

**Constructing Learning Conversations:
A Study of the Discourse and Learner Experiences of
Online Synchronous Discussions**

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I declare that this thesis is my account of my research and contains as its main content work which has not previously been submitted for a degree at any tertiary education institution.

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ABSTRACT

The aim of this qualitative case study is to gain greater insight into the impact of online synchronous (chat) interaction on the learning process from a sociocultural constructivist perspective in the context of an online undergraduate unit. Given the sparse research on the effectiveness of chat interaction in supporting knowledge construction processes, few appropriate analytical methods available for examining educational chat discourse, together with the pedagogical imperative to determine the extent to which the real-time computer-mediated communication (CMC) mode satisfies student learning needs, this study fills the gaps in current research by examining the impact of chat interaction in facilitating participation, knowledge construction, and quality of online learning experience of two different online tutorial groups.

Although the literature largely regards chat interaction as fragmented and characterized by interactional incoherence that disrupts the dialogic knowledge construction process, findings from this single-embedded case study of tutorial groups 1 and 4 (G1 and G4), involved in weekly critical discussions on set-readings over 11 weeks (one semester), show that chat interaction is more structured and complex than the literature suggests.

This study utilizes a new methodological design that integrates discourse and social network analytical methods which are triangulated with self-reports of learning experiences from an online survey instrument. The application of a refined *Exchange Structure Analysis* coding instrument (Kneser, Pilkington, & Treasure-Jones, 2001) with social network analysis (Wasserman & Faust, 1994; Scott, 2000) to transcripts of chat interaction shows educational chat discourse to be coherent; reflecting the typical structure of pedagogical classroom exchanges. Findings from this study further establish that chat interaction enables participation opportunities in tutorial discussions which are valued as important, with variations in levels of participation within and between groups suggesting a pattern of active and peripheral participation which is not necessarily detrimental to learning.

Chat interaction is also found to facilitate collaborative sharing of individual understandings and critical negotiation of meaning which are characteristic of the knowledge construction process, in the form of information-sharing and topic development phases in the exchanges of both groups. Although it is beyond the scope of this study to determine the exact form of knowledge constructed, individual and mutual appropriations of shared knowledge through chat interaction are reported by both groups.

A between group comparison of available tutor scaffolding reveals consistently weak G1 tutor presence compared to strong G4 tutor support at the initial learning stages with gradual withdrawal of scaffolding over time. These results suggest differences in quality of online educational experiences which are confirmed by findings that compared to G1, G4 reported greater satisfaction with more chat tutorial factors; indicating an overall more positive, higher quality of experience with collaborative learning and group work processes afforded by the chat interaction.

With its methodological design, instruments, and findings, this study contributes to existing knowledge on online interaction, advances on previous studies regarding impact of chat interaction on learning, and offers directions for future work in the fields of educational technology, linguistics, and group dynamics in educational social networks. When extrapolated to comparable cases, findings from this study could guide the pedagogical design of collaborative-constructivist learning activities that takes into account the role of chat interaction in the construction of learning conversations.

TABLE OF CONTENTS

Acknowledgements	iii
Abstract	iv
CHAPTER 1: Introduction	1
1.1 Background to the Research	1
1.2 Statement of Problem	2
1.3 Statement of Purpose	7
1.4 Research Questions	7
1.5 Key Assumptions of Study	10
1.6 Scope of Study	11
1.7 Significance of Research	12
1.8 Summary and Outline of Thesis	13
CHAPTER 2: Literature Review	15
2.1 Introduction	15
2.2 Learning and Interaction	17
2.2.1 What is interaction?	17
2.2.2 Philosophical assumptions of objectivism and constructivism	18
2.2.3 Objectivism and implications for learning	19
2.2.4 Constructivism and implications for learning	20
2.2.5 Interaction from constructivist learning perspectives	21
2.2.6 Sociocultural constructs and relevance to study	24
2.2.7 Summary	27
2.3 Interaction in Virtual Learning Environments	29
2.3.1 Types of interaction	29
2.3.2 Computer-mediated interactions	30
2.3.3 Online interaction models	32
2.3.4 Interaction frameworks of the study	34
2.3.5 Online environments and virtual learning communities	39
2.3.6 Summary	42
2.4 Interaction and Online Discourse	43
2.4.1 Asynchronous and synchronous CMC characteristics	43
2.4.2 Studies in educational computer-mediated interaction	45
2.4.3 Discourse Analysis and Conversation Analysis	49
2.4.4 Discourse Analysis as theoretical framework	53
2.4.5 Computer-mediated discourse and chat discourse	54
2.4.6 Chat as social conversation	56
2.4.7 Chat as learning conversation	61
2.4.8 Summary	64

