

Editorial

The *Didattica della matematica. Dalla ricerca alle pratiche d'aula* journal begins 2025 with an issue marked by the variety of contributions, in terms of both the school level to which they refer and the type of content covered. On the one hand, the students' age range within the research and teaching experiences presented in the articles covers all school levels, from pre-school to university. On the other hand, the topics addressed are varied: the use of technology in fostering learning, the analysis of the results of international standardized surveys, the focus on attitudes towards mathematics, the application of the *Universal Design for Learning* approach, and more. This variety testifies to an intellectual environment of research and fieldwork that is extremely sparkling and rich in ideas to be experimented with, as well as of work on which theoretical and didactic reflections can be developed. A richness that makes us glad to be part of this community.

There are three articles in the *Riflessione e ricerca* section. The first article presents two studies investigating the use of digital tools in the teaching of mathematics in primary school,¹ within active learning contexts: the first study analyses an intervention based on GeoGebra, aimed at enhancing pupils' geometric skills; the second concerns an intervention using Genially to create interactive content aimed at developing problem solving skills. The results show an improvement in pupils' skills in both cases, with a more direct impact attributed to GeoGebra and a more indirect one to Genially. The second paper investigates which constructs, detected by means of the context questionnaires of the PISA 2022 survey, have an impact on the mathematical competences of young 15-year-olds in Switzerland and in the Canton of Ticino; among the significant constructs in both contexts, those with the greatest positive effect are, in both Switzerland and the Canton of Ticino, *the mathematics self-efficacy: formal and applied mathematics* followed by *socio-economic status*; among the constructs significant in both contexts, but with a negative effect, are the *frequency of ICT-related activities during the week* and the *frequency of ICT support or feedback*. Among the constructs with a statistically significant impact in Switzerland but not in the Canton of Ticino, the construct with the greatest positive effect is *subjective familiarity with mathematics concepts* and the construct with the greatest negative effect is the *future study or work information*; the constructs *gender* and *mathematics anxiety* are also interestingly significant in Switzerland but not in the Canton of Ticino. The third paper explores the *attitude* towards mathematics in GenZ during the transition phase from secondary to tertiary education, in a first-year class of the Facoltà di Scienze Agrarie e Alimentari; it is described the use of a class Padlet as a tool to collect students' narratives about their relationship with the discipline, and it is shown how these narratives can be framed in terms of *attitude* profiles according to the *Three-Dimensional Model for Attitude*.

There are four articles in the *Esperienze didattiche* section. The first describes the various phases of a teaching path which has been experimented in a ninth-grade class in the Canton of Ticino and centered on the *Universal Design for Learning* approach. In the path, ample space is given to the first principle of the model, which focuses on providing multiple forms of representation of the materials and contents of the lesson; of the whole path it is presented the part about the geometric topic of the cone. In the second article, a game, called *Dov'è nascosta Betta l'apetta?*, and a series of related teach-

1. The primary school in Italy lasts five years and corresponds to the grades from 1 to 5.

ing resources are presented, designed to develop logical thinking in children aged 4 to 7. The game is based on questions and inferences concerning numerical, spatial or perceptual variables, while the teaching resources include worksheets, books and videos designed to support a didactic use of the game, aimed at deepening and initiating discussions and reflections on the logical principles involved. The third article describes a didactic experience carried out in a lower secondary school² on the use of history in the teaching of mathematics; the contribution presents the activities carried out with students on the multiplication between those that Fibonacci calls in the *Liber Abbaci* *broken numbers*, i.e. modern fractions, highlighting the use of various artefacts: the historical source, the *vocabulary of broken numbers*, fractional rods, and more. Finally, the last article describes a didactic experience on the recursive process in the field of geometry, carried out in a eleventh grade class of an Italian upper secondary school,³ and aimed at stimulating the activation of conjectures and argumentation towards demonstrative thinking through the use of the GeoGebra software; the contribution shows how the course favored the learning of Euclidean geometry concepts and developed the students' argumentative skills.

From this long overview of research contributions and teaching experiences, it is clear that there is a great variety of approaches implemented with the students and of analyses of teaching-learning processes that unite the different school levels and, at the same time, the world of research with classroom application in a continuous line.

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2. The lower secondary school in Italy lasts three years and corresponds to the grades from 6 to 8.

3. The upper secondary school in Italy lasts five years and corresponds to the grades from 9 to 13.