



# PHILOSOPHY AND THEORIES OF MATHEMATICS EDUCATION

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Expanded senses of the philosophy of mathematics education include:

1. Philosophy applied to or of mathematics education
2. Philosophy of mathematics applied to mathematics education or to education in general
3. Philosophy of education applied to mathematics education (Brown, 1995).

## UPH LIBRARY COLLECTION

### E-Books

Ángel Alberto Magreñán. (2020). Didactics of Mathematics: New Trends and Experiences. Nova.

Johnny W. Lott. (2015). Mathematics Teaching: Putting Research Into Practice at All Levels. Information Age Publishing.

Stefano Spezia. (2020). Mathematics Education : History and Research. Arcler Press.

Constantinos Xenofontos. (2019). Equity in Mathematics Education: Addressing a Changing World. Information Age Publishing.

Thomas Bedürftig, & Roman Murawski. (2018). Philosophy of Mathematics. De Gruyter.

Tony Gardiner. (2016). Teaching Mathematics at Secondary Level. Open Book Publishers.

Sufian A. Forawi. (2020). Science and Mathematics Education in Multicultural Contexts: New Directions in Teaching and Learning. Common Ground Research Networks.

Denisse R Thompson. (2021). International Perspectives on Mathematics Teacher Education. Information Age Publishing.

Dianne Siemon, Tasos Barkatsas, & Rebecca Seah. (2019). Researching and Using Progressions (Trajectories) in Mathematics Education. Brill.

Timothy Sibbald. (2018). Teaching Interdisciplinary Mathematics. Common Ground Research Networks.

### Keywords

#### Broader Term

Mathematics Education  
Philosophy of Mathematics

#### Narrower Term

STUDY & teaching of the history of mathematics

#### Related Term

MATHEMATICS education -- Psychological aspects

#### Catalog

[opac.uph.edu](http://opac.uph.edu)

## E-Journals

Izmirli, I. M. (2020). **Some Reflections on the philosophy of Mathematics Education: A Denunciation of the Time and Content Arguments.** Pedagogical Research, 5(2). <https://doi.org/10.29333/pr/7854>

Spindler, R. (2022). **Foundational Mathematical Beliefs and Ethics in Mathematical Practice and Education.** Journal of Humanistic Mathematics, 12(2), 49–71. <https://doi.org/10.5642/jhummath.gosn2205>

Silvino de Lima, A., da Silva Lima, I. M., Ferreira Monteiro, C. E., & Lima de Carvalho, L. M. T. (2022). **Mathematics Education in Field Education Contexts.** Mathematics Enthusiast, 19(1), 85–113. <https://doi.org/10.54870/1551-3440.1545>

Aragão da Silva, L., & Pereira de Oliveira, A. M. (2022). **Power relations and the negotiation of meanings in a Community of Practice in the field of Mathematics Education.** Mathematics Enthusiast, 19(2), 341–369. <https://doi.org/10.54870/1551-3440.1556>

Tractenberg, R. E. (2022). **Stewardship of Mathematics: Essential Training for Contributors to, and Users of, the Practice of Mathematics.** Journal of Humanistic Mathematics, 12(2), 221–253. <https://doi.org/10.5642/jhummath.pmat5804>

Blom, R., Lu, O., & Chunlei Lu. (2022). **Mindfully Navigating the Wind and Water: Defining the Currents of Metaphors that Interfere with Excellence in Mathematics Education.** Journal of Humanistic Mathematics, 12(1), 172–179. <https://doi.org/10.5642/jhummath.202201.12>

Pair, J., & Dinh, K. (2022). **Happiness in Mathematics Education: The Experiences of Preservice Elementary Teachers.** Journal of Humanistic Mathematics, 12(1), 98–117. <https://doi.org/10.5642/jhummath.202201.07>

Kollosche, D. (2021). **Styles of reasoning for mathematics education.** Educational Studies in Mathematics, 107(3), 471–486. <https://doi.org/10.1007/s10649-021-10046-z>

ERNEST, P. (2012). **WHAT IS OUR FIRST PHILOSOPHY IN MATHEMATICS EDUCATION?** For the Learning of Mathematics, 32(3), 8–14. <http://www.jstor.org/stable/23391968>

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## FREE INTERNET SOURCE

### Free e-books

Ernest, P., Skovsmose, O., Bendegem, J. P. van, Bicudo, M., Miarka, R., & Moeller, L. K. R. (2016). **The Philosophy of Mathematics Education. ICME-13 Topical Surveys.** In ICME-13 Topical Surveys. <http://link.springer.com/10.1007/978-3-319-40569-8>

Sriraman, B., & English, L. (2010). **Surveying Theories and Philosophies of Mathematics Education.** [https://doi.org/10.1007/978-3-642-00742-2\\_2](https://doi.org/10.1007/978-3-642-00742-2_2)

## Free Article Journals

Alinian, P., Mohammadi, R., Parvaneh, A., & Rejali, A. (n.d.). An Approach to Development : Turning Education from a Service Duty to a Productive Tool. 1–19.

Papadopoulos, A. (2022). René Thom: From Mathematics to Philosophy. Handbook of the History and Philosophy of Mathematical Practice, 1–46. [https://doi.org/10.1007/978-3-030-19071-2\\_98-1](https://doi.org/10.1007/978-3-030-19071-2_98-1)

Hill, J. L., Kern, M. L., Seah, W. T., & van Driel, J. (2021). Feeling Good and Functioning Well in Mathematics Education: Exploring Students' Conceptions of Mathematical Well-Being and Values. ECNU Review of Education, 4(2), 349–375.

Das, K. (2020). Realistic Mathematics & Vygotsky's Theories in Mathematics Education. Shanlax International Journal of Education, 9(1), 104–108.

## Articles

Zheng, Y. (1994). Philosophy of Mathematics, Mathematics Education, and Philosophy of Mathematics Education. Humanistic Mathematics Network Journal, 1(9), 32–41. <https://doi.org/10.5642/hmnj.199401.09.09>

Ravn, O., & Skovsmose, O. (2019). What is the Philosophy of Mathematics Education? (hal. 163–173). [https://doi.org/10.1007/978-3-030-01337-0\\_12](https://doi.org/10.1007/978-3-030-01337-0_12)

Holsten, L. (2011). Stanford Encyclopedia of Philosophy Philosophy of Chemistry. The Stanford Encyclopedia of Philosophy, 1–26. <https://plato.stanford.edu/entries/philosophy-mathematics/>

## Youtube videos

General Lecture Series. (26 Feb 2015). Philosophy of Mathematics Education - Prof. Dr. Marsigit [Video]. Youtube <https://www.youtube.com/watch?v=W7mDvMNpNew>

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Ernest, P., Skovsmose, O., Bendegem, J. P. van, Bicudo, M., Miarka, R., & Moeller, L. K. R. (2016). The Philosophy of Mathematics Education. ICME-13 Topical Surveys. In ICME-13 Topical Surveys. <http://link.springer.com/10.1007/978-3-319-40569-8>