

Contemporary Humanism

International PhD Program & Research Network

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(Education, 2019-2023)

Advisors

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Dissertation

Active, bodily experience Mathematics learning activities. Practices and beliefs of Italian and Australian teachers.

The research is a mixed-method study on the implementation of active, bodily experience mathematics learning activities. Despite both the research in cognitive psychology and neuroscience, and in mathematics education has increasingly highlighted the relevance of active, bodily experience in mathematics learning, often school teaching seems to be far removed from these perspectives. In this study, carried out in two different cultural contexts, Italy and Australia, the reasons for that distance are explored. The research aims to investigate the perspective of primary and secondary school teachers on these teaching proposals. In addition to the direct involvement of teachers, through an online questionnaire and follow-up interviews, the survey includes interviews with researchers in mathematics education. A desk audit of the main research findings concerning the object of study and the presence of official indications in curricular documents and educational policies completes the research framework.

Research interests / Fields of expertise

Mathematics Education and in particular:

- the role of body and movement in Mathematics teaching and learning processes. I'm particularly interested in Multimodal Approaches and Enactivist Pedagogy, but I widely consider approaches descending from Embodied and Embedded Cognition theories. I've mainly investigated teachers' beliefs and practices on it, but I'm also interested in the study of how the involvement of sensory-motor aspects, including the use of artifacts, can support students in learning mathematics;
- the Implementation of Research findings in Mathematics Education, also considering the role of mathematical teaching cultures;
- the Argumentation, Formative Assessment, and Inclusive Practices in Mathematics Education;
- the Communities of Inquiry in Mathematics Teacher Education.

Personal web page

<https://rubrica.unige.it/personale/UkFHW1tg>

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