

**ANALYSIS OF THE EFFECTIVENESS OF
COLLABORATIVE E-LEARNING IN THE SRI LANKAN
UNIVERSITY EDUCATION**

Ilhavanchi Kanaganayagam

(129066V)



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Degree of Master of Business Administration in Information Technology

Department of Computer Science and Engineering

University of Moratuwa
Sri Lanka

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The Dissertation submitted in partial fulfilment of the requirements for the degree
Master of Business Administration in Information Technology

Department of Computer Science & Engineering

University of Moratuwa
Sri Lanka

March 2013

DECLARATION

I hereby certify that this dissertation does not incorporate, without acknowledgment, any material previously submitted for a Degree or Diploma in any University and to the best of my knowledge and belief, it does not contain any material previously published or written by another person or myself except where due reference is made in the text. I also hereby give consent for my dissertation, if accepted, to be made available for photocopying and for interlibrary loans, and for the title and summary to be made available to outside organizations.

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The above candidate has carried out research for the Masters dissertation under my supervision. To best of my knowledge the above particulars are correct.

Dr. Shantha Fernando (Supervisor)

Department of Computer Science and Engineering

University of Moratuwa.

Date

ABSTRACT

E-learning introduced new ways of learning using computer and internet, and is rapidly evolving with the development of technology. Learners can actively participate and collaborate in a learning process using either synchronous or asynchronous e-learning. Collaborative e-Learning (CeL) is an effective way of learning which also improves the processing skills, communication skills, and cognitive skills of the students.

As the first phase of this study, a literature review was done in the areas such as the usage and applications of CeL pedagogy approaches in the global and Sri Lankan context. Then, a preliminary study was conducted in the ten national universities where CeL pedagogy approached used in the academic curricula in a considerable manner. Study conducted with 30 students and 30 lecturers by interviews, phone calls and email. Interview results were analysed to identify the awareness of the effectiveness of CeL instructional models used in the Sri Lankan university education. Further, based on the literature review and the preliminary study analysis, by considering the available resources and relevant constraints of Sri Lankan universities, the definition of CeL in Sri Lankan context was defined and a framework was developed to analyse the effectiveness of CeL in Sri Lankan university education. Finally, based on the framework, the effectiveness of CeL in the Sri Lankan national university education was analysed as quantitative analysis by using SPSS Statistics tool. The modelled framework was validated by the final hypothesis analysis and the best predictors of 'effectiveness of CeL' were identified by the step-wise multiple regression analysis. Further, this thesis describes the discussion regarding the data analysis, conclusions derived from the findings and the recommendations to improve the effectiveness of CeL in Sri Lankan universities. Recommendations were considered for the students, lecturers and the administration of the universities.

The population for this research study is the lecturers, assistant lecturers, undergraduate students and post-graduate students of 15 Sri Lankan National universities where the CeL model is used in the academic curricula. Even though the final analysis was conducted among the national universities, due to the lack of usage of CeL pedagogy approaches in some universities and lack of response rate from some other universities, the final analysis was limited with three universities to maintain the reliability in the results. The three universities were, University of Moratuwa, University of Colombo and University of Peradeniya.

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Table of contents

Chapter 1 - INTRODUCTION	1
1.1. Collaborative e-Learning (CeL)	1
1.2. Research Problem.....	2
1.3. Research Questions	3
1.4. Objectives of the Research	3
1.5. Research Methodology.....	4
1.6. Chapter Overview	5
1.7. Limitations of the Research.....	6
Chapter 2 – LITERATURE REVIEW	7
2.1. e-Learning	7
2.1.1. What is e-Learning?.....	7
2.1.2. Types of e-Learning.....	8
2.1.3. E-learning Tools	9
2.2. e-Learning in Sri Lanka.....	11
2.2.1. e-Learning in Sri Lankan University Education	11
2.2.2. Factors Affecting e-Learning in Sri Lanka	13
2.3. Collaborative Learning.....	17
2.3.1. Cooperative Learning	17
2.3.2. Difference between Collaborative Learning and Cooperative Learning	18
2.3.3. Importance of Collaborative Learning	18
2.4. Collaborative e-learning (CeL)	21
2.4.1. What is CeL?	21
2.4.2. Importance of CeL.....	22
2.4.3. Challenges of CeL	25
2.4.4. Factors affecting CeL	25
2.4.5. Tools Used in CeL.....	26
2.4.6. Effectiveness of CeL	27
2.4.7. Assess the Effectiveness of CeL.....	27
2.4.8. Framework to Assess the Effectiveness of CeL	29
2.4.9. CeL in Sri Lankan Education	30

