

# **Enhancing Critical Thinking of Undergraduate Thai Students through Dialogic Inquiry**

**Maliwan Buranapatana**

**A thesis submitted in fulfilment of the requirements for the degree  
of Doctor of Philosophy**

**School of Languages, International Studies and Tourism  
The University of Canberra, Australia**

**March 2006**

## Abstract

This thesis sets for itself the task of testing the viability of a dialogic model of learning as a methodology for teaching critical thinking in reading and writing to undergraduate students of Thai in Thailand. To this end, we conducted an experiment involving twenty-one undergraduate students of Thai at KhonKaen University, Thailand. This study presents the intellectual background of the pedagogic framework supporting the experiment and a discussion of its outcomes. The assessment of the results of the experiment focuses on the forms of evidence resulting directly from this pedagogic framework. The study concludes with a number of considerations for future research in critical thinking which our project helped us to identify.

For the purpose of our work, we adopt the model of dialogic learning which involves students in looking for perspectives enabling them to challenge, and as a result to enhance, the relevance of the understandings in which they frame their interactions. The process is dialogic because it involves students in working with different points of view by identifying challenging perspectives, constructing conflicting arguments and exploring the strategic potential that the interaction of these arguments may have on the students' initial assumptions. In this sense, the concept of dialogue that we use refers to the methodology of students' inquiry (learning), rather than a specific form of linguistic genre. In our view, this definition is suitable to all fields of inquiry considering that each field deals with evaluation of the strategic (enabling) power of its assumptions.

In the course of this work, we establish the relevance of the above concept of dialogic inquiry against a multitude of ideas regarding the suitability of different approaches to the teaching of critical thinking. We illustrate that, typically, teaching approaches value questioning as a means for generating reasoned arguments. However, the originality of the dialogic model used in this thesis lies in its ability to focus pedagogic environments on students' strategic engagement in social interactions, rather than on the process of questioning alone. Consequently, in our study we assess the quality of students' learning by identifying the contexts indicating the quality of students' social engagement.

These included gauging the community's interest in the students' project, the depth of students' exploratory work, their ability to work together and students' own personal involvement in their project. These outcomes helped us to reflect on the quality of the teaching model which we designed in order to promote the critical thinking process.

The emphasis on students' strategic engagement in social interactions allowed us to break away from the conventional concerns with the link between classroom learning and real-world tasks. Instead, our students engaged in the task of creating a Thai News Network (TNN), an Internet-based broadcasting channel, involving students in generating for themselves the meaning of the objectives of their academic subject in the contexts of challenges that they experienced when creating the channel and its (news) articles. Our data analysis shows that the concept of a Thai News Network proved very successful despite the conventional beliefs that Thai students would find it difficult to be critical thinkers. As we demonstrate throughout the entire thesis, the main issue in teaching critical thinking is not, as it is often assumed, to ask students to critique the teacher or other authority texts. Rather, it is to create conditions enabling students to identify, and to work with, conflicting perspectives in order to create for themselves increasingly better informed and more inclusive strategies for acting in the world. This may not be an original purpose, but our study offers an original pedagogic framework for facilitating this objective.

## Acknowledgements

This thesis has been completed with the assistance, support and encouragement of many people.

My profound gratitude and deep appreciation are due to my primary supervisor, Professor Andrew Lian for his great support, invaluable advice and encouragement. His insightful comments and intelligence guidance are particularly appreciated. My grateful appreciation goes especially to Ms Kate Wilson, my secondary supervisor, for her constructive advice, continuous support, and encouragement throughout the various stages of my study.

I wish to express my utmost gratitude to Dr. Ania Lian for her intellectual support and critical insight. Her tremendous contribution and insightful guidance throughout the project are particularly appreciated. I also wish to gratefully acknowledge Dr. Sripanya Chaiyai for spending a considerable amount of time in the interviewing sessions with all participating students, and for her moral support and inspiration.

My most sincere thanks go to my colleagues at KhonKaen University, Assistant Professor Anong Roongjang, Assistant Professor Wirat Wongpinunwatana, Assistant Professor Walee Khunthuvan, and Ms Piyapak Sinbuathong (lecturer), for their generously agreement to participate in this study as a support team. I wish to acknowledge Assistant Professor Santi Wijakkhanalan for the technical support at the beginning of the project. I am particularly grateful to all the students who enthusiastically participated in this study. This project could not have been possible without them.

I wish to thank Beth Barber who helped me with editing the drafts of the thesis. I also wish to acknowledge Associate Professor Peter and Ms Adela Clayton for their support during my stay in Canberra.

I am deeply indebted to my true friend, John Crocker, and wish to gratefully acknowledge his invaluable support throughout my doctoral journey in Australia.

I am especially grateful to his intellectual and all his great assistance, especially when I needed it the most. My special thanks go to Kaye Carter, Rosemary Crocker, Fran and Don James for their generous friendship and support in many ways during my years in Australia.

