

## Editorial

Saddo Ag Almouloud<sup>1</sup>  
Universidade Federal do Pará  
<https://orcid.org/0000-0002-8391-7054>

Ana Lúcia Manrique<sup>2</sup>  
Programa de Estudos Pós-graduados em Educação Matemática  
Pontifícia Universidade Católica de São Paulo  
<https://orcid.org/0000-0002-7642-0381>

This is the second issue of continuous flow issue of our journal *Educação Matemática Pesquisa* published in 2022. This is the second issue of continuous flow

The articles published in this second issue of volume 24 disseminate results from scientific investigations of researchers from different regions of Brazil and other countries, covering a diversity of national and international research groups and institutions.

We believe that the scientific debate fostered by sharing those articles will contribute to constructing new knowledge in mathematics education. Moreover, the articles published in this issue bring a plurality of theoretical and methodological references that strengthen scientific research in our area.

Volume 24.3 presents 18 articles that deal with mathematical modeling, statistical education, mathematics and pedagogy teachers' education, the use of GeoGebra software, chess game, a study and research path (SRP), STEM education, and a very interesting study on the profile and production of CNPq research productivity grantees.

Below, we briefly present the texts that compose this second issue of 2022 of *Educação Matemática Pesquisa* journal.

The first article, “See, Perceive, Represent, Visualize: A Reflection on the Access to Mathematical Objects and its Relationship with the Way of Thinking Within Mathematics”, is

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<sup>1</sup>, [saddoag@gmail.com](mailto:saddoag@gmail.com)

<sup>2</sup>[manrique@pucsp.br](mailto:manrique@pucsp.br)

authored by Alessandra Hendi dos Santos, Valdeni Soliani Franco and José Carlos Cifuentes. The article presents an investigation into mathematical visualization, based on its relationship with vision, perception, and representation. The research has a qualitative approach in the interpretive paradigm. As a result, the authors understand that it is in the interpretation of what is seen, in the discovery of new relationships, in the representation of what is not within the reach of the eyes, and in the realization of this mathematical activity that visualization is considered as a form of thought.

The article “Mathematical Analysis and Didactic Look at Taylor’s Formulas for a Better Conceptualization” is authored by Imed Kilani, Rahim Kouki, and Mohamed Beldi. The authors present an analysis of Taylor’s formulas (Taylor-Young, Taylor-Lagrange and Taylor with integral remainder) from the mathematical and didactic angles. These formulas are objects of explicit teaching at university entrance and, particularly, in preparatory classes for the studies of Tunisian engineers. As a result, they point out that there are syntactic and semantic complexities regarding teaching these formulas that are not taken into account in the teachers’ official program.

The third article, by Lourdes Maria Werle de Almeida and Letícia Barcaro Celeste Omodei, is called “Authenticity in Mathematical Modeling Activities: In Search for a Design”. The authors conducted a study to structure a design to discuss authenticity in mathematical modeling activities. As a contribution, they point out that modeling activities should, besides meeting the expectations of school reality, be based on extra-school reality.

Mariana dos Santos Cezar and Samuel Rocha de Oliveira are the authors of the article “Mathematics Education as an Instrument of Empowerment: An Exploratory Study of National and International Research”. They seek to understand mathematics education as a possible instrument of empowerment for students and teachers, discussing it within the educational field. The authors indicate that mathematics education can act as an instrument of

empowerment, especially when it is recognized that the mathematics doing must address social and political issues. But it may not be an instrument when it nullifies or minimizes students' and teachers' creative power, discouraging their criticism and satisfying the interests of dominant groups.

The fifth article, “Theoretical Perspectives of Mathematical Education: Possibilities of Articulations”, is authored by Aline Miranda da Silva, José Messildo Viana Nunes, and Elielson Ribeiro de Sales. This study aimed to develop and analyze a study and research path (SRP) carried out with students of a master's course at a university in Pará. The results indicate that collaborative work is necessary to seek the connections between theoretical perspectives.

The article “Autonomy and Creative Insubordination in Teaching Measures of Central Tendency” is authored by Daniella Assemany and Heloisa Almeida de Figueiredo. The authors intend to evidence a mathematics teacher's actions of creative insubordination, revealed in her teaching practice with 8<sup>th</sup> graders of elementary school at a school in the city of Niterói, Rio de Janeiro. The analyzed actions resulted from a didactic intervention with the use of statistical education. As a result, they point out as an act of creative insubordination the way the teacher interpreted, disagreed, reflected, and reorganized the situation in favor of better learning for her students.

The seventh article, authored by Verilda Speridião Kluth, is entitled “Philosophical Hermeneutics as a Driving Force for Historical-Philosophical Research Methodology in Mathematics Education”. The author exposes and supports a historical-philosophical inquiry path inspired by philosophical hermeneutics. The methodology is evidenced by studies that search for the thinking revealed in the construction of knowledge of the structures of algebra and by didactic guidelines when working with mathematical demonstrations in basic education. Débora Danielle Alves Moraes Priebe and Karly Barbosa Alvarenga are the authors of the article entitled “Mathematics in the Nutrition Curriculum”. They analyzed mathematical

aspects of the nutritionist's training process and investigated the implicit and explicit knowledge in the texts of the National Curricular Guidelines and the curriculum of the undergraduate nutrition course at a Brazilian federal university. The researchers found that mathematics is not explicitly present in the guidelines and identified the inexistence of subjects that review or introduce algebra and differential calculus in the curriculum.

