

Handbook of Research on Transforming Mathematics Teacher Education in the Digital Age

Part of the Advances in Higher Education and Professional Development Book Series

Margaret Niess (Oregon State University, USA), Shannon Driskell (University of Dayton, USA) and Karen Hollebrands (North Carolina State University, USA)

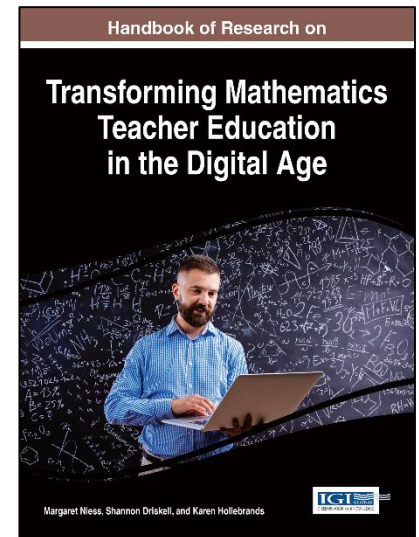
Description:

The digital age provides ample opportunities for enhanced learning experiences for students; however, it can also present challenges for educators who must adapt to and implement new technologies in the classroom.

The Handbook of Research on Transforming Mathematics Teacher Education in the Digital Age is a critical reference source featuring the latest research on the development of educators' knowledge for the integration of technologies to improve classroom instruction. Investigates emerging pedagogies for preservice and in-service teachers.

Readers:

This publication is ideal for professionals, researchers, and educational designers interested in the implementation of technology in the mathematics classroom.



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Topics Covered:

- Digital Instructional Materials
- Distance Technologies
- Formative Assessment
- Inquiry-Based Games
- Online Animation Platforms
- Online Discussion Blogs
- TPACK Framework

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Table of Contents

Foreword

Preface

Acknowledgment

Section 1:

Framing Knowledge for Teaching Mathematics with Technology in the Digital Age

Chapter 1

Technological Pedagogical Content Knowledge: Preparation and Support of Mathematics Teachers

Rachel Harrington, Western Oregon University, USA
Shannon O. Driskell, University of Dayton, USA
Christopher J. Johnston, American Institutes for Research, USA
Christine Browning, Western Michigan University, USA
Margaret L. Niess, Oregon State University, USA

Chapter 2

Design and Implementation Principles for Dynamic Interactive Mathematics Technologies

Thomas P. Dick, Oregon State University, USA
Gail F. Burrill, Michigan State University, USA

Chapter 3

Transforming Mathematics Teaching through Games and Inquiry

Karin Wiburg, New Mexico State University, USA
Barbara Chamberlin, New Mexico State University, USA
Karen Trujillo, New Mexico State University, USA
Julia Lynn Parra, New Mexico State University, USA

Chapter 4

Technology-Mediated Mathematics Teacher Development: Research on Digital Pedagogies of Practice

Patricio Herbst, University of Michigan, USA
Daniel Chazan, University of Maryland, USA
Vu Minh Chieu, University of Michigan, USA
Amanda Milewski, University of Michigan, USA
Karl W Kosko, Kent State University, USA
Wendy Rose Aaron, Oregon State University, USA

Chapter 5

Mathematics Education Technology Professional Development: Changes Over Several Decades

Shannon O. Driskell, University of Dayton, USA
Sarah B. Bush, Bellarmine University, USA
Robert N. Ronau, University of Cincinnati, USA
Margaret L. Niess, Oregon State University, USA
David Pugalee, University of North Carolina-Charlotte, USA

Chapter 6

Distance Technologies and the Teaching and Learning of Mathematics in the Era of MOOC

Veronica Hoyos, National Pedagogical University, Mexico

Section 2:

Developing and Assessing Preservice Teacher Knowledge for Teaching Mathematics with Technologies in the Digital Age

Chapter 7

Documenting a Developing Vision of Teaching Mathematics with Technology

Dana C. Cox, Miami University, USA
Suzanne R. Harper, Miami University, USA

Chapter 8

Transforming Mathematics Teacher Knowledge in the Digital Age through Iterative Design of Course-based Projects

Jennifer M. Suh, George Mason University, USA
Debra R. Sprague, George Mason University, USA
Courtney K. Baker, George Mason University, USA

Chapter 9

Transforming Preservice Mathematics Teacher Knowledge For and With The Enacted Curriculum: The Case of Digital Instructional Materials

Alden J. Edson, Michigan State University, USA
Amanda Thomas, Penn State Harrisburg, USA

Chapter 10

Transforming Lesson Design through Animation: Preservice Mathematics Teachers' Plan-imations

