

MATHEMATICS EDUCATION AND SOCIETY

The Mathematics Education and Society Community understands that there is a need for a wider discussion of the social, ethical, and political dimensions of mathematics education for disseminating theoretical frameworks, discussing methodological issues, sharing and discussing research, planning for action and the development of a strong research network on mathematics education and Society across the world.

The International Mathematics Education and Society conferences aim at bringing together mathematics educators from around the world to provide such a forum, as well as to offer a platform on which to build future collaborative activities. It is expected that topics discussed in this forum will be wide-ranging. It is also expected that all issues will have clear underpinning with social, political, cultural, and/or ethical themes.

The general topics of the conference broadly come under, but not limited to, the following themes:

1. The politics of mathematics education
2. Cultural and social aspects of mathematics learning and teaching
3. The sociology of mathematics and mathematics education
4. Alternative research methodologies in mathematics education

International Conferences of Mathematics Education and Society started in 1998 with the first one hosted in Nottingham, England, then in Portugal in 2000 and again in 2008, followed by Denmark (2002), Australia (2004), Germany (2010), South Africa (2013), United States of America (2015), Greece (2017) and India (2019). All these were in-person conferences. The 11th edition of the conference hosted by Austria in 2021 was the only online edition so far and that too due to the COVID pandemics restrictions. In 2023, the 12th International Conference of Mathematics Education and Society (MES) took place again in an in-person, onsite mode after 4 years, and it was hosted by the Federal University of São Paulo (UNIFESP) in Diadema Campus, Brazil. The upcoming Conference is planned to take place in 2025 in the United States of America.

This 12th edition conference in Brazil was special because the MES Conference completes 25 years in 2023 and moreover, this was the first time that a MES conference was held in Latin America. Mathematics Education community in South America is very vibrant and active. Therefore, to provide all participants of this 12th edition of the MES conference, as well as the readers of this Special Dossier of *Prometeica* Journal with an opportunity to learn more about research carried out in this part of the globe and discuss it together, the MES-12 accepted submissions in 3 languages: Portuguese, Spanish and English.

We, the MES-12 Local Organising Committee asked all participants of this edition to accept the challenge of reading and revising works written in a language that many of them were not familiar with, such as, Portuguese and Spanish, with the support of technological translation tools and with the cooperation of the members of the MES community who knew those languages. We were very excited with the MES community's engagement in this proposal, which was embraced by the group, and greatly enriched our conference.

As mentioned above, the aim of the MES Conference is to explore relationships between the teaching and learning of mathematics and socio-political, cultural, and ethical issues. MES sets a political agenda for mathematics education by addressing a range of issues related to social justice. You will find

discussions on such issues in the 12th International Conference of Mathematics Education and Society and, consequently in this Special Dossier very enriching and meaningful.

One issue concerns the oppressive features that might be enacted through the school mathematics tradition. Following this tradition, a principal task for the students is to listen to the teacher's presentation of the new topics during each lesson, to study these from the textbook, and to solve pre-formulated exercises. One of the aspirations of MES is to provide alternatives to this pattern. Some have found inspiration for doing so in Paulo Freire's pedagogical ideas and talked about reading and writing the world with mathematics: "reading the world" as in understanding and interpreting the world, and "writing the world" as changing it.

Another concern of the MES community is to confront and act against racism, sexism, xenophobia, homophobia, ableism, and all kind of social exclusions. This concern has catalysed into fostering ambitions of designing and establishing an inclusive mathematics education. This means to establish a classroom – or any other formal educational space, including online spaces – where everybody feels at home, and where all can learn together and from each other. This also concerns students with disabilities, blind students, deaf students, or students with autism spectrum disorder, for example.

MES-12 conference gave a platform where topics related to several controversial and emergent socio-political issues were explored. It has been exemplified how economic exploitation can be documented in numbers and figures that students can use as resources for project work, and how it is possible to turn visible the economic inequalities that might haunt a country. Environmental problems have been explored as well. It has been illustrated how both primary, secondary, and tertiary students can address problems of pollution through mathematical investigations. The cutting down of the rainforest has been presented as a possible topic for project works, and so has been the concerns related to climate changes in general.

For creating a learning environment where critical social issues can be explored, and where students become invited to identify cases of social injustices and to formulate what they find social justice might include, it is important to establish dialogue as an integral part of a classroom practice. This has been a concern of many MES studies.

The school mathematics tradition has established well-specified borders around mathematics. However, for addressing social issues in the mathematics classroom, it is important to move beyond such borders. It is important to integrate mathematics in interdisciplinary activities. How this can be done has been exemplified through many MES studies. Among these 'dialogue' as a tool has emerged prominently in this edition.

Dialogue has been a guiding principle for the MES Conferences. The ambition is to address social and political issues not through confrontational discussion, but through shared exploration. The Conference is organised in a way that fosters a collaboration among seniors and novice researchers. This spirit of cooperation brings a special atmosphere and a particular energy to the studies that are rooted in the MES community. Also, our reviewing process is open, which means the authors can talk to their reviewers towards building together a stronger work, avoiding hidden authorities deciding whether a paper can be accepted or not, privileging the dialogue principle as mentioned before.

The articles of this Special Dossier of *Prometeica* are all written by researcher who joined the MES Conference in Diadema in 2023 presenting their work. This is the first volume, the volume two will be released in 2024.

The emergent theme of this Special Dossier has been 'dialogue' and altogether 65 articles have been collected. These articles are reflection of the similar concerns which emerge from several different locations across the globe as the MES-12 received authors from 25 different countries, representing all continents. This Special Dossier of *Prometeica* also offers plans of action through a range of theoretical frameworks which can help us problematise and also be responsive to tackle and address the

contemporary challenges. We hope that more dialogues will emerge and help us respond to the contemporary needs.

We are grateful to *Prometeica* for making space for this Special Dossier. We are grateful to the Municipality of Diadema for its support. We are also grateful to UNIFESP for all the support it has provided for making the MES Conference in Diadema a reality and a success. We would also like to thank the entire MES community, who, with an enormous sense of unity, have kept this conference stronger with each edition for 25 years, and there is still much more to come.

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