2.4.10. Summary of Literature Review	31
Chapter 3 – RESEARCH METHODOLOGY	33
3.1. Introduction	33
3.2. Phase 1- Preliminary Study	33
3.2.1. Total Population of Preliminary Study	33
3.2.2. Research Methodology of Preliminary Study	34
3.2.3. Research Instrumental of Preliminary Study	35
3.3. Phase 2 – Conceptual Framework Development	37
3.3.1. Assess the effectiveness of CeL	37
3.3.2. Framework to assess the effectiveness of CeL	38
3.3.3. Hypothesis to assess the effectiveness of CeL	39
3.4. Phase 3 – Final Study	41
3.4.1. Total Participants	41
3.4.2. Population for the Final study	44
3.4.3. Confidence Level of the final study	44
3.4.4. Response Rate	44
3.4.5. Selection of Likert Scale	45
Chapter 4 – DATA ANALYSIS	47
4.1. Introduction to the Data Analysis	47
4.2. Preliminary Study Analysis	47
4.2.1. Define CeL	47
4.2.2. Factors Affecting CeL	48
4.2.3. Awareness of Tools Used in CeL	50
4.2.4. Effective Tools to Use in CeL	52
4.2.5. Benefits of CeL Compared to Other Teaching Approaches	52
4.2.6. Challenges in Carrying Out CeL in Sri Lankan Universities	53
4.2.7. Perception of Lecturers about Students’ Interest in CeL	54
4.2.8. Interest of Sri Lankan University Students in CeL	55
4.2.9. Perception about the Assessment of Effectiveness of CeL	55
4.3. Final Study Analysis	55
4.3.1. Valid responses	55
4.3.2. Demographic Profile of Students Respondents	56

4.3.3. Demographic Profile of Lecturer Respondents	60
4.3.4. Preparing the Data for the SPSS Analysis.....	63
4.3.5. Internal Consistency Analysis	63
4.3.5.1. Internal Consistency - Students' Academic Performance	65
4.3.5.2. Internal Consistency - Students' Communication Skills	67
4.3.5.3. Internal Consistency - Students' Cognitive Skills	68
4.3.5.4. Internal Consistency - Students' Interaction.....	69
4.3.5.5. Internal Consistency - Students' Technical Capability.....	70
4.3.5.6. Internal Consistency - Students' Satisfaction	71
4.3.5.7. Internal Consistency - Lecturers' Interaction	72
4.3.5.8. Internal Consistency - Lecturers' Technical Capability	73
4.3.5.9. Internal Consistency - Lecturers' Satisfaction.....	74
4.3.5.10. Internal Consistency - Participants' Interaction.....	75
4.3.5.11. Internal Consistency - Participants' Technical Capability.....	76
4.3.5.12. Internal Consistency - Participants' Satisfaction	77
4.3.6. Normality Testing.....	78
4.3.6.1. Normality Testing – Students' Academic Performance	78
4.3.6.2. Normality Testing – Students' Communication Skills	80
4.3.6.3. Normality Testing – Students' Cognitive Skills	82
4.3.6.4. Normality Testing – Students' Interaction.....	84
4.3.6.5. Normality Testing – Students' Technical Skills	85
4.3.6.6. Normality Testing – Students' Satisfaction	87
4.3.6.7. Normality Testing – Lecturers' Interaction	88
4.3.6.8. Normality Testing – Lecturers' Technical Capability	89
4.3.6.9. Normality Testing – Lecturers' Satisfaction.....	91
4.3.6.10. Normality Testing – Participants' Interaction.....	92
4.3.6.11. Normality Testing – Participants' Technical Capability	93
4.3.6.12. Normality Testing – Participants' Satisfaction	95
4.3.7. Hypothesis Testing	96
4.3.7.1. Hypothesis Testing – Students' Academic Performance.....	96
4.3.7.2. Hypothesis Testing – Students' Communication Skills.....	97
4.3.7.3. Hypothesis Testing – Students' Cognitive Skills.....	98
4.3.7.4. Hypothesis Testing – Students' Interaction	99
4.3.7.5. Hypothesis Testing – Students' Technical Capability	100

