

**Applying Computer-Mediated Collaborative  
Learning into English Foreign Language Classrooms  
at a Vietnamese University**

**Nguyen, Thi Xuan Lan**  
MA in Applied Linguistics  
(La Trobe University, Australia)  
BA in TESOL  
(Ho Chi Minh City Open University, Vietnam)

A thesis submitted in fulfilment of the requirements for  
the degree of Doctor of Philosophy in Education  
at the University of Newcastle, Australia.

May 2016

## STATEMENT OF ORIGINALITY

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying, subject to the provisions of the Copyright Act 1968.

Nguyen, Thi Xuan Lan

Signed:

Date: 10/05/2016

## DEDICATIONS

This thesis is dedicated to my parents, my husband and my daughter, who are my heart and inspiration.

## ACKNOWLEDGEMENTS

My greatest acknowledgement is to my supervisors, Associate Professor Shen Chen and Mr Greg Preston. Without their professional supervision, this thesis would not be completed. I could not have asked for more patient, supportive, understanding, and dedicated supervisors.

I wish to acknowledge all teacher and student participants of this research who have contributed with their valuable information. I wish to thank all academic and official staff at the research site for their assistance and support during the time this research was being conducted.

Finally, I am indebted to VIED and the University of Newcastle for their financial support for my study in Australia. This work would not have been possible without funding from these organisations.

## TABLE OF CONTENTS

	Page
Abstract.....	xi
List of Tables .....	xiii
List of Figures.....	xv
List of Appendices .....	xvi
Abbreviations.....	xvii
CHAPTER 1: INTRODUCTION.....	1
1.1 The Problematic Issues .....	1
1.1.1 English as an International Language .....	2
1.1.2 Second/Foreign Language Pedagogy Reform.....	4
1.1.3 The Development of Computer-Assisted Language Learning.....	5
1.2 The Pedagogical Problems .....	8
1.3 Existing Context of the Study in Vietnam.....	11
1.3.1 English Foreign Language Education in Vietnam .....	12
1.3.2 Integrating Computing into Education in Vietnam.....	14
1.4 Background of the Study .....	16
1.4.1 Universities in Vietnam.....	16
1.4.2 Higher Education Students.....	17
1.4.3 Academic Staff.....	19
1.5 Research Questions.....	20
1.6 Significance of the Study .....	22
1.7 Organisation of the Thesis .....	23
1.8 Summary.....	26
CHAPTER 2: LITERATURE REVIEW.....	27
2.1 Sociocultural Theory .....	27
2.1.1 Mediation .....	28
2.1.2 The Zone of Proximal Development.....	30

2.1.3 Scaffolding .....	33
2.2 Collaborative Learning .....	34
2.2.1 Definition of Collaborative Learning.....	35
2.2.2 Components of Collaborative Learning.....	38
2.2.3 Benefits of Collaborative Learning.....	40
2.2.4 Challenges in Collaborative Learning.....	41
2.3 Computer-Mediated Communication .....	42
2.3.1 Definition of Computer-Mediated Communication.....	43
2.3.2 Features of Computer-Mediated Communication.....	44
2.3.3 Modes of Computer-Mediated Communication .....	47
2.3.3.1 Synchronous Computer-Mediated Communication.....	47
2.3.3.2 Asynchronous Computer-Mediated Communication .....	48
2.3.4 Contributions of Computer-Mediated Communication to Education	49
2.3.5 Computer-Mediated Communication in Second/Foreign Language Education .....	51
2.4 Computer-Mediated Collaborative Learning.....	53
2.5 Summary .....	55
 CHAPTER 3: METHODOLOGY .....	57
3.1 Research Design .....	57
3.1.1 Research Objective.....	57
3.1.2 Rationale for the Research Approaches .....	57
3.1.3 Sampling Procedure .....	59
3.1.4 Technical Selection and Description.....	61
3.1.4.1 Asynchronous Computer-Mediated Communication Choice .	61
3.1.4.2 E-Learning Platform Description .....	62
3.1.5 Participants .....	65
3.1.5.1 Teachers .....	65
3.1.5.2 Students .....	66
3.1.6 Human Ethical Considerations.....	68

