Record Nr. UNINA9910357854503321 The 'Resource' Approach to Mathematics Education / / edited by Luc Titolo Trouche, Ghislaine Gueudet, Birgit Pepin Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2019 **ISBN** 3-030-20393-X Edizione [1st ed. 2019.] 1 online resource (564 pages) Descrizione fisica Advances in Mathematics Education, , 1869-4918 Collana Disciplina 510.71 Soggetti Mathematics - Study and teaching Education - Research Learning Teaching Study Skills International education Comparative education **Mathematics Education** Teaching and Teacher Education Research Methods in Education Learning & Instruction Study and Learning Skills International and Comparative Education Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Part 1. Framing the Field Of Research -- Chapter 1. Studying Teachers' Nota di contenuto Documentation Work: Emergence Of A Theoretical Approach (Ghislaine Gueudet) -- Chapter 2. The Construct Of 'Resource System' As An Analytic Tool In Understanding The Work Of Teaching (Kenneth Ruthven) -- Chapter 3. What is the Reality of Teacher's Work, Behind the Design of Mathematics Exercises? Lessons From The Scribal Schools, 4000 Years Ago (Christine Proust). - Chapter 4. Reflecting on a

Theoretical Approach From A Networking Perspective: The Case of The Documentational Approach to Didactics (Michèle Artigue) -- Part 2. A

Comparative Perspective -- Chapter 5. Mathematics Teachers as Designers (Birgit Pepin at al.) -- Chapter 6. Teachers Collective Work Inside and Outside School as an Essential Spring Of Mathematics Teachers' Documentation: Japanese and Chinese Experiences (Takeshi Miyakawa) -- Chapter 7. Teachers' Use of Mathematics Resources: A Look across Cultural Boundaries (Janine Remillard). Part 3. New resources needed, perspectives for further research -- Chapter 8. Teachers' resource systems, their structure, their evolution, their mapping (Jana Trgalova) -- Chapter 9. Analyzing Teachers' Work With Resources, Methodological Issues (Catherine Loisy) -- Chapter 10. Instrumentation, Competencies, Design Capacity, Expertise (Sebastian Rezat) -- Chapter 11. Transitions towards digital resources: change. invariance, and orchestration (Paul Drijvers) -- Part 4. Conclusion --Chapter 12. Evidencing the missing resources of the documentational approach to didactics, towards new programs of research (Luc Trouche).

Sommario/riassunto

This edited volume will help educators better analyze methodological and practical tools designed to aid classroom instruction. It features papers that explore the need to create a system in order to fully meet the uncertainties and developments of modern educational phenomena. These have emerged due to the abundance of digital resources and new forms of collective work. The collected papers offer new perspectives to a rising field of research known as the Documentational Approach to Didactics. This framework was first created by the editors of this book. It seeks to develop a deeper understanding of mathematics teaching expertise. Readers will gain insight into how to meet the theoretical questions brought about by digitalization. These include: how to analyze teachers' work when they prepare for their teaching, how to conceptualize the relationships between individual and collective work, and how to follow the related processes over the long term. The contributors also provide a comparative view in terms of contrasting selected phenomena across different educational cultures and education systems. For instance, they consider how differences in curriculum resources are available to teachers and how teachers make use of them to shape instruction. Coverage also considers the extent to which teachers make use of additional material, particularly those available through the global marketplace on the Internet. This book builds on works from the Re(s) sources 2018 Conference, Understanding teachers' work through their interactions with resources for teaching, held in Lyon, France.