# STUDENT INTERACTION IN THE IMPLEMENTATION OF THE JIGSAW TECHNIQUE IN LANGUAGE TEACHING

Siti Mina Tamah



Groningen Dissertations in Linguistics 91 ISSN 0928-0030 ISBN 978-90-367-4902-2

© 2011 by Siti Mina Tamah Cover design by Agung Asalie Printed by Wöhrmann Print Service, Zutphen, the Netherlands

### RIJKSUNIVERSITEIT GRONINGEN

# STUDENT INTERACTION IN THE IMPLEMENTATION OF THE JIGSAW TECHNIQUE IN LANGUAGE TEACHING

### **Proefschrift**

ter verkrijging van het doctoraat in de Letteren aan de Rijksuniversiteit Groningen op gezag van de Rector Magnificus, dr. E. Sterken, in het openbaar te verdedigen op donderdag 19 mei 2011 om 13:15 uur

door

Siti Mina Tamah geboren op 25 juni 1962 Lombok, Indonesië Promotor: Prof. dr. C.L.J. de Bot

Copromotor: Dr. H. I. Hacquebord

Beoordelingscommissie: Prof. dr. C.M. de Glopper

Prof. dr. H.P.M. Creemers

Prof. dr. W.J.C.M. van de Grift

To Billy Asalie Arini Asalie Agung Asalie

## TABLE OF CONTENT

Table of Content	vii
List of Appendices	xii
List of Tables	xii
List of Figures	xiii
Acknowledgements	XV
CHAPTER 1 INTRODUCTION	1
1.1 Background of the Study	1
1.2 Research Questions	5
1.3 Significance of the Study	6
1.4 Preview of the Thesis Chapters	7
CHAPTER 2 REVIEW OF RELATED LITERATURE	9
2.1 Constructivism	9
2.2 Social Interactionism	11
2.3 Interaction Components in Language Teaching	13
2.4 Initiation-Response-Feedback in Classroom Discourse	18
2.5 Cooperative Learning	20
2.5.1 Benefits of Cooperative Learning	22
2.5.2 Drawbacks of Cooperative Learning	23
2.5.3 Essential Components of Cooperative Learning	25
2.5.4 Grouping Considerations	30
2.5.5 Cooperative Learning Techniques	31
2.6 Jigsaw	32
2.7 Previous Related Studies	34
2.8 Summary	36
CHAPTER 3 PILOT STUDIES	37
3.1 Introduction	37
3.2 Pilot Study 1	39
3.2.1 Research Questions of Pilot Study 1	39
3.2.2 Research Method for the First Question of Pilot Study 1	39
3.2.2.1 Research Design	39
3.2.2.2 Variables	39
3.2.2.3 Population and Sample	40

3.2.2.4 Treatments
3.2.2.5 Research Instrument
3.2.2.6 Data Collection Procedure
3.2.2.7 Data Analysis Procedure
3.2.3 Research Method for the Second Question of Pilot Study 1
3.2.3.1 Subjects
3.2.3.2 Data
3.2.3.3 Research Instruments
3.2.3.4 Data Collection Procedure
3.2.3.5 Data Analysis Procedure
3.2.4 Research Method for the Third Question of Pilot Study 1
3.2.4.1 Subjects
3.2.4.2 Data
3.2.4.3 Research Instrument
3.2.4.4 Data Collection Procedure
3.2.4.5 Data Analysis Procedure
3.2.5 Findings of Pilot Study 1
3.2.5.1 Findings Related to the First Research Question
3.2.5.2 Findings Related to the Second Research Question
3.2.5.3 Findings Related to the Third Research Question
3.2.6 Summary
3.3 Pilot Study 2
3.3.1 Research Questions of Pilot Study 2
3.3.2 Research Method for the First Question of Pilot Study 2
3.3.2.1 Research Design
3.3.2.2 Variables
3.3.2.3 Population and Sample
3.3.2.4 Treatments
3.3.2.5 Research Instrument
3.3.2.6 Data Collection Procedure
3.3.2.7 Data Analysis Procedure
3.3.3 Research Method for the Second Question of Pilot Study 2
3.3.3.1 Subjects
3.3.3.2 Data
3.3.3.3 Research Instruments