3.2 Research Procedures .....	69
3.2.1 Data Collection.....	72
3.2.1.1 Pre-Course Questionnaires.....	74
3.2.1.2 Post-Course Questionnaires.....	75
3.2.1.3 Pre-Test .....	76
3.2.1.4 Post-Test.....	77
3.2.1.5 Classroom Observation .....	78
3.2.1.6 Peer Review .....	80
3.2.1.7 Group Discussion.....	81
3.2.1.8 Interview .....	81
3.2.2 Data Analysis .....	83
3.2.2.1 Quantitative Data Analysis .....	83
3.2.2.2 Qualitative Data Analysis .....	84
3.2.2.3 Mixed Data Analysis.....	87
3.2.3 Validity and Reliability.....	89
3.3 Limitation of the Methodology.....	89
3.4 Summary.....	91
 CHAPTER 4: QUANTITATIVE FINDINGS.....	93
4.1 Participants .....	93
4.1.1 Teachers .....	94
4.1.1.1 Demographics .....	94
4.1.1.2 Computer Skills and Use.....	95
4.1.1.3 Experience of Applying Collaborative Learning .....	97
4.1.2 Students .....	97
4.1.2.1 Demographics .....	99
4.1.2.2 Computer Use.....	101
4.1.2.3 Collaborative Learning Experience.....	103
4.1.3 Correlation Analysis.....	104
4.1.3.1 Gender Effects.....	104

4.1.3.2 Age Effects.....	106
4.1.3.3 Factors Affected by Learners' Backgrounds.....	107
4.2 The Effects of Different Treatments on the Change of Pre-Test and Post-Test .....	109
4.2.1 The Change in the Results of Pre-Test and Post-Test.....	109
4.2.2 Changes in the Results of Tests among Groups with Different Treatments.....	110
4.2.3 The Effects of Different Treatments on the Test Results of Students from Different Faculties .....	111
4.2.4 Correlation Analysis.....	115
4.3 Learners' Reflections on Computer-Mediated Collaborative Learning ..	117
4.3.1 Reliability of the Questionnaire Items .....	117
4.3.2 Learners' Perceptions of Computer-Mediated Collaborative Learning .....	119
4.3.3 Correlation Analysis.....	122
4.3.3.1 Academic Factors.....	122
4.3.3.2 Social Factors .....	123
4.3.3.3 Psychological Factors.....	124
4.4 Learners' Reflections on Face-to-Face Collaborative Learning.....	125
4.4.1 Reliability of the Questionnaire Items .....	125
4.4.2 Learners' Perceptions of Face-to-Face Collaborative Learning ....	126
4.4.3 Correlation Analysis.....	129
4.4.3.1 Academic Factors.....	130
4.4.3.2 Social Factors .....	131
4.4.3.3 Psychological Factors.....	131
4.4 Summary.....	132
 CHAPTER 5: QUALITATIVE FINDINGS (STUDENTS' AND TEACHERS' REFLECTIONS ON THE APPLICATIONS) .....	134
5.1 Benefits of the Applications .....	135

5.2 Challenges.....	145
5.2.1 Challenges of Face-to-face Collaborative Learning Group .....	145
5.2.2 Challenges of Computer-Mediated Collaborative Learning Group	152
5.3 Teachers' and Students' Attitudes towards the Applications .....	156
5.3.1 Teacher' and Students' Attitudes towards Face-to-Face Collaborative Learning.....	156
5.3.2 Teacher' and Students' Attitudes towards Computer-Mediated Collaborative Learning.....	160
5.4 Summary.....	165
 CHAPTER 6: QUALITATIVE FINDINGS (FACE-TO-FACE COLLABORATIVE LEARNING AND COMPUTER-MEDIATED COLLABORATIVE LEARNING PRACTICES) .....	167
6.1 Classroom Observation.....	167
6.1.1 Teaching Practices .....	168
6.1.2 Participation.....	170
6.1.3 Interaction .....	173
6.2 Peer Review .....	176
6.2.1 Participation .....	176
6.2.2 Interaction .....	178
6.2.3 Social Presence .....	180
6.3 Group Discussion.....	183
6.3.1 Face-to-Face Discussion .....	184
6.3.2 Online Discussion.....	186
6.3.2.1 Participation .....	187
6.3.2.2 Interaction .....	188
6.3.2.3 Social Presence.....	189
6.4 Summary.....	191
 CHAPTER 7: DISCUSSION .....	192

