Contents

Part I Understanding Group Processes

1 A Complexity-Grounded Model for the Emergence of Convergence in CSCL Groups ......................................................... 3
   Manu Kapur, John Voiklis, and Charles K. Kinzer

2 Analyzing the Contextual Nature of Collaborative Activity .......... 25
   Maarit Arvaja

3 Understanding Learners’ Knowledge Building Trajectory
   Through Visualizations of Multiple Automated Analyses............... 47
   Nancy Law, Johnny Yuen, Wing O.W. Wong, and Jing Leng

4 Representational Tools for Understanding
   Complex Computer-Supported Collaborative
   Learning Environments .................................................................... 83
   Cindy E. Hmelo-Silver, Rebecca Jordan, Lei Liu,
   and Ellina Chernobilsky

5 How to Study Group Cognition ...................................................... 107
   Gerry Stahl

6 Thinking about Methods to Capture
   Effective Collaborations .................................................................. 131
   Stephanie D. Teasley

Part II Understanding Learning within Groups

7 Analyzing Collaborative Processes and Learning
   from Hypertext Through Hierarchical Linear Modelling .............. 145
   Agni Stylianou-Georgiou, Elena Papanastasiou,
   and Sadhana Puntambekar
8 Analyzing Collaborative Interactions with Data Mining Methods for the Benefit of Learning .............................. 161
Peter Reimann, Kalina Yacef, and Judy Kay

9 Multilevel Analysis in CSCL Research ................................................. 187
Jeroen Janssen, Gijsbert Erkens, Paul A. Kirschner, and Gellof Kanselaar

10 Sequential Analysis of Scientific Argumentation in Asynchronous Online Discussion Environments ......................... 207
Allan Jeong, Douglas B. Clark, Victor D. Sampson, and Muhsin Menekse

11 Is the Whole Greater than the Sum of Its Parts? Explaining the Role of Individual Learning and Group Processes in CSCL .............................................. 235
Susanne P. Lajoie

Part III Frameworks for Analyzing Interactions in CSCL

12 Quantifying Qualities in Collaborative Knowledge Construction: The Analysis of Online Discussions ...................... 247
Karsten Stegmann and Frank Fischer

13 An Interaction-Aware Design Process for the Integration of Interaction Analysis into Mainstream CSCL Practices ................................................. 269
Alejandra Martínez-Monés, Andreas Harrer, and Yannis Dimitriadis

14 A Framework for Assessment of Student Project Groups On-Line and Off-Line ........................................... 293
Gahgene Gweon, Soojin Jun, Joonhwan Lee, Susan Finger, and Carolyn Penstein Rosé

15 Analyzing Productive Interactions in CSCL: Collaborations, Computers and Contradictions .................................. 319
Eileen Scanlon

16 Tracing Interaction in Distributed Collaborative Learning ................................................................. 341
Daniel Suthers and Richard Medina
17 Analyzing Collaborative Interactions Across Domains and Settings: An Adaptable Rating Scheme ........................................... 367
Nikol Rummel, Anne Deiglmayr, Hans Spada, George Kahrimanis, and Nikolaos Avouris

18 Analytical Frameworks for Group Interactions in CSCL Systems ............................................................... 391
Kristine Lund

Index .................................................................................................................................................................. 413
Analyzing Interactions in CSCL
Methods, Approaches and Issues
Puntambekar, S.; Erkens, G.; Hmelo-Silver, C. (Eds.)
2011, XXII, 416 p., Hardcover
ISBN: 978-1-4419-7709-0