

Thematic issue of NOMAD 2023

Call for papers

Digital resources in mathematics education

Digital resources seem to play an ever-increasing role in mathematics education and are now part of the teaching and learning of most mathematical topics. While resources that are no longer new, such as the calculator, are still being used frequently, new and more sophisticated resources seem to emerge. Thus, the landscape of available digital resources in mathematics education includes textbooks, infrastructure, and topic specific software/hardware, making it complex to navigate for both teachers and learners. In the Nordic countries, the complexity is further accelerated by ongoing or imminent discussions and initiatives of revising the mathematics curriculum to include programming and computational thinking. This landscape adds implications for practice, policy and for what is needed of our theoretical frameworks to study mathematics education in such a context adequately. This special issue invites contributions from the Nordic and Baltic countries that investigate a broad spectrum of how practitioners, researchers and decision-makers navigate digital resources in mathematics education from pre-school to higher education.

Topics

Authors' contributions can relate to multiple aspects of the overarching theme. These can report both on empirical and theoretical studies and refer (but not be limited) to the following topics:

- How have digital tools and aids been included in the mathematics *curriculum*? What explicit justifications and hidden reasons can be identified? Are there notable similarities and differences between countries?
- What do experiences and results say about the mediating role of digital technologies in students' mathematics *learning*?
- How have digital tools facilitated or eventually obscured the *assessment* of mathematics learning?
- What are the roles of digital resources in bridging mathematical competencies with other *non-mathematical* fields of practice (e.g., design) and theoretical constructs (e.g., computational thinking)?

- Which opportunities and challenges are there in the use of *online platforms* for teaching and learning mathematics, including online synchronous and asynchronous teaching and learning?
- How can digital resources and their role be defined and classified in the context of mathematics education? How do different *theoretical perspectives* frame computing hardware and other tangibles, mathematics-oriented software, digital textbooks, programming languages, online teaching platforms and learning communities?
- Which challenges and dispositions do *teachers* find in adopting and using digital resources before and during their practice? To what extent do technologies respond to their necessities? Are there gaps associated with, for example, age?
- Which *socio-political* aspects can be highlighted with the irruption of digital resources in mathematics education? Which political agendas and corporate motives are interwoven in the mainstreaming of digital resources?

To be accepted for this issue, papers must meet the standard requirements of NOMAD [see <http://ncm.gu.se/5978-2>]. Submitted papers will be reviewed by at least two other researchers through a double-blind peer review. Authors are expected to participate in the review process by reviewing other contributions. Authors who wish to contribute to this issue are invited to send a brief outline of the intended paper, in the form of an abstract, to Andreas Lindenskov Tamborg [andreas_tamborg@ind.ku.dk] no later than September 15, 2021.

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