



**Development of a Virtual Learning Environment
(VLE) During the COVID -19 Pandemic:
A Study with special reference to Advanced
Technological Institute.**

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Declaration

I hereby declare that to the best of my knowledge, this submission is my own work, and it does not contain direct material previously published or written by another person, or material that has been accepted for the award of any other academic qualification by a university or other institution of higher learning, except where acknowledgement is made in the text.

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The above candidate has carried out research for the M.Sc. thesis under my supervision.

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Abstract

In this Covid-19 pandemic, Information and Communication Technology (ICT) plays a major role, and the use of IT tools such as the Virtual Learning Environment (VLE) has become vital. Virtual Learning Environment (VLE) integrates several tools that provide higher educational institutions in an effective and efficient method to manage, share, store, its academic resources and enhance their traditional way of teaching in pandemic situation. The implementation of VLE During the COVID -19 Pandemic has become a need at Advanced Technological institute in the learning and teaching environment. Although there is an increased willingness to its widespread implementation among higher educational institutes in this pandemic situation.

The main objective of this research is to develop a Virtual Learning Environment (VLE) for Advanced Technological Institute during the COVID -19 Pandemic, as well as to identify the existing virtual learning environment status of other higher educational institutes and the benefits of implementing a Virtual Learning Environment (VLE) at Advanced Technological Institute during the COVID -19 Pandemic.

The conduct of this research involved qualitative method, the finding of the research presented that existing system used only for downloading the notes of lectures. As per the finding, virtual system developed using the following features such as conducting online examination, quizzes, discussion forum and automatic question generation using natural language processing to enhance the learning and teaching process. further the finding of this research helps to implement a virtual Learning system at Advanced Technological institutes in the pandemic situation to enhance the learning and teaching process. Adobe photoshop for image editing purpose, MySQL for creating database, Apache Web Server, WordPress, Google colab for prototype question generation and php for virtual environment development as well as Microsoft Visio for diagram drawing were utilized to develop this system development.

Keywords: Virtual Learning Environment, Information Technology, Teaching and Learning Environment, Natural Language processing.

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Table of Contents

Declaration.....	II
Abstract.....	III
Acknowledgment.....	IV
List of Figures.....	X
List of Tables.....	XI
Abbreviations.....	XII
Chapter 01: Introduction.....	1
1.1. Introduction.....	1
1.2. Research Background.....	3
1.2.1. Critical success factors for VLE implementation.....	4
1.2.1.1. The E-learning Environment and Infrastructure.....	4
1.2.1.2. The Learners' Point of View.....	5
1.2.1.3. The Attributes of Educators.....	5
1.2.1.4. Attitude of Lecturers.....	6
1.3. Research questions.....	6
1.4. Research objectives.....	7
1.5. Context and Scope of the Study.....	8
1.6. Research Methodology.....	8
1.7. Significance of Research.....	9
1.7.1. Empirical evidence in the context of Sri Lanka.....	10
1.7.2. Theoretical Contribution.....	10
1.7.3. Practical Contribution.....	10
1.8. Summary.....	11
Chapter 02: Literature Review.....	12
2.1. Introduction.....	12
2.2. Concept of the study.....	12
2.3. Definition of terms.....	15
2.3.1. Information System.....	15
2.3.2. E-learning.....	16
2.3.3. VLE.....	16

2.3.4.	Blended learning	16
2.3.5.	Critical success factor.....	16
2.4.	Background of VLE	16
2.5.	Implementation of VLE	17
2.5.1.	Prior Studies of e-learning Assessment.....	17
2.5.2.	Prior Studies of VLE Usage Assessments.....	19
2.6.	VLE Critical Success Factor categories	22
2.6.1.	Students' Perspectives.....	22
2.6.2.	Lecturers' Performance	23
2.6.3.	VLE characteristics	23
2.7.	Review of theories and models relating to individual adoption of technology 24	
2.7.1.	Technology Acceptance Model.....	24
2.7.2.	Rogers' Diffusion of Innovation Theory.....	25
2.8.	Theoretical Framework and Formulation of Hypotheses.....	26
2.8.1.	Determinants and it's elements of VLE implementation	28
2.8.2.	D1. Students' Perspectives	29
E1.	Students' attitude towards VLE	29
E3.	Self- efficacy.....	31
E4.	Experience	31
E1.	Lecturer attitude towards VLE:	32
E2.	Responsiveness	33
E3.	Teaching style	33
E4.	Self- efficacy.....	33
2.8.1	D3. VLE Characteristics	34
E1.	System Quality.....	34
E2.	Information Quality	34
E3.	Service Quality	35
2.9	Chapter Summary.....	36
Chapter 03: Data and Method		37
3.1	Introduction	37
3.2	Purpose of the Research	37