3.3.3.4 Data Collection Procedure	66
3.3.3.5 Data Analysis Procedure	66
3.3.4 Research Method for the Third Question of Pilot Study 2	66
3.3.4.1 Subjects	66
3.3.4.2 Data	67
3.3.4.3 Research Instrument	67
3.3.4.4 Data Collection Procedure	68
3.3.4.5 Data Analysis Procedure	68
3.3.5 Findings of Pilot Study 2	68
3.3.5.1 Findings Related to the First Research Question	68
3.3.5.2 Findings Related to the Second Research Question	69
3.3.5.3 Findings Related to the Third Research Question	74
3.3.6 Summary	77
3.4 The Main Study under Report	78
CHAPTER 4 RESEARCH METHOD	81
4.1 Nature of the Study	81
4.2 Ethical Considerations	81
4.3 Research Design	82
4.4 Data Collection	82
4.4.1 Setting	82
4.4.2 Subjects and Key Informants	83
4.4.3 Research Instruments	84
4.4.4 Cooperative Learning Techniques Implemented	86
4.4.5 Group Size	86
4.4.6 Group Composition	87
4.4.7 Role Assigning	89
4.4.8 Materials	90
4.4.9 Task Structure	91
4.4.10 Models of Group Work	93
4.4.11 Procedure of Data Collection	96
4.4.11.1 Reading Course Access	96
4.4.11.2 Main Data Collection Procedure	00
4.5 Data Analysis Procedure 1	02
4.6 Summary	05

	CATEGORIES
	5.1 Macro Interaction Analysis Classification
	5.2 Micro Interaction Analysis Categories
	5.2.1 First Micro Interaction Analysis Categories
	5.2.2 Second Micro Interaction Analysis Categories
	5.3 Interaction Analysis Exemplified
	5.3.1 Macro Interaction Analysis Exemplified
	5.3.2 First Micro Interaction Analysis Exemplified
	5.3.2.1 Initiation Exemplification
	5.3.2.2 Response Exemplification
	5.3.2.3 Feedback Exemplification
	5.3.2.4 IRF Exemplification
	5.3.3 Second Micro Interaction Analysis Exemplified
	5.3.3.1 Discrete Exemplification
	5.3.3.2 Integrated Exemplification
	5.4 Summary
CHAPTEI	R 6 DATA ANALYSIS, FINDINGS AND DISCUSSIONS
	6.1 Obtained Data
	6.2 Students' Involvement in Group Interaction
	6.2.1 Data Analysis
	6.2.2 Findings and Discussions
	6.3 Types of Information Used to Understand a Text
	6.3.1 Data Analysis
	6.3.2 Findings and Discussions
	6.4 Helping Behavior in Group Interaction
	6.4.1 Data Analysis
	6.4.2 Findings and Discussions
	6.5 Scaffolding Categories Related to Different Ability Levels
	6.5.1 Data Analysis
	6.5.2 Findings and Discussions
	6.6 Summary
	D. T. CONCLUCIONS
CHAPTEI	<b>R 7 CONCLUSIONS</b> 7.1 Summary

7.2 Theoretical Implications	 166
7.3 Pedagogical Implications	 167
7.4 Limitations of the Study	 169
7.5 Recommendations for Further Research	 169
References	 173
Appendices	 185
Dutch Summary	 253
Gradil	255