7.1 Collaborative Learning .....	192
7.1.1 Learning and Teaching Practices.....	192
7.1.2 Learning Outcomes.....	194
7.2 The Nature of Computer-Mediated Collaborative Learning in EFL Classrooms in Vietnam.....	197
7.2.1 Peer Review .....	197
7.2.2 Group Discussion.....	200
7.3 Teachers' and Students' Perceptions of the Application of Computer- Mediated Collaborative Learning .....	202
7.3.1 Students' Perceptions.....	203
7.3.2 Teachers' Reflections .....	205
7.4 Teachers' and Students' Readiness for the Application of Computer- Mediated Collaborative Learning .....	208
7.4.1 Students' Readiness .....	208
7.4.2 Teachers' Readiness .....	211
7.5 Summary .....	212
 CHAPTER 8: CONCLUSION .....	214
8.1 Implications of the findings .....	214
8.1.1 Application of Computer-Mediated Collaborative Learning .....	214
8.1.2 Methodological Decision.....	217
8.1.3 Research Methodology .....	218
8.2 Limitations .....	221
8.3 Recommendations for Further Research .....	223
8.4 Conclusions.....	225
 REFERENCES .....	227
 APPENDICES .....	238

## ABSTRACT

From the sociocultural perspective, as learning is viewed as a process of collaboration, this research investigates how the mediational tool, computer-mediated communication, assists English foreign language students to learn collaboratively. The research emphasises the efficiency of this application in supporting collaborative learning in English foreign language classrooms in Vietnam, in terms of enhancing learning outcomes, and learners' and teachers' attitudes towards the application. A multi-case study is conducted with English foreign language teachers and students from different faculties of a university in Ho Chi Minh City, Vietnam; three different treatments, including collaborative learning with computer-mediated communication, face-to-face collaborative learning, and traditional teaching methods, are examined within a semester. A number of data collection instruments including classroom observation, questionnaires, tests, peer reviews, group discussions and interviews, are designed to collect multi-type data from multiple resources.

Findings from the research have confirmed the positive impacts of computer-mediated communication on collaborative learning, in which learners participate actively in learning, and become more responsible and autonomous for their own learning. With its unique features, computer-mediated communication is shown to foster learners' participation and interaction and thus encourage collaboration. Significantly, both learners and teachers have positive attitudes towards this application, and would like to encourage it more in their future classes. Though fewer students participated in learning activities with computer-mediated communication than in face-to-face collaborative learning modes, and more students have positive attitudes towards face-to-face collaborative learning than computer-mediated communication, there is evidence that computer-mediated communication offers English foreign language learners opportunities for learning that are not

possible in face-to-face collaborative learning mode or other traditional practices. Practically, computer-mediated communication provides learners more opportunities for communication among peers, to learn outside the classroom and to access authentic sources of knowledge and information on the Internet.

However, computer-mediated communication has been found to affect the learning of different students in different ways, as learners from the social sciences and humanities group and business-finance-economics group participated more and have more positive attitudes towards computer-mediated communication practices than those from the technological science group. Furthermore, it cannot accommodate all language skills and thus cannot fulfil all English foreign language learners' needs. Therefore, computer-mediated communication is suggested, not to replace, but to blend with other face-to-face teaching and learning practices, to ensure all learning demands are met, and teachers and learners are able to enjoy all benefits from both computer-mediated communication and face-to-face collaborative learning.

## LIST OF TABLES

	Page
Table 2.1 Collaborative learning vs. traditional teaching practices .....	37
Table 2.2 Benefits of collaborative learning.....	40
Table 2.3 Studies of computer-mediated communication of language skills..	53
Table 3.1 Participant grouping method .....	61
Table 3.2 Process of data collection .....	73
Table 3.3 Method of data collection and analysis .....	88
Table 4.1 English Foreign Language teachers' personal information .....	95
Table 4.2 English Foreign Language teachers' time of computer use .....	96
Table 4.3 Group and gender cross tabulation .....	98
Table 4.4 Students' personal information.....	100
Table 4.5 Factors affected by gender.....	105
Table 4.6 Factors affected by age .....	107
Table 4.7 Factors affected by learners' background.....	108
Table 4.8 Scheffe post hoc multiple comparisons: pairs significantly differed.....	112
Table 4.9 Mean of changes between the results of pre-test and post-test for classes .....	113
Table 4.10 Correlation of learners' background and test results .....	115
Table 4.11 Item reliability (Computer-Mediated Collaborative Learning) ...	118
Table 4.12 Average mean score of factors affecting learners' perception of Computer-Mediated Collaborative Learning.....	121
Table 4.13 Item reliability (Face-to-face Collaborative Learning) .....	126
Table 4.14 Average mean score of factors affecting learners' perception of Collaborative Learning .....	129
Table 5.1 Teacher and student participants in the interviews.....	135
Table 6.1 Teaching practices .....	169
Table 6.2 Learners' attendance and participation.....	172
Table 6.3 Student-teacher interaction in class .....	174

