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Soggetti	Mathematics—Study and teaching Educational psychology Teaching Education Children Mathematics Education Educational Psychology Didactics and Teaching Methodology Childhood Education Ensenyament de la matemàtica Educació primària Educació secundària Llibres electrònics
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Nota di contenuto	Chapter 1. An introduction to mathematical teaching and learning in the elementary and middle school years -- Part I: PEDOGICAL APPROACHES TO TEACHING -- Chapter 2. Instructional Supports for Mathematical Problem Solving and Learning: Visual Representations -- Chapter 3. Equilibrated Development Approach to Word Problem Solving in Elementary Grades: Fostering Relational Thinking -- Chapter 4. Experiences of Tension in Teaching Mathematics for Social Justice -- Chapter 5. Designing Inclusive Educational Activities in Mathematics:

The Case of Algebraic Proof -- Chapter 6. A Sustained Board Level Approach to Elementary School Teacher Mathematics Development -- Part II: MATHEMATICAL LEARNING -- Chapter 7. A Digital Home Numeracy Practice (DHNP) Model to Understand the Digital Factors Affecting Middle School Children's Mathematics Practice -- Chapter 8. How Number Talks Assist Students in Becoming Doers of Mathematics -- Chapter 9. Language Matters: Mathematical Learning and Cognition in Bilingual Children -- Chapter 10. Mathematical Creativity of Learning in 5th Grade Students -- Chapter 11. Symbolic Mathematics Language Literacy: A Framework and Evidence from a Mixed Methods Analysis -- Chapter 12. Grasping Patterns of Algebraic Understanding: Dynamic Technology Facilitates Learning, Research, and Teaching in Mathematics Education -- Index.

Sommario/riassunto

This book focusses on teaching and learning in elementary and middle school mathematics and suggests practices for teachers to help children be successful mathematical thinkers. Contributions from diverse theoretical and disciplinary perspectives are explored. Topics include the roles of technology, language, and classroom discussion in mathematics learning, the use of creativity, visuals, and teachers' physical gestures to enhance problem solving, inclusive educational activities to promote children's mathematics understanding, how learning in the home can enhance children's mathematical skills, the application of mathematics learning theories in designing effective teaching tools, and a discussion of how students, teachers, teacher educators, and school boards differentially approach elementary and middle school mathematics. This book and its companion, Mathematical Cognition and Understanding, take an interdisciplinary perspective to mathematical learning and development in the elementary and middle school years. The authors and perspectives in this book draw from education, neuroscience, developmental psychology, and cognitive psychology. The book will be relevant to scholars/educators in the field of mathematics education and also those in childhood development and cognition. Each chapter also includes practical tips and implications for parents as well as for educators and researchers.