I wish to express my sincere thanks to a number of friends for their friendship and support. My most sincere thanks go to Piya Louis Siangsukone and Supanit Kulsiri for their assistance in many aspects of the preparation of my thesis, in particular for the presentation of the many diagrams. I also wish to acknowledge my sincere thanks to my many friends and colleagues for their friendship and support, in particular, Karinrat Srismith, Oranuch Sawetrattanasatien, Pattanasak Rattanasiwamok, Thitiporn Tang, Songpon Intasian, Supanee Pongwisutsak, Suttida Ngonkum, and Wariya Lamlert.

I owe enormous gratitude to my family for their love and support throughout this very demanding but rewarding time in Australia.

# Contents

ABSTRACT .....	III
ACKNOWLEDGEMENTS.....	V
CONTENTS .....	VII
CHAPTER 1 INTRODUCTION.....	1
1.1 INTRODUCTION .....	1
1.2 FOCUS OF THE RESEARCH AND RESEARCH QUESTIONS .....	6
1.3 SIGNIFICANCE OF RESEARCH .....	8
1.4 RESEARCH PLAN AND METHODS.....	9
1.5 SCOPE AND LIMITATIONS.....	10
1.6 ORGANIZATION OF THE THESIS.....	11
CHAPTER 2 APPROACHES TO CRITICAL THINKING: THE REVIEW OF THE LITERATURE .....	13
2.1 INTRODUCTION .....	13
2.2 VARIETY OF TERMS USED IN THE DISCUSSION OF CRITICAL THINKING .....	14
2.3 THE NOTIONS OF CRITICAL AND CRITICAL THINKING.....	14
2.3.1 Early conceptions of critical thinking: Dewey, Glaser and Russell....	14
2.3.2 Metacognition as an aspect of critical thinking.....	16
2.3.3 Distinguishing critical thinking from being correct.....	20
2.3.4 Critical thinking as a social practice .....	22
2.3.5 Critical thinking as an inquiry.....	25
2.3.6 The definition of critical thinking in this study.....	27
2.4 CONTROVERSIAL ISSUES WITHIN THE CRITICAL THINKING MOVEMENT .....	30
2.4.1 Can critical thinking be taught? .....	30
2.4.2 Is teaching critical thinking domain-general or domain-specific?.....	33
2.4.3 Can critical thinking skills be transferred across domains?.....	37
2.4.4 Can critical thinking skills be measured? .....	40
2.4.5 Is critical thinking ability a factor of gender, age, GPA or major?.....	44
2.5 THE TEACHING AND LEARNING OF CRITICAL THINKING.....	45
2.5.1 Effective critical thinking skills instruction.....	46
2.6 PROMOTING CRITICAL THINKING THROUGH INQUIRY .....	50
2.6.1 Learning through inquiry .....	50
2.6.2 The process of inquiry.....	51

2.6.3	Questioning as a stimulus to inquiry .....	53
2.6.4	Classroom as a community of inquiry .....	55
2.6.5	Problems in inquiry-based instruction .....	60
2.6.5.1	An inquiry-oriented approach .....	60
2.6.5.2	An inquiry-based learning model.....	62
2.7	LEARNING THROUGH REAL WORLD PROBLEMS .....	64
2.8	LEARNING TOGETHER IN A GROUP.....	66
2.9	LEARNING THROUGH DIALOGUE.....	70
2.10	USING WRITING TO ENHANCE CRITICAL THINKING .....	72
2.11	CONCLUSION.....	75
CHAPTER 3	DIALOGIC MODEL OF INQUIRY AND THE <i>THAI NEWS NETWORK</i> .....	76
3.1	INTRODUCTION .....	76
3.2	DIALOGIC MODEL OF LEARNING AND REAL LIFE PROBLEMS .....	76
3.3	DIALOGIC MODEL OF INQUIRY AND ITS PEDAGOGIC FRAMEWORK.....	78
3.4	DIALOGIC MODEL OF INQUIRY AND MACROTASK.....	79
3.5	THE <i>THAI NEWS NETWORK</i> AS A MACROTASK .....	81
3.6	CONCLUSION.....	84
CHAPTER 4	RESEARCH METHODOLOGY .....	86
4.1	INTRODUCTION .....	86
4.2	RESEARCH QUESTIONS.....	86
4.3	RESEARCH DESIGN.....	86
4.3.1	Participant selection and sampling.....	87
4.3.2	Ethical considerations .....	88
4.3.3	Duration and procedures .....	89
4.4	DATA COLLECTION .....	92
4.4.1	Students' co-constructed articles.....	93
4.4.2	Feedback from viewers .....	95
4.4.3	Students' self-reports .....	95
4.4.4	In-depth, semi-structured interviews.....	96
4.4.5	Questionnaires.....	97
4.5	CONCLUSION.....	97
CHAPTER 5	STUDENTS' DEVELOPMENT AS CRITICAL THINKERS .....	99
5.1	INTRODUCTION .....	99

