Vocational Qualification
OJT	On the Job Training
PM	Project Management
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute

QS	Quantity Surveying
TOC	Theory of Constraints
TVEC	Tertiary and Vocational Education Commission
TVET	Technical and Vocational Education and Training
UNEVOC	International Centre for Technical and Vocational Education and Training of the UNESCO
US	United States
USA	United States of America