4.3.7.6. Hypothesis Testing – Students’ Satisfaction.....	101
4.3.7.7. Hypothesis Testing – Lecturers’ Interaction.....	102
4.3.7.8. Hypothesis Testing – Lecturers’ Technical Capability.....	103
4.3.7.9. Hypothesis Testing – Lecturers’ Satisfaction	104
4.3.7.10. Hypothesis Testing – Participants’ Interaction	105
4.3.7.11. Hypothesis Testing – Participants’ Technical Capability.....	106
4.3.7.12. Hypothesis Testing – Participants’ Satisfaction	107
4.3.7.13. Summary of Hypotheses Testing	108
4.3.8. Relationship Analysis of the Variables	109
4.3.8.1. Scatter Plot & Correlation Analysis - Students’ Academic Performance.....	110
4.3.8.2. Scatter Plot & Correlation Analysis - Students’ Communication Skills	112
4.3.8.3. Scatter Plot & Correlation Analysis - Students’ Cognitive Skills	113
4.3.8.4. Scatter Plot & Correlation Analysis - Students’ Interaction.....	114
4.3.8.5. Scatter Plot & Correlation Analysis - Students’ Technical Capability.....	116
4.3.8.6. Scatter Plot & Correlation Analysis - Students’ Satisfaction	117
4.3.8.7. Scatter Plot & Correlation Analysis - Lecturers’ Interaction.....	118
4.3.8.8. Scatter Plot & Correlation Analysis - Lecturers’ Technical Capability	120
4.3.8.9. Scatter Plot & Correlation Analysis - Lecturers’ Satisfaction	121
4.3.8.10. Scatter Plot & Correlation Analysis - Participants’ Interaction.....	122
4.3.8.11. Scatter Plot & Correlation Analysis - Participants’ Technical Capability...	124
4.3.8.12 Scatter Plot & Correlation Analysis - Participants’ Satisfaction	125
4.3.9. Regression Analysis	126
4.3.9.1. Regression Analysis - Students’ Academic Performance.....	128
4.3.9.2. Regression Analysis - Students’ Communication Skills	129
4.3.9.3. Regression Analysis - Students’ Cognitive Skills	130
4.3.9.4. Regression Analysis - Students’ Interaction	131
4.3.9.5. Regression Analysis - Students’ Technical Capability.....	132
4.3.9.6. Regression Analysis - Students’ Satisfaction	133
4.3.9.7. Regression Analysis - Lecturers’ Interaction.....	134
4.3.9.8. Regression Analysis - Lecturers’ Technical Capability.....	135
4.3.9.9. Regression Analysis - Lecturers’ Satisfaction	136
4.3.9.10. Regression Analysis - Participants’ Interaction.....	137
4.3.9.11. Regression Analysis - Participants’ Technical Capability.....	138
4.3.9.12 Regression Analysis - Participants’ Satisfaction	139