Table 6.4 Students' participation in peer review task.....	177
Table 6.5 Turn-taking behaviours in face-to-face and online peer review groups .....	179
Table 6.6 The social moves in face-to-face and online interaction .....	182
Table 6.7 Learners' behaviours while participating in group discussion .....	186
Table 6.8 Students' participation in group discussion on E-learning .....	187

## LIST OF FIGURES

	Page
Figure 1.1 Organisation of the thesis .....	25
Figure 2.1 The mediated nature of human/world relationship .....	29
Figure 2.2 The zone of proximal development.....	31
Figure 3.1 Advanced mixed methods design of the research .....	59
Figure 3.2 A discussion board on E-Learning .....	64
Figure 3.3 Process of qualitative data analysis.....	86
Figure 4.1 Correlation coefficient range.....	104
Figure 4.2 The error bar chart of the changes between pre-test and post-test among groups.....	111
Figure 4.3 Effects on the perception of computer-mediated collaborative learning by learners in different groups .....	121
Figure 4.4 Effects on the perception of face-to-face collaborative learning by learners in different groups .....	129
Figure 5.1. Students' reflections of the benefits of face-to-face collaborative learning and computer-mediated collaborative learning.....	144
Figure 6.1 Percentage of student attendance by class.....	170
Figure 6.2 Level of learners' participation in classroom tasks .....	172
Figure 6.3 Types of student-teacher interaction .....	175
Figure 6.4 L1 use in face-to-face and online comments.....	181
Figure 6.5 Participants' turn taking in a group discussion .....	188
Figure 6.6 Types of social moves used in a discussion .....	190

## LIST OF APPENDICES

	Page
APPENDIX A: Human Research Ethics Approval .....	238
APPENDIX B: Consent Forms and Information Statements .....	241
APPENDIX C: Pre-Course Questionnaires.....	260
APPENDIX D: Post-Course Questionnaires .....	266
APPENDIX E: Classroom Observation Forms .....	274
APPENDIX F: Peer Review Form .....	277
APPENDIX G: Interview Questions .....	279
APPENDIX H: Teachers' Responses of Pre-Course Questionnaire .....	285
APPENDIX I: Students' Responses of Pre-Course Questionnaire .....	287
APPENDIX J: The Results of T-Test Analysis of the Changes between Pre- Test and Post-Test.....	290
APPENDIX K: One Way ANOVA Analysis of the Changes in the Test Results for Sub-Groups of Different Professional Divisions	292
APPENDIX L: Descriptive Statistics from Post-Course Questionnaire .....	294
APPENDIX M: Correlation of Learners' Reflections on Computer-Mediated Collaborative Learning .....	296
APPENDIX N: Correlation of Learners' Reflections on Face-to-Face Collaborative Learning .....	298
APPENDIX O: Model & Template for the Assessment of Social Presence .	300
APPENDIX P: Learners' Participation and Interaction in Group Discussion on E-Learning .....	301

## ABBREVIATIONS

ACMC	Asynchronous Computer-Mediated Communication
CALL	Computer-Assisted Language Learning
CL	Collaborative Learning
CLT	Communicative Language Teaching
CMC	Computer-Mediated Communication
CMCL	Computer-Mediated Collaborative Learning
EFL	English Foreign Language
FTF	Face-to-Face
FTFCL	Face-to-Face Collaborative Learning
ICT	Information Communication Technology
L1	First Language
L2	Second Language
MOET	Ministry of Education and Training
SCMC	Synchronous Computer-Mediated Communication
SCT	Sociocultural Theory
TESOL	Teaching English to Speakers of Other Languages
ZCD	The Zone of Current Development
ZPD	The Zone of Proximal Development