# **List of Appendices**

Appendix	1 K-W-L
Appendix	2 Individual Worksheet 1 (For Expert Team)
Appendix	3 Group Worksheet (For Expert Team)
Appendix	4 Individual Worksheet (For Home Team)
Appendix	5 Group Worksheet (For Home Team)
Appendix	6 Course Outline
Appendix	7 Individual Worksheet (Non-Jigsaw)
Appendix	8 Group Worksheet (Non-Jigsaw)
Appendix	9 Table of Grouping and Role Assigning
Appendix 1	0 Reading Materials Discussed
Appendix 1	1 Forms and Notes Used in Cooperative Learning Implementation
Appendix 1	2 Research Data
Appendix 1	3 An Instance of Forming a Cohesive and Heterogeneous Group
Appendix 1	4 Data and Research Instruments of Pilot Studies
	List of Tables
Table 3.1	Treatment in the Experimental Group
Table 3.2	Treatment in the Control Group
Table 3.3	Scenario During Data Collection for the Second Question
Table 3.4	Self-perceptions on Sharing Ideas
Table 3.5	Self-perceptions on Listening to Others
Table 3.6	Self-perceptions on Helping Others
Table 3.7	Group-perceptions on Sharing Ideas
Table 3.8	Group-perceptions on Listening to Others
Table 3.9	Group-perceptions on Helping Others
Table 3.10	Self-perceptions on Explaining Ability
Table 3.11	Group-perceptions on Explaining Ability
Table 3.12	Preference for Jigsaw
Table 3.13	Willingness to Be Taught Using Jigsaw
Table 3.14	Perceptions on One's Own Role
Table 3.15	Perceptions on One's Own Role Related to the Other Roles (1)
Table 3.16	Perceptions on One's Own Role Related to the Other Roles (2)

Table 3.17	Preference for Role Assigning	76
Table 3.18	Perceptions on Role Assigning for Better Discussion	76
Table 4.1	Predetermined Roles for Key Informants	90
Table 4.2	Roles Executed by Key Informants	90
Table 5.1	Interaction Analysis Classification	108
Table 5.2	Micro Interaction Analysis Categories	110
Table 5.3	Scaffolding Interaction Analysis Categories	111
Table 6.1	IRF Moves in Group Interaction	130
Table 6.2	Students' Involvement	130
Table 6.3	Students' Involvement With Regard to Different Ability Levels	131
Table 6.4	Types of Information in Text Understanding Interaction	139
Table 6.5	Scaffolding Categories	144
Table 6.6	Scaffolding Categories Revealing Need of Assistance	145
Table 6.7	Scaffolding Categories Revealing Support of Assistance	145
Table 6.8	Students' Scaffolding Categories Revealing Requests for Assistance .	152
Table 6.9	Students' Scaffolding Categories Revealing Assistance Providing	152
	List of Figures	
Figure 6.1	Data Classification (in percentages)	128
Figure 6.2	Students' Moves in Group Interaction	129
Figure 6.3	Group Interaction by Roles (Data 1)	132
Figure 6.4	Group Interaction by Roles (Data 2)	132
Figure 6.5	Group Interaction by Roles (Data 3)	132
Figure 6.6	Group Interaction by Roles (Data 4)	132
Figure 6.7	Students in Need and Support of Assistance	153
Figure 6.8	Students in Their Overall Need and Support of Assistance	154

### Acknowledgements

The composing process of this thesis is the most precious journey I have ever had. It all started with my dream to obtain my Ph.D. degree outside my country to experience different challenging academic atmosphere. With this journey, I then realize more how much love God has endowed me. He has provided me with so many people to whom I would like now to express my sincere gratitude.

Foremost, my deep appreciation goes to my remarkable promotor, Prof. Kees de Bot. for opening the first road in my journey. His initial interest in my research topic and his letter of acceptance had enabled me to convincingly take the first step on the road. He once opened my mind with his fatherly advice when I acted childish at the beginning of the journey – when I was afraid of losing the 'sandwich' program in the journey. His prompt feedback and critical comments to my work had been very valuable. He also attended to details in his proofreading for the final stage of the dissertation completion, gave me valuable corrections and suggestions and even assisted me with the Dutch summary. He was also generous supporting me financially for a seminar I attended – using his own research budget. I am also much obliged to my co-promotor, dr. H.I. Hacquebord. Though at first she thought she could not assist me much with my qualitative study, she in fact spent her precious time on providing me with constructive feedback on my work. I have learnt a lot from both of them – their logical ways of thinking. From interactions with them, I saw the power of human brains that can focus on the overall research globally, and at the same time, attend to the fine points in the study. They indirectly taught me how to be a serious scholar by being one themselves.

