## Contents

Probing Beneath the Surface of Experience ................................. 1
John Mason

### Part I  Teacher Noticing in Various Grade Bands and Contexts

Teacher Noticing in Various Grade Bands and Contexts:

- **Commentary** .......................................................... 21
  Brett Criswell and Rebecca McNall Krall

**From a Framework to a Lens: Learning to Notice Student Mathematical Thinking.** ........................................ 31
Dawn Teuscher, Keith R. Leatham and Blake E. Peterson

**Investigating Secondary Preservice Teacher Noticing of Students’ Mathematical Thinking.** ........................................ 49
Erin E. Krupa, Maryann Huey, Kristin Lesseig, Stephanie Casey and Debra Monson

**A Case Study of Middle School Teachers’ Noticing During Modeling with Mathematics Tasks** .............................. 73
Brandon Floro and Jonathan D. Bostic

**Using Video of Peer Teaching to Examine Grades 6–12 Preservice Teachers’ Noticing** ........................................ 91
Lorraine M. Males

### Part II  Examining Student Thinking through Teacher Noticing

**Examining Student Thinking Through Teacher Noticing: Commentary** .... 113
Randolph Philipp, Mike Fredenberg and Casey Hawthorne

**Mathematical Teacher Noticing: The Key to Learning from Lesson Study** ................................................................. 121
Mi Yeon Lee and Ban Heng Choy
Learning to Notice Student Thinking About the Equal Sign: K-8 Preservice Teachers’ Experiences in a Teacher Preparation Program .............................................................. 141
Leigh A. van den Kieboom, Marta T. Magiera and John C. Moyer

Following a Teacher’s Mathematical and Scientific Noticing Across Career Progression from Field Experiences to Classroom Teaching ......................................................... 161
Julie M. Amador, Ingrid Carter, Rick A. Hudson and Enrique Galindo

Noticing Students’ Conversations and Gestures During Group Problem-Solving in Mathematics .............................................. 183
Kevin J. Wells

Part III Extending Equitable Practices in Teacher Noticing

Extending Equitable Practices in Teacher Noticing: Commentary ................................................................. 207
Cindy Jong

“Everything Matters”: Mexican-American Prospective Elementary Teachers Noticing Issues of Status and Participation While Learning to Teach Mathematics ............. 215
Crystal Kalinec-Craig

“Maybe It’s a Status Problem.” Development of Mathematics Teacher Noticing for Equity ................................................................. 231
Evra M. Baldinger

Making Visible the Relationship Between Teachers’ Noticing for Equity and Equitable Teaching Practice ........................................ 251
Elizabeth A. van Es, Victoria Hand and Janet Mercado

Part IV Complexities in Measuring Teacher Noticing

Complexities in Measuring Teacher Noticing: Commentary ................................................................. 273
Victoria R. Jacobs

Measuring Noticing Within Complex Mathematics Classroom Interactions ................................................................. 281
Shari L. Stockero and Rachel L. Rupnow

Using Mathematical Learning Goals to Analyze Teacher Noticing ................................................................. 303
Sandy M. Spitzer and Christine M. Phelps-Gregory

Measuring Elementary Mathematics Teachers’ Noticing: Using Child Study as a Vehicle ................................................................. 321
Heidi L. Beattie, Lixin Ren, Wendy M. Smith and Ruth M. Heaton
Contents

Investigating the Relationship Between Professional Noticing and Specialized Content Knowledge .................................................. 339
Lara K. Dick

A Standardized Approach for Measuring Teachers’ Professional Vision: The Observer Research Tool ............................................ 359
Kathleen Stürmer and Tina Seidel

Challenges in Measuring Secondary Mathematics Teachers’ Professional Noticing of Students’ Mathematical Thinking ............. 381
Susan D. Nickerson, Lisa Lamb and Raymond LaRochelle

Part V Exploring the Boundaries of Teacher Noticing

Exploring the Boundaries of Teacher Noticing: Commentary ........... 401
Miriam Gamoran Sherin

Shifting Perspectives on Preservice Teachers’ Noticing of Children’s Mathematical Thinking ................................................... 409
Alison Castro Superfine, Amanda Fisher, John Bragelman and Julie M. Amador

Curricular Noticing: Theory on and Practice of Teachers’ Curricular Use .................................................................................. 427
Julie M. Amador, Lorraine M. Males, Darrell Earnest and Leslie Dietiker

The FOCUS Framework: Characterising Productive Noticing During Lesson Planning, Delivery and Review ............................... 445
Ban Heng Choy, Michael O.J. Thomas and Caroline Yoon

Noticing Distinctions Among and Within Instances of Student Mathematical Thinking ......................................................... 467
Shari L. Stockero, Keith R. Leatham, Laura R. Van Zoest and Blake E. Peterson

Teachers’ Professional Noticing from a Perspective of Key Elements of Intensive, One-to-One Intervention ...................................... 481
Thi L. Tran and Robert J. Wright

Part VI Conclusion

The Ascendance of Noticing: Connections, Challenges, and Questions .................................................................................. 507
Jonathan Norris Thomas

Author Index ................................................................................. 515
Subject Index .............................................................................. 525
Teacher Noticing: Bridging and Broadening
Perspectives, Contexts, and Frameworks
Schack, E.O.; Fisher, M.H.; Wilhelm, J.A. (Eds.)
2017, XX, 536 p. 51 illus., 12 illus. in color., Hardcover
ISBN: 978-3-319-46752-8