4.3.9.13. Summary of Regression Analysis	140
4.3.10. Step-wise Multiple Regression Analysis	140
4.3.10.1. Step-wise Multiple Regression Analysis for Students.....	141
4.3.10.2. Step-wise Multiple Regression Analysis for Lecturers	144
4.3.10.3. Step-wise Multiple Regression Analysis for Participants.....	146
Chapter 5 – DISCUSSIONS.....	149
5.1. Introduction	149
5.2. Preliminary Study Discussion	149
5.2.1. Awareness about CeL.....	149
5.2.2. Effective Tools Used in CeL	149
5.2.3. Advantages of CeL	152
5.2.4. Challenges of CeL	154
5.2.5. Perception of CeL among University Lecturers and Students	156
5.2.6. Framework to Analyse the Effectiveness of CeL.....	158
5.3. Final Study Discussion.....	159
5.3.1. Hypothesis Testing.....	159
5.3.2. Linear Regression Analysis.....	160
5.3.2. Step-wise Multiple Regression Analysis.....	160
Chapter 6 – RECOMMENDATIONS & CONCLUSION	162
6.1. Recommendations	162
6.2. Conclusion.....	164
6.3. Future Research.....	168
References.....	169
Appendix-1 –Survey for the lecturers	178
Section A.....	178
Section B.....	181
Section C.....	182
Appendix-2 – Survey for the students.....	183
Section A.....	183
Section B.....	186
Section C.....	188
Appendix-3 – T Distribution Critical Values Table	189

List of Figures

Figure 2.1: E-learning Tools	10
Figure 2.2: Learner preferences on different learning modes (Source: [22])	12
Figure 2.3: Evaluation summary of the learners (Source: [22])	12
Figure 2.4: Inhibiting and facilitating factors for e-learning (Source: [25]).....	13
Figure 2.5: Learning style & Learner’s age group (Source: [26])	14
Figure 2.6: Learning style and profession (Source: [26])	14
Figure 2.7: Affective behaviour of an e-learner (Source: [30])	16
Figure 2.8: Dale’s cone of learning (Source: [44])	20
Figure 2.9: Factors important or students’ educational experience (Source: [50]).....	23
Figure 2.10: Stages in becoming an e-learner (Source: [50])	24
Figure 3.1: Framework to assess the effectiveness of CeL.....	39
Figure 4.1: Factors affecting the effectiveness of CeL	50
Figure 4.2: Usage of production tools in the universities	51
Figure 4.3: Usage of learning tools in the universities.....	51
Figure 4.4: Gender of the students.....	57
Figure 4.5: Age of the students	57
Figure 4.6: University of the students.....	57
Figure 4.7: Field of the students	58
Figure 4.8: CeL started period of the students	58
Figure 4.9: Study level of the students.....	58
Figure 4.10: Subject count of the students.....	59
Figure 4.11: Hours for e-learning of students	59
Figure 4.12: Percentage of time for CeL of students	59
Figure 4.13: Gender of the lecturers	60
Figure 4.14: Age of the lecturers	60
Figure 4.15: University of the lecturers	61
Figure 4.16: Field of lecturing of the lecturers	61
Figure 4.17: CeL practicing period of the lecturers	61
Figure 4.18: Modules per semester of the lecturers	62
Figure 4.19: Hours per week for e-learning of the lecturers.....	62

Figure 4.20: Percentage of time on CeL of the lecturers	62
Figure 4.21: Internal consistency - Students' academic performance.....	65
Figure 4.22: Internal Consistency - Updated Students' Academic Performance	66
Figure 4.23: Internal Consistency - Students' Communication Skills	67
Figure 4.24: Internal Consistency - Students' Cognitive Skills	68
Figure 4.25: Internal Consistency - Students' Interaction.....	69
Figure 4.26: Internal Consistency - Students' Technical Capability.....	70
Figure 4.27: Internal Consistency - Students' Satisfaction	71
Figure 4.28: Internal Consistency - Lecturers' Interaction	72
Figure 4.29: Internal Consistency - Lecturers' Technical Capability	73
Figure 4.30: Internal Consistency - Lecturers' Satisfaction.....	74
Figure 4.31: Internal Consistency - Participants' Interaction.....	75
Figure 4.32: Internal Consistency - Participants' Technical Capability.....	76
Figure 4.33: Internal Consistency - Participants' Satisfaction	77
Figure 4.34: Normality Distribution - Students' Academic Performance.....	79
Figure 4.35: Normality Curve - Students' Communication Skills.....	81
Figure 4.36: Normality Curve - Students' Cognitive Skills.....	83
Figure 4.37: Normality Curve - Students' Interaction.....	85
Figure 4.38: Normality Curve - Students' Technical Capability	86
Figure 4.39: Normality Curve - Students' Satisfaction	87
Figure 4.40: Normality Curve - Lecturers' Interaction	89
Figure 4.41: Normality Curve - Lecturers' Technical Capability	90
Figure 4.42: Normality Curve - Lecturers' Satisfaction.....	91
Figure 4.43: Normality Curve - Participants' Interaction	93
Figure 4.44: Normality Curve - Participants' Technical Capability	94
Figure 4.45: Normality Curve - Participants' Satisfaction	95
Figure 4.46: Hypothesis Testing – Students’ Academic Performance	96
Figure 4.47: Hypothesis Testing – Students’ Communication Skills.....	98
Figure 4.48: Hypothesis Testing – Students’ Cognitive Skills.....	99
Figure 4.49: Hypothesis Testing – Students’ Interaction.....	100
Figure 4.50: Hypothesis Testing – Students’ Technical Capability	101
Figure 4.51: Hypothesis Testing – Students’ Satisfaction	102
Figure 4.52: Hypothesis Testing – Lecturers’ Interaction	103
Figure 4.53: Hypothesis Testing – Lecturers’ Technical Capability	104

