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THE USE OF MANAGEMENT INFORMATION SYSTEMS
FOR PLANNING AND MANAGEMENT OF SERVICE
SECTOR INFRASTRUCTURE:
A CASE STUDY BASED ON EDUCATION INFRASTRUCTURE

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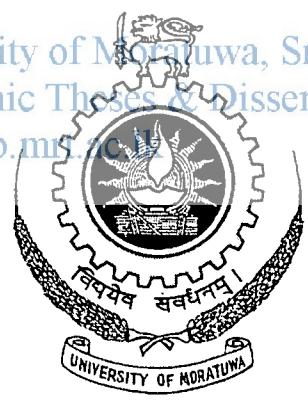
BY

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THESIS SUBMITTED TO THE DEPARTMENT OF CIVIL ENGINEERING
IN FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF
MASTER OF PHILOSOPHY IN ENGINEERING



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ABSTRACT

Improvements in school infrastructure have a positive impact on enrolment and retention of children in schools. Planning, management and development of education infrastructure demand information from many sources, including statistical data, school requirements, norms, standards etc. The quality of the infrastructure decisions is linked in many important ways to the quality and availability of information. Education Management Information System (EMIS) is tool, which is used to provide timely, cost effective and user appropriate information to support educational planning. However, there is no evidence of either the data available with the current EMIS or utilizing the information obtained from the EMIS for school infrastructure planning in Sri Lanka.

The Sri Lankan education system consists of five management levels; National, Provincial, Zonal, Divisional and School level. At each level, planning and management decisions on school infrastructure are taken. This study is focused on determination of available information for infrastructure planning and what is being currently used for infrastructure planning. The use of EMIS to enhance the quality of the infrastructure planning decisions is also highlighted in the study.

In this study, three data collection techniques were used and analysis of them was done separately. The statistical data analysis was done to obtain a broad picture on the total student population of Sri Lanka, student population at the age of six years, trends of student movements in different types of schools and school infrastructure in Sri Lanka. The interview results were analysed to determine the planning, financing and data collection processes at each level of education administration. The information used for infrastructure planning at each level was also studied. In field data analysis, availability school infrastructure in the Piliyandala zone was analysed. The available facilities were compared with national norms and how this information can be used in infrastructure planning was highlighted.

Student population statistics and school norms are the mostly used information in infrastructure planning. Although the information is available, student population trends, location of schools and social and economic background of students are rarely used in planning. In providing physical facilities, the educational planners should have first hand information, and in this context, the EMIS plays a major role. The data recorded at the Ministry EMIS are nearly 75% accurate when compared with the field data and, therefore, the accuracy level should be improved. Government is the main funding agent for education infrastructure. All the financial information is recorded because all fund allocations must go through several stages within the system. Therefore, financial information is available at each level of the education system. Most of the school infrastructure facilities considered in the study (classroom facility, science labs and toilet facility) do not corroborate the school norms, which is an important fact to be considered in future infrastructure planning.

Key words: Infrastructure planning, Management Information System, National norms for school infrastructure

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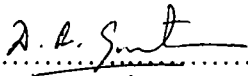
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DECLARATION

I, Abeyratne Herath Mudiyansele Dilani Rasanjalee Dassanayake, hereby declare that the content of this thesis is the output of the original research work carried out over a period of 48 months at the Department of Civil Engineering, University of Moratuwa. Whenever any work done by others is included in this thesis, it is appropriately indicated as a reference.


.....

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List of Abbreviations

A/L	General Certificate in Education Advanced level
ADB	Asian Development Bank
AEPAM	Academy of Educational Planning and Management
AIP	Annual Implementation Plan
CBG	Criteria Based Grants
DDE	Deputy Director of Education
DFID	Department for International Development
EFA	Education for All
EMIS	Education Management Information System
GDP	Gross Domestic Product
GNP	Gross National Product
GTZ	Deutsche Gesellschaft fur Technische Zusammenarbeit (German Agency for Technical Cooperation)
JICA	Japanese International Co-operation Agency
MIS	Management Information Systems
MOE	Ministry of Education
NEC	National Education Commission
O/L	General Certificate in Education Ordinary level
PPT	Provincial Planning Team
SDS	School Development Society
SEAMEO	Southeast Asian Ministers of Education Organisation
SEMP	Secondary Education Modernization Project
UNESCO	United Nations Educational Scientific and Cultural Organisation
USAID	United States Agency for International Development
WB	World Bank
WEF	World Education Forum
WVEIS	West Virginia Education Information System



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