2.5 Student Perceptions of Online Learning Experience	66
2.5.1 Student perceptions of online learning	66
2.5.2 Impact of student perceptions	67
2.5.3 Evaluation frameworks for online learning	68
2.5.5 Summary	70
2.6 Summary	71
CHAPTER 3: The Case Study	73
3.1 Introduction	73
3.2 About <i>Organisational Informatics</i>	74
3.3 The Virtual Learning Environment	77
3.4 The OI Unit Pedagogical Framework	81
3.5 The Online Synchronous Tutorial	82
3.6 Summary	88
CHAPTER 4: Research Methodology	89
4.1 Introduction	89
4.2 Methodological Considerations	90
4.2.1 Philosophical and theoretical perspectives	90
4.2.2 Qualitative framework of study	92
4.3 Case Research Methodology	95
4.3.1 Justification of case research approach	95
4.3.2 The instrumental case study: Definition and design	96
4.3.3 Ethical considerations	102
4.3.4 Research stages in this study	105
4.4 Methods and Instruments	106
4.4.1 Discourse analysis: Method and coding instrument	106
4.4.2 Social network analysis	123
4.4.3 Perception survey analysis	138
4.5 Data Processing	151
4.5.1 Data pre-processing for transcript and survey datasets	151
4.5.2 Treatment of survey data	152
4.5.3 Treatment of transcript data	152
4.6 Validity Issues and Measures	165
4.6.1 Reliability in discourse and social network analyses	165
4.6.2 Validity of perception survey analysis	167
4.6.3 Constructs and measures for research questions	168
4.7 Summary	174

CHAPTER 5: Results	175
5.1 Introduction	175
5.2 Results for Research Question 1: Engagement in chat exchanges	179
5.2.1 Extent of participation	179
5.2.2 Extent of initiation and receiving of responses	183
5.2.3 Summary	190
5.3 Results for Research Question 1: Interactional purposes	191
5.3.1 Turn types in chat exchanges	191
5.3.2 Moves in chat exchanges	194
5.3.3 Move range	202
5.3.4 Summary	203
5.4 Results for Research Question 1: Collaborative Learning Process in Groups	205
5.4.1 Equality of participation	205
5.4.2 Information-sharing and topic development	215
5.4.3 Summary	227
5.5 Summary of Results for Research Question 1	229
5.6 Results for Research Question 2: Opportunities for Participation	231
5.6.1 Survey dataset and participants	231
5.6.2 Opportunities for participation	232
5.6.3 Summary	241
5.7 Results for Research Question 2: Learning Support	242
5.7.1 Tutor learning support	242
5.7.2 Peer learning support	242
5.7.3 Summary	245
5.8 Results for Research Question 2: Quality of Learning Experience and Collaborative Work Process	247
5.8.1 Integration of chat tutorial activity in the course design	247
5.8.2 Satisfaction with experiences of chat tutorial factors	252
5.8.3 Summary	259
5.9 Summary of Results for Research Question 2	261
 CHAPTER 6: Discussion and Conclusions	 263
6.1 Introduction	263
6.2 Discussion and Implications of Results	263
6.2.1 Participation.....	264
6.2.2 Knowledge construction.....	272
6.2.3 Quality of online learning experience.....	278
6.2.4 Summary of findings.....	281

6.3 Limitations of Study and Future Directions.....	283
6.3.1 Limitations of study.....	283
6.3.2 Future directions.....	285
6.4 Summary of Study.....	286
REFERENCES	287
APPENDIX A: Case Study Documents	301
A.1 Unit Outline Semester 2, 2005	301
A.2 Peer Assessment of Participation	306
A.3 Reflective Journal	307
A.4 Guidelines for Tutorial Presenters	308
A.5 Ecoms Guidelines	309
A.6. Research Sites for Possible Study	310
A.7. Information Letter and Consent Form	312
APPENDIX B: Instrumentation Documents	313
B.1. Codebook: Introduction to Exchange Structure Analysis	313
B.2. NetMiner II: Features, System Requirements and Limitations	341
B.3. Web Survey Questionnaire	342
B.4. Draft Questionnaire (Print Version)	349
B.5. Survey Announcement Message	353
APPENDIX C: Results From Data Analysis	354
C.1. Degree Dataset	356
C.2. ES Turn Types	359
C.3. Move Turn Types	365

