EMP Educação Matemática Pesquisa
ISSN 1983-3156
A1
http://dx.doi.org/10.23925/1983-3156.2023v25i4p001-008

Editorial

Agnaldo da Conceição Esquincalha[1]
Programa de Pós-Graduação em Ensino de Matemática
Universidade Federal do Rio de Janeiro
Doutor em Educação Matemática
https://orcid.org/0000-0001-5543-6627

Ana Lúcia Manrique[2]
Programa de Estudos Pós-graduados em Educação Matemática
Pontifícia Universidade Católica de São Paulo
Doutora em Psicologia da Educação
https://orcid.org/0000-0002-7642-0381

Clélia Maria Ignatius Nogueira[3]
Programa de Pós-graduação em Educação em Ciências e Educação Matemática
Universidade Estadual do Oeste do Paraná
Graduação em Educação Matemática
Universidade Estadual do Paraná
https://orcid.org/0000-0003-0200-2061

Edmar Reis Thiengo[4]
Programa de Pós-Graduação em Educação em Ciências e Matemática
Instituto Federal do Espírito Santo
Doutor em Educação
https://orcid.org/0000-0002-4423-4939

This is the fourth issue of the journal *Educação Matemática Pesquisa* published in 2023. This year, we are editing the issues of volume 25, sharing with our readers the results of scientific research in mathematics education. Volume 25 commemorates 25 years of commitment by the editors and professors of the Postgraduate Program in Mathematics Education at PUC-SP, who have always strived for the excellence of this journal. Furthermore, we are celebrating the award of Qualis A1 in this last evaluation of the Quadrennial 2017-2020, which recognizes all the efforts we have always made to improve the editing quality of the works published in this journal, as well as the quality of the articles published over all these years.

[1] aesquincalha@gmail.com
[2] analuciamanrique@gmail.com
[3] voclelia@gmail.com
[4] thiengo@ifes.edu.br

Therefore, it is with great satisfaction that we present this thematic issue, arising from a proposal from the coordination of GT13 - Difference, Inclusion and Mathematics Education Working Group of the Brazilian Society of Mathematics Education - SBEM, at the end of 2022, to the editors of the journal. The proposal was submitted and approved by the Editorial Board, which established the following PhD professors as organizers: Agnaldo da Conceição Esquincalha, Ana Lúcia Manrique, Clélia Maria Ignatius Nogueira and Edmar dos Reis Thiengo, all members of the working group GT13 at the time. From the opening of the notice, at the beginning of 2023, until this moment of publication, many people were involved. Forty-four articles were submitted, which required us to mobilize many reviewers. From this intense activity, twenty-one papers resulted approved, presenting the current scenario of GT13 research, which covers not only objects relating to students supported by special education, but also considers other focuses, such as older people, immigrants, and racial and gender issues. In short, GT13 is present in this thematic volume in all its scope, seeking alternatives for those historically marginalized and whom society in general and schools in particular end up not welcoming.

The diversity of topics covered can be identified in the summary of each article proposed below:

Also focusing on teaching mathematics to deaf students and also written by the South region, specifically Rio Grande do Sul, the text "*MathLibras* in the 3rd grade of elementary school classroom and the first perceptions about three project videos," written by Thaís P. Grützmann, Tatiana B. Lebedeff, Mônica M. Garcia, and Joseane M. Viana, describes and problematizes the first presentations of three videos, with narratives containing mathematical challenges related to composition-type additive structure problems, for a class of deaf students attending the 3rd grade at a bilingual elementary school for the deaf located in RS, in 2022. The action revealed weaknesses that must be remedied, which contributed to strengthening the project. It also guides how to proceed when creating educational videos for the deaf.

The article “Normalizing mathematics (education): Analysis of forums of an extension course on gender studies and mathematical education,” by Hygor Batista Guse and Hugo dos Reis Detoni, analyzes the discussions of a forum of the extension course “Gender studies : What does mathematics have to do with it?”, aimed at (prospective) teachers who teach (will teach) mathematics, addressing the stereotypes that mathematics can (re)produce regarding people who dissent from gender and sexual norms. The authors aim to estrange the pseudoneutrality of mathematics, discursively constructed as inherent to the subject over time.

The article “Development of mathematical thinking in students with intellectual disabilities,” authored by Adriela Maria Noronha, Sani de Carvalho Rutz da Silva, and Elsa Midori Shimazaki, all from the Southern Region of Brazil, addresses how mathematical thinking develops in students with intellectual disabilities (ID). Theoretically supported by cultural-historical and developmental teaching theories and by carrying out a formative didactic.