5.2	STUDENTS' DEVELOPMENT AS CRITICAL THINKERS: EVIDENCE FROM THE CO-CONSTRUCTED ARTICLES .....	100
5.2.1	Month 1 .....	102
5.2.1.1	Sources of information .....	102
5.2.1.2	Question / issue raised in the co-constructed articles .....	103
5.2.1.3	Analysis of information .....	104
5.2.1.4	Reasoned argument .....	109
	<i>GMOs</i> .....	110
	<i>Hackers</i> .....	111
	<i>Paradorn Srichapan</i> .....	113
	<i>Bali bombing</i> .....	114
	<i>Transsexual Men</i> .....	115
5.2.1.5	Summary of the analysis of articles in month 1 .....	116
5.2.2	Month 2 .....	119
5.2.2.1	Sources of information .....	119
5.2.2.2	Questions / issues raised in the co-constructed articles .....	120
5.2.2.3	Analysis of information .....	121
	<i>Spirulina</i> .....	122
	<i>Casinos</i> .....	123
	<i>Doctors' IQ</i> .....	125
	<i>Educational reform</i> .....	126
5.2.2.4	Reasoned argument .....	128
	<i>Spirulina</i> .....	128
	<i>Casino</i> .....	130
	<i>Doctors' IQ</i> .....	131
5.2.2.5	Summary of the analysis of the articles written in month 2 .....	134
5.2.3	Month 3 .....	136
5.2.3.1	Sources of information .....	136
5.2.3.2	Questions / issues raised in the co-constructed articles .....	137
5.2.3.3	Analysis of information .....	138
	<i>The National Anthem</i> .....	138
	<i>Potash mining</i> .....	146
	<i>Autonomous University</i> .....	149
	<i>Spas</i> .....	151



5.2.3.4	Summary of analytical thinking in month 3.....	154
5.2.3.5	Reasoned argument .....	154
	<i>The National Anthem</i> .....	154
	<i>Potash mining</i> .....	158
	<i>Autonomous University</i> .....	160
	<i>Spas</i> .....	161
5.2.3.6	Summary of the analysis of the articles written in month 3.....	162
5.2.4	Conclusion of students' development as critical thinkers: Evidence from the co-constructed articles .....	165
5.3	STUDENTS AS CRITICAL THINKERS: EVIDENCE FROM CLASSROOM DISCUSSIONS	168
5.3.1	Quantity of the questions / issues asked.....	170
5.3.2	Quality of the questions / issues asked.....	170
5.4	CONCLUSION.....	173
CHAPTER 6	FEATURES PROMOTING CRITICAL THINKING IN A DIALOGIC MODEL OF INQUIRY	175
6.1	INTRODUCTION .....	175
6.2	FEATURES PROMOTING CRITICAL THINKING IN A DIALOGIC MODEL OF INQUIRY	175
6.2.1	Students' evaluations of the dialogic model of inquiry in the context of the TNN environment .....	176
6.2.1.1	The TNN project and dialogic learning .....	177
6.2.1.2	The TNN project and the quality of the students' learning.....	181
6.2.1.3	The TNN project and the community's response .....	184
6.2.2	Students' evaluation of the support systems .....	189
6.2.2.1	Group discussions .....	189
6.2.2.2	Classroom discussion .....	191
6.2.2.3	The team of teachers functioned as a support structure .....	192
6.2.2.4	Features of the TNN project contributing to students' motivation	193
6.3	LIMITATIONS OF THE MODEL .....	197
6.3.1	TNN is time consuming: .....	197
6.3.2	Suitable team teachers.....	198
6.3.3	Problems with group work.....	199
6.4	CONCLUSION.....	201
CHAPTER 7	CONCLUSION, REFLECTIONS AND IMPLICATIONS FOR FUTURE RESEARCH	204

7.1	SUMMARY OF THE FINDINGS AND CONCLUSIONS .....	204
7.2	SUMMARY OF THE STUDY AND IMPLICATIONS FOR FUTURE RESEARCH.....	208
7.2.1	Strengths of the model .....	208
7.3	LIMITATIONS OF THE MODEL .....	212
7.4	APPLICABILITY OF THE PEDAGOGIC STRUCTURE OF THE THAI NEWS NETWORK MODEL TO OTHER CONTEXTS.....	214
7.5	DIALOGIC LEARNING IN THAI EDUCATIONAL CONTEXT.....	214
7.6	CONCLUSION: WHERE TO NEXT? .....	215
	<b>REFERENCES .....</b>	<b>216</b>
	 APPENDIX A: THE INITIAL INTRODUCTORY LETTER .....	 232
	APPENDIX B: INFORMATION FOR PARTICIPANTS .....	233
	APPENDIX C: INFORMED CONSENT FORM.....	236
	APPENDIX D: INTERVIEW QUESTIONS.....	237
	APPENDIX E: OPEN-ENDED QUESTIONNAIRE.....	238
	APPENDIX F: FOLLOW-UP QUESTIONNAIRE.....	242
	APPENDIX G: STUDENTS' SELF REPORTS.....	243
	APPENDIX H: ELEVEN CRITICAL READING ABILITIES.....	244
	APPENDIX I: TEACHERS' MARK FOR THE CO-CONSTRUCTED ARTICLES.....	245
	APPENDIX J: TNN HOME PAGE.....	246
	APPENDIX K: EXAMPLES OF THE CO-CONSTRUCTED ARTICLES .....	251