LIST OF FIGURES

Figure 2.1. Distance education communication model (Wedemeyer, 1981, p.40)	33
Figure 2.2. 3-Level Model of Planned ELearning Interactions (Hirumi, 2002, p.143)	33
Figure 2.3. Conversational Framework (Laurillard, 2002)	34
Figure 2.4. Types of Interaction (Garrison & Anderson, 2003, p.43; Anderson & Garrison, 1998)	35
Figure 2.5. Community of Inquiry Model (Garrison, Anderson, & Archer, 2000)...	36
Figure 2.6. Types of CMC interaction (Ngwenya, Annand, & Wang, 2004, p.323)	43
Figure 2.7. Yahoo™ chat application user interface	58
Figure 2.8. WebCT™ chat application user interface	58
Figure 3.1. Developmental time-line of study unit from 1998-2005	74
Figure 3.2. The WebCT™ learning environment at Murdoch University	77
Figure 3.3. 2005 <i>Organisational Informatics</i> home page	77
Figure 3.4. Extended <i>Organisational Informatics</i> VLE (Sudweeks, 2003c, p.176)	78
Figure 3.5. 2005 representation of <i>Organisational Informatics</i> VLE (adapted from Sudweeks, 2003c, p.176)	79
Figure 3.6. WebCT™ chat facility	79
Figure 3.7. 2005 OI unit lecture schedule	80
Figure 3.8. Content materials: iLecture resources	80
Figure 3.9. Assessment resources	81
Figure 3.10. <i>Organisational Informatics</i> chat tutorial rooms	83
Figure 3.11. Tutorial session with two presenters	84
Figure 3.12. Tutorial session with one presenter	84
Figure 3.13. Tutorial logs	85
Figure 3.14. Online Tutorial Pedagogical Framework (adapted from Sudweeks, 2004, p. 93)	87
Figure 4.1. The instrumental case design: Stages and processes (adapted from Yin, 1994, p.49)	97
Figure 4.2. Four variants of case study design (Yin, 1994, p.39)	98
Figure 4.3a. Representation of classroom interaction (adapted from Sinclair & Coulthard, 1992, p.5)	107
Figure 4.3b. Representation of classroom interaction (adapted from Pilkington, 1999, p.12)	107
Figure 4.4. Virtual classroom interaction model: Session, episode and social spaces	108
Figure 4.5. Educational chat exchange system: Exchange, turn and move	109
Figure 4.6. ESA scheme in current study: Coding at ES and Move levels	120
Figure 4.7. ES and Move level analyses of a pedagogical chat exchange	121
Figure 4.8. A sociogram	123
Figure 4.9. A sociometric star	124

Figure 4.10. A directed and valued graph	124
Figure 4.11. Case-by-variable matrix	125
Figure 4.12. Adjacency matrix and sociogram for friendship (<i>likes</i>) relation	125
Figure 4.13. Case-by-affiliation matrix and sociogram (adapted from Wasserman & Faust, 1994, pp.299-301)	125
Figure 4.14. NetMiner II: Representations and analysis of a chat exchange	127
Figure 4.15. Blockmodeling: Blocked/partitioned matrix and sociogram for directed <i>marriage</i> relational ties of four families	128
Figure 4.16. Node, tie and <i>likes</i> relation.....	131
Figure 4.17. Nodes as actors in chat exchange.....	132
Figure 4.18. Nodes as turns in chat exchange.....	132
Figure 4.19. Actor-node types: Isolate, Transmitter, Receiver, and Carrier.....	134
Figure 4.20. Process model for coding and analysis of transcript data	136
Figure 4.21. Process of web survey development	142
Figure 4.22. Closed and open-ended web survey questions	143
Figure 4.23. Nominal measurement scale with dichotomous categories (Q.12) ..	143
Figure 4.24a. Ordinal scales with itemized categories (Q.3)	143
Figure 4.24b. Ordinal scales with ranking order (Q.10)	144
Figure 4.25. Frame of reference in web survey question	144
Figure 4.26. Progress indicators: vertical scroll bar and question numbers	147
Figure 4.27. Compulsory student name and ID fields in survey	148
Figure 4.28. <i>Unable to Judge</i> (UJ) option in Q.5	149
Figure 4.29. Survey returns from <i>Remark Web Survey</i> ®: Text and numerical formats	153
Figure 4.30. Transcript data: units of analysis (adapted from Shoemaker, 1996)	154
Figure 4.31a. Turn labels	155
Figure 4.31b. Exchange labels	155
Figure 4.32. Transcript data formatting process	155
Figure 4.33. Turns in episode	156
Figure 4.34. Master codesheet	157
Figure 4.35. Descriptive statistics from Master codesheet	158
Figure 4.36. Sorting turns in episode into an exchange.....	159
Figure 4.37. Exchange master codesheet	160
Figure 4.38. Chat exchange: Actor network adjacency matrix	162
Figure 4.39. Chat exchange: Turn network adjacency matrix	163
Figure 4.40a. Chat exchange: Actor network sociogram	164
Figure 4.40b. Chat exchange: Turn network sociogram	164
Figure 5.1. Groups 1 and 4: Comparison of (I) associated Moves	195
Figure 5.2. Groups 1 and 4: Comparison of (RI) associated Moves	196
Figure 5.3. Groups 1 and 4: Comparison of (R) associated Moves	197
Figure 5.4. Groups 1 and 4: Comparison of (RC) associated Moves	197