Teaching mathematics to blind students is also the theme of the article “Representations of a pie chart for blind students in teaching statistics”, now with authors from the Southeast region, specifically the state of Rio de Janeiro, Rodrigo Cardoso dos Santos, Claudia Coelho de Segadas Vianna, and Antônio Carlos Fontes dos Santos. The article brings subsides to provide a congenitally blind student with tactile reading of some representations of an accessible pie chart. The graph presented in this work was taken from a mathematics textbook in ink and represented through tactile graphs produced by the Braille Fácil program, by the MONET software, and handmade using different material artifacts, such as EVA, cubes of golden material and different types of textures. The results indicated that the interpretation of a graph is not learned spontaneously; it follows in stages, so that the student can process the information to connect them and acquire knowledge that is meaningful to him.

The article “Aspects of knowledge to teach mathematics to students with Down syndrome raised in a community of teachers,” authored by authors from Paraná Neusa Eliana Wollmann Tabaka, Fábio Alexandre Borges, and Everton José Goldoni Estevam, analyze

aspects of knowledge to teach mathematics to students with Down syndrome, raised in a training context of a community of teachers who teach mathematics to students with Down syndrome (DS), working both in special education schools and in regular schools. The discussions covered the potential and limitations of DS children in mathematics, the content and pedagogical knowledge for teaching numbers, curriculum adaptation, and the use of multisensory materials and highlighted the possibilities of collaborative work for the continuing education of teachers who teach mathematics.

Teaching mathematics to blind students is addressed by Andréa Paula Monteiro de Lima, Iranete Maria da Silva Lima, and Jaqueline Aparecida Foratto Lixandrão Santos, all from the Northeast region, in the article "Narratives of mathematics teachers about situations experienced in classes with blind students." Based on inclusive mathematics education and critical mathematics education studies, the researchers seek to understand the communication in inclusive classes, resting on narratives from teachers who teach mathematics in classes with blind students. The results reveal that teachers are concerned about including blind students; however, this inclusion is ineffective due to difficulties caused by adequate physical infrastructure, appropriate teaching resources, and access to initial and continuing education that discuss inclusive education.

Next, the authors Eliane Matesco Cristovão and Dario Fiorentini present the article "Exploratory-investigative approach in mathematics to include children and young people in situations of school failure," presenting the results of a research that investigated the possibility and contributions of the exploratory-investigative approach to the mathematics learning of students participating in a recovery project, in an attempt to understand and face school failure. The research revealed that the approach adopted could favor students' emancipation and inclusion at school, bringing possibilities of giving new meaning to failure and enabling them to confront a perverse system.

To identify meanings produced about working on the streets, the article "When school expels you, street work is an opportunity to dream," by Lucas Martini, Yasmin Cartaxo Lima,

Fernanda Dartora Musha and Elenilton Vieira Godoy, arises from discussions with mathematics graduates in a subject on mathematics at the elementary school. The analyses are based on interviews with two black men working on the streets and a university graduate. The results point to street work as a dream opportunity in the face of school exclusion and, on the other hand, highlight the distance between mathematics and social experience.

The ninth article in this issue, “Racial microaggressions in higher education: Perceptions and experiences of STEM students at the Federal University of Alfenas,” by Ronaldo André Lopes and Guilherme Henrique Gomes da Silva, presents the results of research that sought to identify the experiences of higher education STEM students with racial microaggressions during their university trajectory.

Janaina Zanon Roberto Stellfeld, José Ricardo Dolenga Coelho, Anderson Roges Teixeira Góes, and Heliza Colaço Góes, authors of the paper “Building paths for mathematics classes from an inclusive perspective through the universal design for learning approach,” analyze the didactic processes of a teacher- researcher weaving relationships that bring the universal design of learning close to the inclusive mathematics education. To this end, pedagogical intervention was used in a municipal school, with children aged seven to ten. The authors showed that, so far, the proposed approach has made knowledge accessible, especially to those who have greater difficulty.

The theme of dreams returns in the article by Daniela Alves Soares, titled “Spaces for dreams in mathematics classes: Problematizations and possibilities,” motivated by the idea that mathematics classes are possible spaces for dreaming. The discussions occur based on the answers of Brazilian and Colombian public school adolescent students in situations of social disadvantage. The outcomes indicate that school and mathematics classes provide few spaces for the manifestation and development of dreams, but the participants show that there are possibilities for teachers to offer more spaces.

"Access to mathematical knowledge in inclusive classes: Differentiating teaching based on structured tasks from legitimizing variables for deaf students” reports part of Nadjanara Ana

Basso Morás's doctoral research, supervised by Clélia Maria Ignatius Nogueira and Luiz Márcio Santos Farias, featuring a partnership between the South and Northeast regions of Brazil. The research discusses access to mathematical knowledge "additive structure problems with natural numbers" in inclusive classes, based on tasks structured in variables that legitimize deaf students' differences. The study relies on Vergnaud's theory of conceptual fields and Chevallard's anthropological theory of didacticism and presents T4TEL as a tool for developing potentially inclusive tasks.

