

**AN ANALYSIS OF DRAWBACKS IN ONLINE
TEACHING AND FEASIBLE SOLUTIONS: A CASE
STUDY OF ANURADHAPURA EDUCATION ZONE**

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MSc. in Business Statistics

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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.

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The above candidate has carried out research for the Masters Dissertation under my supervision.

Name of Supervisor: Dr. S.C. Mathugama

Signature of the Supervisor:

Date:

DEDICATION

To my family

ACKNOWLEDGEMENT

The success of this research project was made possible thanks to the support of numerous individuals. I would like to extend my heartfelt appreciation and gratitude to the following individuals who have contributed to the successful completion of this project.

Foremost, I wish to extend my sincerest thanks to Dr. Samantha Mathugama, a Senior Lecturer at the Institute of Technology, University of Moratuwa, for her dedicated supervision filled with enthusiasm.

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ABSTRACT

Online education is important because it provides accessibility, flexibility, safe learning during pandemics, and reaching a broader audience with cost-effectiveness. At present, there is very little research on Sri Lankan teacher's difficulties towards online teaching. Therefore, this study was initiated to provide scientific results about Sri Lankan teachers' difficulties towards online teaching. The Anuradhapura education zone is selected for this study, since it contains a lot of remote areas and schools.

This study was conducted based on a questionnaire survey design. Altogether 209 teachers in Anuradhapura Education Zone were surveyed. The questionnaire in this research was used basically to identify the difficulties and feasible solutions of online teaching in Anuradhapura Education Zone. The demographic factors were analyzed and presented using descriptive statistical methods. Multinomial Logistic Regression Model & Factor Analysis were used as advanced statistical methods.

Multinomial Logistic Regression Model was used to model the relationship between Mean Barrier Level and identified explanatory variables. Factor Analysis was used to identify common factors for the observed set of difficulties.

Study shows that "monthly internet bill", "number of classes per week", "number of students in a class" & "internet connection type" can be considered as significantly associated explanatory variables with Mean Barrier Level in the Multinomial Logistic Regression Model. Also findings of this study show that, "lack of attractive teaching & assessment methods" as the most important common barrier. Next important common barriers are "lack of knowledge & infrastructures" & "surround interruptions". The least important common barrier is the "consume more time". Therefore educators should implement interactive teaching methods, online assessment platforms that can automatically grade assignments & government should provide training, discounted internet packages, high-speed broadband infrastructure, workshops, webinars, or tutorials to help educators to enhance successful online education.

Keywords- Questionnaire survey design, Multinomial Logistic Regression Model, Mean Barrier Level, Factor Analysis, Explanatory variables

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LIST OF ABBREVIATIONS

Abbreviation	Description
ADSL	Asymmetric Digital Subscriber Line
ANOVA	Analysis of Variance
Cum	Cumulative
CI	Confidence Interval
DS	Divisional Secretariat
Exp	Exponential
FA	Factor Analysis
ICT	Information and communication technologies
KMO	Kaiser-Meyer-Olkin
LL	Log Likelihood
M	Mean
MANOVA	Multivariate Analysis of Variance
Max	Maximum
Min	Minimum
MLP	Multiple Logistic Regression
MLR	Multiple Logistic Regression
NPC	Nuwaragam Palatha Central
NPE	Nuwaragam Palatha East
OR	Odds Ratio
OT	Online Teaching
PAF	Principal Axis Factoring
PCF	Principal Component Factoring
SD	Standard Deviation
SE	Standard Error
VIF	Variance Inflation Factor

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