Figure 5.5. Comparisons of inclusiveness in a 4 actor-node network (adapted from Scott, 2000, p. 71)	206
Figure 5.6. Rachel as Isolate in exchanges: EXG-3-G1S1E1, EXG-9-G1S3E2 ..	210
Figure 5.7. Fay as Isolate in exchanges: EXG-7-G4S8E1, EXG-2-G4S11E2	210
Figure 5.8a. Topic development with I-{INQ} in two abridged exchanges within an episode	221
Figure 5.8b. Topic development with RI-{CLA} in abridged exchange	222
Figure 5.8c. Topic development with RI-{CHK} and RI-{CHA} in abridged exchange	223
Figure 5.9. Groups 1 and 4: Distribution of Move Sets 1 to 4	225
Figure 5.10. Groups 1 and 4: Distribution of Off-Topic turns	226
Figure 5.11. Tutors: Distribution of Off-Topic turns	227
Figure 5.12. Groups 1 and 4: Extent of tutor learning support (Q.3a)	242

LIST OF TABLES

Table 2.1. Contrasts between constructivist perceptions of learning and interaction (adapted from Cobb, 1994)	22
Table 2.2. Six classes of interactions (Anderson & Garrison, 1998; Hirumi, 2002)	30
Table 2.3. Community of Inquiry categories and indicators (Garrison & Anderson, 2003, p.30)	37
Table 3.1. 2005 <i>Organisational Informatics</i> assessment components (Sudweeks, 2005)	75
Table 3.2. List of participants from Groups 1 and 4	82
Table 3.3. Characteristics of tutorial groups 1 and 4	83
Table 3.4. OI unit content topics (from <i>2005 Resources Material</i>)	86
Table 4.1. Design implications for study from sociocultural constructivist perspective (adapted from Cobb, 1994)	91
Table 4.2. Differences between quantitative and qualitative research frameworks (based on Denzin & Lincoln, 2000, pp.1-28)	92
Table 4.3 Dimensions of quantitative and qualitative research (based on Sudweeks & Simoff, 1998, pp.33-36)	93
Table 4.4 Dimensions of this study	93
Table 4.5. Research sites identified for possible study.....	99
Table 4.6. Site selection by criteria	100
Table 4.7. Data sources in this study: Strengths and limitations (adapted from Yin, 1994, p.80)	101
Table 4.8. Main and secondary data sources for research questions.....	101
Table 4.9. Online survey dataset and response rate	101
Table 4.10. Ethical factors: Online research design and group characteristics	103
Table 4.11. Major stages in research study	105
Table 4.12. Kneser et al.'s (2001) categories in ESA scheme	113
Table 4.13. Modified ESA scheme in Cox et al. (2004)	113
Table 4.14. Cox et al.'s (2004) definitions of coding categories (adapted from pp.185-186)	114
Table 4.15. Methodological designs of Kneser et al. (2001) and Cox et al. (2004)	114
Table 4.16. General coding symbols and description in current study.....	116
Table 4.17. Coding categories in current study: ES, Move and Other categories	117
Table 4.18. ESA scheme in current study: Summary of associated ES and Move categories	120
Table 4.19. Means of communication in survey stages	140
Table 4.20. Monetary cost factors in web survey.....	141
Table 4.21. Organization of questions in web survey.....	145
Table 4.22. Response rate of web survey.....	146
Table 4.23. Groups 1 and 4 participants: Pseudonyms and actor-node labels ...	151
Table 4.24. Transcript dataset by week, date, session and episode	152