The article "Questioning colonial structures in mathematics education: An analysis of student agency", by Edmar Reis Thiengo and Felipe Machado Teixeira Couto, analyzes student agency in mathematics education from the perspective of social justice. The text aims to understand how colonial structures materialize and influence concepts addressed by authors such as Eric Gutstein, Imani Goffney, Rochelle Gutiérrez and Melissa Boston, Ubiratan D'Ambrósio, Marilyn Frankenstein and Paola Valero, seeking to identify nuances and contradictions in connection with the agency of student.

The article "'*I know how to do it in practice, but I don't know how to do it in grammar*': Reflections on the different mathematical knowledge of older people in the literacy process," written by Douglas Silva Santos and Carla Cristina Pompeu, results from a study carried out with older people enrolled in youth and adult education, aiming to understand the reasons for their dropping out and resuming schooling and highlight their different mathematical knowledge. The authors used field diary records and statements from research participants, showing that they did not experience previous schooling processes, however, they bring a range of knowledge acquired throughout their lives.

With the title "Microexclusion and immigrant students," Manuella Carrijo's article takes a theoretical approach to data produced in her doctoral research with immigrants from Haiti and Venezuela and mathematics teachers from schools that received the group. In this way, the article proposes highlighting the voices of immigrants and teachers to support discussions around inclusive mathematics education. The author shows that the barriers linked

to the inclusion of immigrant students are related to different levels of oppressive situations and indicates five types of micro-exclusions related to immigrants.

After that, we have the article “Geometric thinking, art, and racial issues in early childhood education: Possibilities and decolonial pedagogical practices,” by Gabriela dos Santos Barbosa, Ariene Vitalino da Silva and Bruno Gonçalo Penedo Souza, discussing data from research on the construction of geometric thinking in black and favela children in early childhood education, in the Maré favela, Rio de Janeiro, from a decolonial perspective, based on the art of Tarsila do Amaral.

The article “What can a Mathematical Applications subject do?: Student voices on socioeconomic and racial issues”, by Fernanda Malinosky Coelho Rosa, Thiago Donda Rodrigues, and Everton Dutra Colodetti, brings reflections on socioeconomic and racial issues that emerged in a master's degree research whose field was the subject called Mathematical Applications, in the 9th grade of elementary school at a municipal school in a peripheral neighborhood in Campo Grande/MS, in the academic year 2022.

Proposing to explore the terminologies, practices, and attitudes in the vocabulary of mathematics teachers that permeate the inclusion of neurodivergent students, authors Elton Andrade Viana and Ana Lúcia Manrique bring the article “Discussing neurodiversity in mathematics education: The new terminologies that emerge in studies on autism." Starting from the question: “What assumptions can we identify in mathematics teachers' vocabulary regarding autism?” and using the principles of neurodiversity as a theoretical framework, eight teachers from two public schools were investigated. The research indicated that neurodiversity is a movement with the potential to mobilize changes in the educational scenario.

Still on gender studies, the article “Narratives of mathematics degree students whose bodies escape hegemonic standards on their educational paths,” by Jéssica Maria Oliveira de Luna and Agnaldo da Conceição Esquincalha, analyzes the paths of young women, mathematics degree students, under the perspective of feminist epistemologies. In this text, the body is examined through Butlerian and transfeminist perspectives, highlighting intersectional

dimensions of black feminism. The study adopts a feminist qualitative approach and explores narrative interviews with two degree students in mathematics self-identified as feminists, whose political bodies dissent from hegemonic norms (one is black and the other is a transvestite) on their educational trajectories and relationship with mathematics.

The article "'What about the *beer? Don't you want to check on their expiry date?*'": Older women literacy students at YAE appropriating hegemonic mathematical practices," by Flávia Cristina Duarte Pôssas Grossi, and Maria da Conceição Ferreira Reis Fonseca, focuses on older women learning literacy in the education of young adults and older people (YAE) appropriating hegemonic mathematical practices, referred to in the text as numeracy practices, to highlight its discursive nature. The text analyzes these women's participation in the discursive interactions during a school activity proposed by the teacher and carried out inside a supermarket, which involved reading the expiry dates of industrialized products inside a supermarket.

Concluding this thematic issue, the blind student and the teaching of statistics are also addressed in the text produced in the Northeast region, called "The mathematics class and the challenges of inclusion: The teaching of statistical variables and frequency distribution for a blind student," written by Eduardo Onofre , Vanessa Lays Oliveira dos Santos, and Marcus Bessa de Menezes. Based on the conjecture that there is a distance between the knowledge taught to blind students and the knowledge taught to sighted students, the researchers, supported by the theory of didactic transposition, searched for evidence of internal didactic transposition (IDT) during teaching of the concepts of statistical variables and frequency distribution, in a 9th-grade classroom, with the inclusion of a blind student. The research pointed to gaps in the mathematical knowledge taught to blind students that cause difficulties in their learning.

In general, we understand that the scope of the themes, the theoretical and procedural richness, the quality of the writing, and the scientific rigor of the texts that make up this volume make it an important reference for research and practice in inclusive mathematics education.