I am also indebted to Dr. Marjolijn Verspoor who established the Ph.D. support group and provided me with the opportunity to present part of my Ph.D. study. I got additional insights to improve my dissertation after the presentation by considering the comments from Kirsten Kolstrup, Wander Lowie and Steve Thorne. Besides, I would like to acknowledge the assistance of Wyke van de Meer who prepared the facilities for my study especially in finding an equipped room every time I came back to Groningen, Nella Scholtens who helped me with the completion of the form "Defence ceremony date application" while I was in my home country, and Diana Muller who checked the details of the title page of my thesis.

I am indeed grateful for the vital contribution of the study participants, especially those involved as the key informants without whom there would be no data. In turn, I would also like to express my thankfulness to my colleagues, Trianawaty and Maria Ignatia. The reliability of the data would not have been obtained without their assistance as being the coders. Thanks also to all my colleagues at the English Department of Widya Mandala University, Surabaya, Indonesia for their encouragement.

My short life in the Netherlands has been colored by Eva and Wan Hiang to whom I cannot forget to be thankful. Knowing I stayed far away from my family, they cheered me and offered their warm hospitality. They even bothered themselves to take a train to visit me in Groningen. I am especially indebted to Eva and her husband, Ernst, for their invaluable assistance during the hard time I experienced as my flight back to my country was cancelled when Schiphol airport was closed due to the Iceland's volcano eruption.

My special thanks also go to Saakje, a quiet and nice woman working as a volunteer at the Frisian Department. She generously lent her bike which then made me have a healthier life. She assisted me with the knowledge of making book style page layout for my dissertation. I will always remember the once-a-week brief walk we took together during lunch break, and the escort to the northern part of the Netherlands she and her sister, Annie, provided me.

I also owe special thanks to Xiaoyan Xu for the valuable information on things to do when the defence was approaching. She also gave me a big hand to distribute the books to the Ph.D department so that I did not miss the deadline. I am very grateful to my husband, Billy Asalie and my daughter, Arini who became my 'special' paranymphs assisting me particularly on the defence day. I am also thankful for the friendship with Gulsen, Hana, Hong, Kirsten, Laura, Tal, Teddy, Tuba, and Yuni. I am also grateful to get acquainted with Oom Bonard and Meity who showed their hospitality during my stay in Groningen.

My sincere thanks also go to Mbak Tina, Tante Panca, and Tante Voni who once became my kind landladies, and also to all Indonesian students in Groningen, among others, Ari, Hadi, Lia, Nurul, Pita, Puri, Wisnu, and Yuli for the precious friendship.

Special thanks also go to my sisters, brothers, and relatives who have given me love and strong support in every way that they can. My sisters and brothers had especially been proud of me when they knew I got the prestigious scholarship – the tuition fee waiver from the University of Groningen, the Netherlands, and the living cost from the Indonesian government.

Finally, my greatest debt of thanks must be to my family. Many thanks to my husband, Billy, for his continued and unfailing love, understanding and support during my study life, and, not to forget, to my dearest daughter, Arini, and son, Agung. Both have been especially encouraging – giving me their moral as well as practical support during the journey. The lovely family I have makes my journey even much more precious.

In general, I wish to thank all who sustained me in many different ways over the journey. Eventually, I discovered that I am the most fortunate person in the world for the advantageous 'sandwich' program available in the journey – the one which enables me to grow academically and socially experiencing how to live in this 4-season country which is very different from Indonesia, my country.