Julie Amador, University of Idaho, USA
Darrell Earnest, University of Massachusetts, Amherst, USA

Chapter 11

Prospective Teachers' Incorporation of Technology in Mathematics Lesson Plans

Karen Hollebrands, North Carolina State University, USA
Allison McCulloch, North Carolina State University, USA
Hollylynn S. Lee, North Carolina State University, USA

Chapter 12

Formative Assessment and Preservice Elementary Teachers' Mathematical Justification: Using Digital Tools for Convincing and Assessing

Alden J. Edson, Michigan State University, USA
Diane R. Rogers, Kalamazoo Regional Educational Service Agency, USA
Christine A. Browning, Western Michigan University, USA

Chapter 13

Learning Mathematics and Technology through Inquiry, Cooperation, and Communication: A Learning Trajectory for Future Mathematics Teachers

Alfinio Flores, University of Delaware, USA
Jungeun Park, University of Delaware, USA
Stephen A. Bernhardt, University of Delaware, USA
Joan L. Buttram, University of Delaware, USA

Chapter 14

Mathematics Teacher Educators' Use of TPACK-MKT Knowledge Domains: Developing Online Discussion Blogs

Anne Marie S. Marshall, Berry College, USA
Kadian M. Callahan, Kennesaw State University, USA

Section 3:

Transforming and Assessing Inservice Teacher Knowledge for Teaching Mathematics with Technologies in the Digital Age

Chapter 15

The Influence of Professional Development on Primary Teachers' TPACK and Use of Formative Assessment

Drew Polly, The University of North Carolina at Charlotte, USA
Christie Martin, University of South Carolina at Columbia, USA
Chuang Wang, University of North Carolina at Charlotte, USA
Richard G Lambert, University of North Carolina at Charlotte, USA
David K Pugalee, University of North Carolina at Charlotte, USA
Catharina W. Middleton, East Carolina University, USA

Chapter 16

Designing Elementary Mathematic Games Using Effective Mathematic Teaching Practices

Beth Bos, Texas State University, USA
Theresa Engel, Lamar Elementary, USA

Chapter 17

Developing Teachers' TPACK for Mathematics through Professional Development: The Case of InterMath

Chandra Hawley Orrill, University of Massachusetts at Dartmouth, USA
Drew Polly, University of North Carolina at Charlotte, USA

Chapter 18

Mathematics Teachers' Knowledge-of-Practice with Technologies in an Online Masters' Program: Scoop Action Research Experiences and Reflections

Margaret L. Niess, Oregon State University, USA
Henry Gillow-Wiles, Oregon State University, USA

Chapter 19

An Algebra Teacher's Instructional Decision-Making Process with GeoGebra: Thinking with a TPACK Mindset

Jacob Felger, Missisquoi Community Schools, USA
Kathryn G Shafer, Ball State University, USA

Chapter 20

Dynamic Approach to Teaching Geometry: A Study of Teachers' TPACK Development

Ewelina Suchacka McBroom, Southeast Missouri State University, USA
Zhonghong Jiang, Texas State University, USA
M. Alejandra Sorto, Texas State University, USA
Alexander White, Texas State University, USA
Edwin Dickey, University of South Carolina, USA

Chapter 21

Preparing Teachers to Implement Technology: The CCMS Experience

Stephen J. Pape, Johns Hopkins University, USA

Sharilyn Ownes, Forsythe Technical Community College, USA

Douglas T. Owens, The Ohio State University, USA

Karen E. Irving, The Ohio State University, USA

Henry Gillow-Wiles, Oregon State University, USA

Margaret L. Niess, Oregon State University, USA

Compilation of References

About the Contributors

Index

Chapter 22

A Reconstructed Conception of Learner Engagement in Technology Rich Online Learning Environments

Margaret (Maggie) L. Niess is Professor Emeritus of Mathematics Education at Oregon State University. Her research focuses on integrating technology in teaching science and mathematics and the knowledge teachers require for integrating technologies in their teaching –TPACK. She has authored multiple peer-reviewed journals and chapters including multiple teacher preparation books. She directed the design, implementation, and evaluation of an online Master of Science program for K-12 mathematics and science teachers with an interdisciplinary science, mathematics, and technology emphasis. Her research from this program explores the effectiveness of social metacognitive constructivist learning trajectory in online graduate coursework. She is an editor of an upcoming IGI Handbook of Research on Teacher Education in the Digital Age. She has chaired multiple committees for the Association of Mathematics Teacher Educators (AMTE), currently serves as chair for the American Educational Research Association's SIG-TACTL (Technology as a Change Agent in Teaching and Learning).

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