Figure 4.54: Hypothesis Testing – Lecturers’ Satisfaction.....	105
Figure 4.55: Hypothesis Testing – Participants’ Interaction	106
Figure 4.56: Hypothesis Testing – Participants’ Technical Capability	107
Figure 4.57: Hypothesis Testing – Participants’ Satisfaction.....	108
Figure 4.58: Scatter Plot - Students' Academic Performance	111
Figure 4.59: Correlation Analysis - Students' Academic Performance	111
Figure 4.60: Scatter Plot - Students' Communication Skills.....	112
Figure 4.61: Correlation Analysis - Students' Communication Skills	113
Figure 4.62: Scatter Plot - Students' Cognitive Skills.....	114
Figure 4.63: Correlation Analysis - Students' Cognitive Skills	114
Figure 4.64: Scatter Plot - Students' Interaction	115
Figure 4.65: Correlation Analysis - Students' Interaction.....	115
Figure 4.66: Scatter Plot - Students' Technical Capability	116
Figure 4.67: Correlation Analysis - Students' Technical Capability	117
Figure 4.68: Scatter Plot - Students' Satisfaction.....	118
Figure 4.69: Correlation Analysis - Students' Satisfaction	118
Figure 4.70: Scatter Plot - Lecturers’ Interaction	119
Figure 4.71: Correlation Analysis - Lecturers’ Interaction.....	119
Figure 4.72: Scatter Plot - Lecturers’ Technical Capability	120
Figure 4.73: Correlation Analysis - Lecturers’ Technical Capability.....	121
Figure 4.74: Scatter Plot - Lecturers’ Satisfaction.....	121
Figure 4.75: Correlation Analysis - Lecturers’ Satisfaction	122
Figure 4.76: Scatter Plot - Participants’ Interaction.....	123
Figure 4.77: Correlation Analysis - Participants’ Interaction	123
Figure 4.78: Scatter Plot - Participants’ Technical Capability	124
Figure 4.79: Correlation Analysis - Participants’ Technical Capability.....	125
Figure 4.80: Scatter Plot - Participants’ Satisfaction	125
Figure 4.81: Correlation Analysis - Participants’ Satisfaction	126
Figure 4.82: Regression Analysis - Students' Academic Performance.....	128
Figure 4.83: Regression Analysis - Students’ Communication Skills.....	129
Figure 4.84: Regression Analysis - Students’ Cognitive Skills.....	130
Figure 4.85: Regression Analysis - Students’ Interaction	131
Figure 4.86: Regression Analysis - Students’ Technical Capability	132
Figure 4.87: Regression Analysis - Students’ Satisfaction	133