Table 4.25. Data sub-set used in reliability check	166
Table 4.26. Research question 1 constructs and measures.....	169
Table 4.27. Research question 2 constructs and measures.....	173
Table 5.1. Transcript dataset by date, session and episode.....	176
Table 5.2. Survey dataset and final response rate.....	176
Table 5.3. Groups 1 and 4 participants: Pseudonyms and actor-node labels	177
Table 5.4. Profile of participants	177
Table 5.5. Groups 1 and 4: Attendance for all Episodes	178
Table 5.6. Groups 1 and 4: <i>Present, Lurking</i> or <i>Absent</i> participants for all episodes	180
Table 5.7. Groups 1 and 4: Frequency of ALL turns by turn types.....	181
Table 5.8. Tutors: Distribution of OT turn types	182
Table 5.9. Groups 1 and 4: TASK turn density	183
Table 5.10. Outdegree and indegree for episode G4S3-E1: Row and column sum in adjacency matrix	184
Table 5.11. Groups 1 and 4: Sum of ties, mean degree and standard deviation of degree by episode	185
Table 5.12. Groups 1 and 4: Frequency of presenter/tutor out-ties and mean degree by episode	186
Table 5.13. Groups 1 and 4: Actor-node types	188
Table 5.14. Groups 1 and 4: Reciprocity values by episode	189
Table 5.15. Groups 1 and 4: Distribution of ES turns	192
Table 5.16. Tutors: Distribution of ES turns	193
Table 5.17. Groups 1 and 4: Distribution of Moves for all episodes	195
Table 5.18. Groups 1 and 4: Summary distribution of ES turns	198
Table 5.19. Tutors: Distribution of Moves for all episodes	201
Table 5.20. Groups 1 and 4: Move Range	202
Table 5.21. Tutors: Summary of Move Range.....	203
Table 5.22. Group 1: Inclusiveness values of exchanges for all episodes.....	207
Table 5.23. Group 4: Inclusiveness values of exchanges for all episodes.....	208
Table 5.24. Groups 1 and 4: Distribution of exchanges with inclusiveness of =1 and <1 for all episodes.....	209
Table 5.25. Groups 1 and 4: Distribution of extended turn sequences for all episodes	212
Table 5.26. Groups 1 and 4: I-SEQ by presenters and tutors	213
Table 5.27. Tutors: Extended turn sequences by episode	214
Table 5.28. Tutors: Frequency of extended turn sequences for 1st and last 11 episodes	214
Table 5.29. Descriptors for Move Sets 1-3.....	216
Table 5.30. Groups 1 and 4: Move Sets 1 and 2 indicating information-sharing ..	218
Table 5.31. Groups 1 and 4: Move Set 3	219
Table 5.32. Descriptors for Move Set 4	220
Table 5.33. Groups 1 and 4: Move Set 4 indicating topic development	225

Table 5.34. Demographic data from survey	231
Table 5.35. Groups 1 and 4: Presence and use of participation opportunities (Q.5a, Q.5b)	232
Table 5.36. Question sets 1-5: Factors motivating and inhibiting participation.....	233
Table 5.37. Groups 1 and 4: Turn-taking behaviour (Q.5c, Q.5d)	234
Table 5.38. Groups 1 and 4: Respondent experiences as Presenter (Q.1)	235
Table 5.39. Groups 1 and 4: Respondent experiences as Participant (Q.2)	235
Table 5.40. Groups 1 and 4: Facilitation styles of tutor and presenters (Q.4a-4b)	236
Table 5.41. Groups 1 and 4: Tutor and peer assessment of participation (Q.4c-4d)	237
Table 5.42. Groups 1 and 4: Response rate for Q.6 and Q.7.....	237
Table 5.43. Group 1: Responses for common aspects in presenter and participant roles (Q.1a/2a; Q.1e/2c; Q.1f/2d)	240
Table 5.44. Groups 1 and 4: Previous experience with chat media (Q.15; Q.16)	241
Table 5.45. Question sets 1-3: Measures of peer learning support.....	243
Table 5.46. Groups 1 and 4: Extent of learning support from other students (Q.3b, Q.5g)	243
Table 5.47. Groups 1 and 4: Quantity of contributions provided and received (Q.5e; Q.5f)	243
Table 5.48. Groups 1 and 4: Mutuality in attainment of learning (Q.5h; Q.5i)	244
Table 5.49. Groups 1 and 4: Response rate for Q.11.....	247
Table 5.50. Impact of factors: Synchronous CMC medium, presenter, quality of online interaction	252
Table 5.51. Question sets 1-2: Measures of quality of learning experience and collaborative work process (Q.8; Q.9; Q.17)	252
Table 5.52. Online tutorial factors with potential impact on student satisfaction of learning experience	253
Table 5.53. Groups 1 and 4: Response rate for Q.17	253
Table 5.54. States and parameters of gap value for online tutorial factors.....	254
Table 5.55. Groups 1 and 4: Distribution of respondents who reported levels of importance and satisfaction with online tutorial factors (Q.8; Q.9)	255
Table 5.56. Groups 1 and 4: Online tutorial factors ranked by gap value and state	256