The ninth article, "STEM Integration in Basic Education Conveyed by Mathematical Modeling Activities with Experimentation", is authored by Karina Alessandra Pessoa da Silva, Paulo Henrique Hideki Araki, and Adriana Helena Borssoi. The study aimed to investigate how STEM education is mobilized in the development of mathematical modeling activities with experimentation. The authors corroborate that the experimentation allowed the integration of the STEM areas through studies and research on the studied phenomena, manipulation of *software* for curve adjustments and use of laboratory equipment.

The article "Meanings and Senses Attributed to School Practice by Final-Term Undergraduates in Mathematics: The Cases of Brazil and Colombia", authored by Gustavo Javier Daza Damian, and Romélia Mara Alves Souto, intends to describe and analyze the meanings and senses attributed to school practice to mathematics teaching and learning by Brazilian and Colombian students attending the last semester of a mathematics course. As a result, the authors conclude that school practice carries a social meaning related to the sociocultural context in which it is immersed, at the same time enabling subjects to build multiple private and collective meanings.

The eleventh article, by Carlos Alex Alves and Leandro Londero da Silva, is entitled "Profile and Scientific Production of CNPq Research Productivity Grantees Working in Mathematics Education". The authors investigated the profile and scientific production of researchers awarded a CNPq research productivity grant who worked in mathematics education in 2021. As a contribution, the study points out that the average time for obtaining the doctorate

of the grant holders is 19 years; most grantees are leaders in research groups; the training of doctoral human resources was carried out mostly by grant holders 1 (A, B and C) and master's by grant holders 1C and 2; the most outstanding scientific productions were complete works in proceedings, followed by articles published in journals, with identification of 618 different, mainly national, journals.

Sandra Alves de Oliveira, Elizete Pereira das Neves Carvalho, Milane Silva Santana Ribeiro, and Sônia Maria Alves de Oliveira Reis are the authors of the article "Agreements and Disagreements with Mathematics in the Educational Path of Pedagogy Students". The authors discuss changes in the views of pedagogy students about mathematics in their educational trajectory based on the moments experienced during graduation. The findings refer to the possibility of the undergraduates being able to critically reflect on the gaps, the marks left, fears and anxieties in the teaching and learning processes of mathematical concepts and contents.

The thirteenth article is by Eliane Matesco Cristovão, Fabiana Fiorezi de Marco, Bruna da Rosa Santos, and Lóren Grace Kellen Maia Amorim, and is entitled "Perspectives of Interdisciplinarity Explained in the Pedagogical Projects of Degree Courses in Mathematics in Brazilian Public Universities". The authors carried out a systematic meta-synthesis review on five studies published in an e-book that addresses the results of a national survey on 105 pedagogical projects from courses throughout Brazil. As a result, the authors point out that only six projects show evidence of a perspective of education through interdisciplinarity.

Adriana Soely André de Souza Melo, Sérgio Luiz Malta de Azevedo, and Rogério de Melo Grillo are the authors of the article "The Chess Game and its Relationship with the Teaching and Learning Processes: An Integrative Review". The results indicate that although some studies involve chess at school, research that proposes to build a pedagogical approach to chess is not usual.

The fifteenth article is authored by Gerson Pastre de Oliveira and Marcos Lopes de Oliveira, entitled “Generalization of Standards and Digital Technologies: An Experiment with Elementary School Students”. The authors present a proposal that foresaw sessions to solve problems that had as part of the strategy the use of technologies, including digital ones, with emphasis on the GeoGebra software. The result proves that the planned didactic strategy allowed the subjects to reflect on the proposals addressed, providing mathematically valid solutions for the activities.

The article “A Woman’s Place is... also in Mathematics: Understanding from the Critical Mathematics Education Perspective”, by Erica Laiza Gomes Marques and José Milton Lopes Pinheiro, presents an analysis of how critical mathematics education can contribute to understanding the presence of women in mathematics and democratizing this space of knowledge. The results reveal that ties are imposed on women to withdraw them from scientific and mathematical spaces. The work presents a proposal with an emancipatory bias, although it cannot alone emancipate.

The seventeenth article, “Identity Movements of Teachers in the Pandemic Context”, is by Carla da Silva Eliodorio, Mateus Boneli Velten, and Thiarla Xavier Dal-Cin Zanon. The research analyzes the identity movements of two basic education mathematics teachers who work at a public institution in the south of Espírito Santo. The results of this study point to aspects of self-knowledge and professional identity of both teachers, which were transformed through individual and collective experiences in their school environment and social, cultural, and economic context.

Finally, the last article, by Bruno Silva Silvestre, Maria Marta da Silva, and Wellington Lima Cedro, is entitled “What to do in the End-of-Course Paper? Analyzing Mathematics Undergraduates’ Choices”, the authors present elements that support students’ thematic choices for their end-of-course

work. The authors point out that the choices are based on the attribution of personal sense to the social meaning of the entire education process of the degree course.