

Table of Contents

Introduction <i>Alan J. Bishop</i>	1
 Curriculum, Goals, Contents, Resources <i>Jeremy Kilpatrick – Section Editor</i>	
 Introduction to Section 1 <i>Jeremy Kilpatrick</i>	 7
Chapter 1: Goals of Mathematics Teaching <i>Mogens Niss</i>	11
Chapter 2: Using and Applying Mathematics in Education <i>Jan de Lange</i>	49
Chapter 3: Number and Arithmetic <i>Lieven Verschaffel and Erik De Corte</i>	99
Chapter 4: Designing Curricula for Teaching and Learning Algebra <i>Eugenio Filloy, Rosamund Sutherland</i>	139
Chapter 5: Space and Shape <i>Rina Hershkowitz, Bernard Parzysz, and Joop van Dormolen</i>	161
Chapter 6: Data Handling <i>J. Michael Shaughnessy, Joan Garfield and Brian Greer</i>	205
Chapter 7: Probability <i>M. Borovcnik and R. Peard</i>	239
Chapter 8: Functions and Calculus <i>David Tall</i>	289
Chapter 9: Assessment <i>David Clarke</i>	327
Chapter 10: ‘This is so’: a text on texts <i>Eric Love and David Pimm</i>	371
Chapter 11: Concrete Materials in the Classroom <i>Julianna Szendrei</i>	411

Chapter 12: Calculators in the Mathematics Curriculum: the Scope of Personal Computational Technology	435
<i>Kenneth Ruthven</i>	

Chapter 13: Computer-Based Learning Environments in Mathematics	469
<i>Nicolas Balacheff and James J. Kaput</i>	

Teaching & Learning Mathematics

Colette Laborde – Section Editor

Introduction to Section 2	505
<i>Colette Laborde</i>	

Chapter 14: Elementary School Practices	511
<i>Jerry P. Becker and Christoph Selter</i>	

Chapter 15: Junior Secondary School Practices	565
<i>Antoine Bodin and Bernard Capponi</i>	

Chapter 16: Senior Secondary School Practices	615
<i>Lucia Grugnetti and François Jaquet</i>	

Chapter 17: Further Mathematics Education	647
<i>Rudolf Sträßer and Robyn Zevenbergen</i>	

Chapter 18: Higher Mathematics Education	675
<i>Guershon Harel and Jana Trgalová</i>	

Chapter 19: Critical Issues in the Distance Teaching of Mathematics and Mathematics Education	701
<i>Stephen Arnold, Christine Shiu and Nerida Ellerton</i>	

Chapter 20: Adults and Mathematics (Adult Numeracy)	755
<i>Gail E. FitzSimons and Helga Jungwirth, Juergen Maaß and Wolfgang Schloeglmann</i>	

Chapter 21: Popularization: Myths, Massmedia and Modernism	785
<i>Paul Ernest</i>	

Perspectives & Interdisciplinary Contexts

Ken Clements – Section Editor

Introduction to Section 3	821
<i>Ken Clements</i>	

Chapter 22: Epistemologies of Mathematics and of Mathematics Education	827
<i>Anna Sierpinska and Stephen Lerman</i>	
Chapter 23: Proof and Proving	877
<i>Gila Hanna and H. Niels Jahnke</i>	
Chapter 24: Ethnomathematics and Mathematics Education	909
<i>Paulus Gerdes</i>	
Chapter 25: Research and Intervention Programs in Mathematics Education: A Gendered Issue	945
<i>Gilah C. Leder, Helen J. Forgasz and Claudie Solar</i>	
Chapter 26: Language Factors in Mathematics Teaching and Learning	987
<i>Nerida F. Ellerton and Philip C. Clarkson</i>	
Chapter 27: Anthropological Perspectives on Mathematics and Mathematics Education	1035
<i>Bill Barton</i>	
Chapter 28: The Role of Theory in Mathematics Education and Research	1055
<i>John Mason and Andrew Waywood</i>	
 Social Conditions & Perspectives on Professional Development	
<i>Christine Keitel – Section Editor</i>	
Introduction to Section 4	1093
<i>Christine Keitel</i>	
Chapter 29: Didactics of Mathematics and the Professional Knowledge of Teachers	1097
<i>Paolo Boero, Carlo Dapuerto, and Laura Parenti</i>	
Chapter 30: Preparing Teachers to Teach Mathematics: A Comparative Perspective	1123
<i>Claude Comiti and Deborah Loewenberg Ball</i>	
Chapter 31: Inservice Mathematics Teacher Education: The Importance of Listening	1155
<i>Thomas J. Cooney and Konrad Krainer</i>	
Chapter 32: Teachers as Researchers in Mathematics Education	1187
<i>Kathryn Crawford and Jill Adler</i>	

Chapter 33: The Mathematics Teacher and Curriculum Development	1207
<i>Barbara Clarke, Doug Clarke, and Peter Sullivan</i>	
Chapter 34: International Co-operation in Mathematics Education	1235
<i>Edward Jacobsen</i>	
Chapter 35: Critical Mathematics Education	1257
<i>Ole Skovsmose and Lene Nielsen</i>	
Chapter 36: Towards Humanistic Mathematics Education	1289
<i>Stephen I. Brown</i>	
Name Index	1323
Subject Index	1347

International Handbook of Mathematics Education

Bishop, A.; Clements, M.A.K.; Keitel-Kreidt, C.; Kilpatrick, J.; Laborde, C. (Eds.)

1996, XVI, 1368 p. 45 illus. In 2 volumes, not available separately., Hardcover

ISBN: 978-0-7923-3533-7