Figure 4.88: Regression Analysis - Lecturers' Interaction	134
Figure 4.89: Regression Analysis - Lecturers' Technical Capability	135
Figure 4.90: Regression Analysis - Lecturers' Satisfaction.....	136
Figure 4.91: Regression Analysis - Participants' Interaction	137
Figure 4.92: Regression Analysis - Participants' Technical Capability	138
Figure 4.93: Regression Analysis - Participants' Satisfaction.....	139
Figure 4.94: ANOVA Results for Multiple Regression Analysis – Students.....	142
Figure 4.95: Model Summary for Multiple Regression Analysis – Students	143
Figure 4.96: Variables Entered or Removed in Regression Analysis – Students.....	144
Figure 4.97: ANOVA Results for Multiple Regression Analysis – Lecturers	145
Figure 4.98: Model Summary for Multiple Regression Analysis – Lecturers.....	146
Figure 4.99: Variables Entered or Removed in Regression Analysis – Lecturers.....	146
Figure 4.100: ANOVA Results for Multiple Regression Analysis – Participants.....	147
Figure 4.101: Model Summary for Multiple Regression Analysis – Participants.....	147
Figure 4.102: Variables Entered or Removed in Regression Analysis – Participants.....	148



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List of Tables

Table 1.1: Research Questions.....	3
Table 1.2: Research Objectives.....	4
Table 2.1: Summary of Literature Review	31
Table 3.1: Preliminary Study Population.....	34
Table 3.2: Preliminary Study Interview Modes	35
Table 3.3: Preliminary Study Instrumental.....	35
Table 3.4: Research Question vs Preliminary Study Instrument	37
Table 3.5: Indicators to Measure the Effectiveness of CeL.....	37
Table 3.6: Measurement Criteria of the Independent Variables	38
Table 3.7: Total Population of final Study.....	42
Table 3.8: Total Undergraduate Students	43
Table 3.9: Total Population of the Study	43
Table 3.10: Confidence Interval	44
Table 3.11: Obtained Confidence Interval	44
Table 3.12: Response Rate for the Final Study.....	45
Table 4.1: Factors Affecting the Effectiveness of CeL.....	48
Table 4.2: Factors Affecting the Effectiveness of CeL.....	50
Table 4.3: Effective CeL Tool	52
Table 4.4: Summary of Effective CeL Tool	52
Table 4.5: Benefits of CeL.....	53
Table 4.6: Challenges of Implementing CeL in Universities	53
Table 4.7: Students' Interest in CeL and Lecturers' Perception	54
Table 4.8: Final Survey - Valid Responses.....	56
Table 4.9: Demographic Profile of Students.....	57
Table 4.10: Demographic Profile of Lecturers	60
Table 4.11: Normality Testing – Students’ Academic Performance	78
Table 4.12: Normality Testing – Students’ Communication Skills.....	80
Table 4.13: Normality Testing – Students’ Cognitive Skills.....	82
Table 4.14: Normality Testing – Students’ Interaction	84
Table 4.15: Normality Testing – Students’ Technical Skills.....	85
Table 4.16: Normality Testing – Students’ Satisfaction.....	87

Table 4.17: Normality Testing – Lecturers’ Interaction	88
Table 4.18: Normality Testing – Lecturers’ Technical Capability	89
Table 4.19: Normality Testing – Lecturers’ Satisfaction.....	91
Table 4.20: Normality Testing – Participants’ Interaction	92
Table 4.21: Normality Testing – Participants’ Technical Capability	93
Table 4.22: Normality Testing – Participants’ Satisfaction.....	95
Table 4.23: Summary of Hypotheses Testing.....	109
Table 4.24: Summary of Regression Analysis.....	140



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List of Abbreviations

CeL	- Collaborative e-Learning
TCL	- Traditional Classroom Lecturing
IT	- Information Technology
ICT	- Information and Communications Technology
CSCL	- Computer Supported Collaborative Learning
CSCW	- Computer Supported Cooperative Work
LMS	- Learning Management System
LCMS	- Learning Content Management System
SEL	- Social Emotional Learning
UCSC	- University of Colombo, School of Computing
JICA	- Japan International Cooperation Agency
CD-ROM	- Compact Disc Read-Only Memory
ZPD	- Zone of Proximal Development
eLQCC	- E-Learning Quality Certification Center
G.C.E. A/L	- General Certificate of Education, Advanced Level
UGC	- University Grants Commission
SPSS	- Statistical Package for Social Sciences