3.3	Research Model.....	38
3.4	Proposed Use Case Diagram for Virtual Learning Environment (VLE) During the COVID -19 Pandemic for Advanced Technological Institute.....	41
3.5	Research Strategy.....	41
3.6	Research Method.....	42
3.7	The Population and Sample.....	42
4.7.1	Population.....	42
4.7.2	Sample and Sample Size.....	43
3.8	Data Collection Methods.....	43
3.9	Research Process.....	45
3.10	Data Analysis.....	45
3.11	Summary.....	45
	Chapter 04: Results.....	46
4.1.	Introduction.....	46
4.2.	Demographic profile of surveyed students.....	46
4.3.	Analysis of students’ perspectives.....	47
4.3.1.	Descriptive profile of students’ attitude towards VLE.....	47
4.3.2.	Computer anti-anxiety.....	48
4.3.2.1.	Descriptive profile of computer anti-anxiety.....	48
4.3.3.	Self-efficacy.....	49
4.3.3.1.	Descriptive profile of self -efficacy.....	49
4.3.4.	Experience.....	49
4.3.4.1.	Descriptive profile of Experience.....	49
4.3.5.	Interaction with lecturers and other students.....	49
4.4.	Analysis of lecturers’ performance in using the VLE.....	50
4.4.1.	Lectures’ attitude towards VLE.....	50
4.4.2.	Descriptive profile of lecturers’ attitude towards VLE.....	50
4.4.3.	Responsiveness.....	50
4.4.3.1.	Descriptive profile on responsiveness.....	50
4.4.4.	Teaching Style.....	51
4.4.4.1.	Descriptive profile of teaching style.....	51
4.4.5.	Self-efficacy.....	51

4.5.	Analysis of VLE characteristics.....	52
4.5.1.	System Quality	52
4.5.1.1.	Descriptive profile of System Quality	52
4.5.2.	Information quality.....	53
4.5.2.1.	Descriptive profile of information quality.....	53
4.6.	Summary of research findings.....	53
4.6.1.	The status of VLE implementation	53
4.8.	The effect of lecturers' performance on students' VLE implementation.....	58
4.9.	The effect of VLE characteristics on students' VLE implementation	59
4.10.	The effect of Institutes supports on students' VLE implementation.....	60
4.11.	Summary of results of hypotheses	61
4.12.	Chapter Summary.....	63
	Chapter 05: System Development	64
	Fact Finding Tools	64
	Presentation Layer.....	69
	Data Layer	69
	Application Layer.....	70
	Database Connectivity.....	70
	Web Enabling.....	70
	Web Server.....	70
	Client.....	70
	User Authentication.....	71
	Quiz page	77
5.9.	Discussion forum.....	79
5.10.	Automatic Question Generation using NLP.....	80
5.10.1.	Installation and mount Google Drive.....	80
5.10.2.	Generate distractors (wrong choices) for MCQ options	80
5.10.3.	pretrained BERT WSD Model and extract	81
5.10.4.	Create a question based on the context and respond with T5.	81
5.11.	Output of question generation Using Natural Language processing.....	82
	Chapter 06: Conclusions	83
6.1.	Introduction	83

6.2.	Summary of Findings	83
6.3.	The effect of students' perspectives on their VLE implementation.....	83
6.4.	The effect of lecturers' performance on students' VLE implementation.....	84
6.5.	The effect of VLE characteristics on students' VLE implementation	86
6.6.	The effect of Institutes supports on students' VLE implementation.....	86
6.7.	Practical contribution	87
6.8.	Research limitation and future research	88
6.9.	Summary	88
	References	89
	Appendix 1: Home page Coding	92
	Appendix 1: Virtual Discussion forum page Coding.....	94

List of Figures

Figure 1: Research Methodology	9
Figure 2 The E-Learning Success Model and Sample	18
Figure 3 Janossy's VLE Usage Level and Metric Values	20
Figure 4 A Level-Model for Assessing the VLE Usage among Staff	20
Figure 5 Technology Acceptance Model (TAM)	24
Figure 6 Research Methodology	38
Figure 7 Elaborated Research Model	40
Figure 8 : Existing VLE Just-to download Contents	47
Figure 9: Existing System of Advanced Technical Institute-To Download Lesson contents	54
Figure 10: Level-Model for Assessing the VLE Usage among Staff	54
Figure 11 Overall System Architecture	69
Figure 12 New user Registration	71
Figure 13 User Authentication	71
Figure 14 Proposed System Use Case Diagram	73
Figure 15 Login Page	75
Figure 16 Home Page	76
Figure 17 :Quiz page	77
Figure 18 : Examination Finished page	78
Figure 19: New Students Registration	78
Figure 20:Discussion forum	79
Figure 21: Mount google Drive	80
Figure 22: Create Distractors	80
Figure 23: BERT WSD Model	81
Figure 24: T5 Transformer Model	81
Figure 25: NLP question Generation Output	82

List of Tables

Table 1: Independent Variables with Dimensions and their Authors	27
Table 2: Determinants of VLE Implementation and their Elements	28
Table 3 :Demographic Profile of Surveyed Students	46
Table 4:Descriptive Profile of Students' Attitude towards VLE.....	48
Table 5:Descriptive profile of Students' computer anti-anxiety	48
Table 6:Descriptive Profile of Students' Self Efficiency	49
Table 7:Descriptive Profile of Students' Experience	49
Table 8:Descriptive Profile of Students' Interaction with Lecturers and Students	49
Table 9:Descriptive Profile of Lecturers' Attitude towards VLE.....	50
Table 10:Descriptive Profile of Responsiveness	50
Table 11:Descriptive Profile of Teaching Style	51
Table 12:Descriptive Profile of Lecturers' Self -Efficacy.....	51
Table 13:Descriptive Profile of System Quality.....	52
Table 14:Descriptive Profile of Information Quality	53
Table 15:Summary of Hypotheses	61
Table 16:Use case description for student login.....	73

Abbreviations

VLE	Virtual Learning Environment
ICT	Information and communication Technology
IT	Information Technology
HETC	Higher Education for Twenty first Century
QAAC	Quality Assurance and Accreditation Council
UGC	University Grants Commission
IS	Information System
TAM	Technology Acceptance Model
PEOU	Perceived Ease of Use
PU	Perceived Usefulness
CSF	Critical Success Factors