

1. Record Nr.	UNINA9910672435403321
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Titolo	Mathematical Competencies in the Digital Era [[electronic resource] /] / edited by Uffe Thomas Jankvist, Eirini Geraniou
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	3-031-10141-3
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (359 pages)
Collana	Mathematics Education in the Digital Era, , 2211-8144 ; ; 20
Disciplina	510.71
Soggetti	Mathematics - Study and teaching Educational technology Technical education Study Skills Mathematics Education Digital Education and Educational Technology Technology and Design education Study and Learning Skills Ensenyament de la matemàtica Investigació Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part I: Setting the Scene -- Chapter 1. Introduction(Uffe Thomas Jankvist, Eirini Geraniou & Rikke Maagaard Gregersen) -- Chapter 2. About the Mathematical Competencies Framework and Potential Networking(Mogens Niss & Uffe Thomas Jankvist) -- Chapter 3. The Mathematical Competencies Framework and Digital Technologies(Eirini Geraniou & Morten Misfeldt) -- Part II: Examples of networking around the eight competencies -- Chapter 4. Mathematical Thinking Competency(Mathilde Kjær Pedersen & Paul Drijvers) -- Chapter 5. Mathematical Problem Handling Competency(Tomas Højgaard & Thomas Kaas) -- Chapter 6. Mathematical Modelling Competency(Tinne Hoff Kjeldsen & Kasper Bjerring & Britta Jessen) -- Chapter 7. Mathematical Reasoning Competency(Rikke Maagaard Gregersen &

Anna Baccaglioni-Frank) -- Chapter 8. Mathematical Representation Competency(Ingi Heinesen Højsted & Maria Allesandra Mariotti) -- Chapter 9. Mathematical Symbols and Formalism Competency(Ola Helenius & Linda Ahl) -- Chapter 10. Mathematical Communication Competency(Cecilie Carlsen Bach & Angelika Bikner-Ahsbåhs) -- Chapter 11. Mathematical Tools and Aids Competency(Morten Misfeldt, Eirini Geraniou & Uffe Thomas Jankvist) -- Part III: Examples of networking around the three types of overview and judgment -- Chapter 12. The actual application of mathematics(Raimundo José Elicer & Morten Blomhøj) -- Chapter 13. The historical development of mathematics(Marianne Thomsen & Kathy Clark) -- Chapter 14. The nature of mathematics as a discipline(Maria Østergaard & Dandan Sun) -- Part IV: Broadening the Scene -- Chapter 15. KOM's six teacher competencies - in the digital era(Charlotte Krog Skott & NN) -- Chapter 16. The KOM framework and PISA - in the digital era(Ross Turner & NN) -- Chapter 17. Mathematical competencies and computational thinking (Andreas Tamborg & Jonas Dreyøe & Boris Koichu) -- Chapter 18. Summary and suggested uses for the book(Mario Sánchez Aguilar).

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### Sommario/riassunto

This book focuses on the potential interplay between two distinct, yet related paradigm shifts in mathematics education, drawing on the notion of “networking of theories” through illustrative case studies from the Danish educational system and beyond. The first paradigm shift is the massive introduction of digital technology in the teaching and learning of the subject; the second is a shift from the traditional focusing on mastering of skills and knowledge to being concerned with the possession and development of mathematical competencies. This book builds on the Danish KOM (Competencies and the Learning of Mathematics) project, which sources its description of mathematical mastery primarily on the notion of a “mathematical competency” rather than on lists of topics, concepts, and results. This allows for an overarching framework, which captures the perspectives of mathematics teaching and learning at whichever educational level. While the KOM framework does not in detail address the role of digital technologies in relation to its description of different types of mathematical competencies, etc., the chapters of this book set out to do exactly this, while in the process also drawing on a selection of other theoretical constructs and frameworks from mathematics education research. Starting with introductory chapters by key researchers in the area, the book brings forth chapters for each of the KOM framework’s eight mathematical competencies, authored by Nordic researchers in combination with international scholars. The KOM framework also operates with three types of overview and judgement, which are specifically addressed in relation to the role of digital technologies in the third part of the book. The fourth and final part of the book broadens the scene and provides chapters of a more perspective nature in relation to mathematical competencies in the digital era. The book’s preface is by Susanne Prediger.

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