

Editorial from Mónica Arnal-Palacián, Didactics Editor of MTRJ



Research in Mathematics Education is a field in continuous evolution. New, and not so new, perspectives have been appearing in recent years: interdisciplinary work at different educational levels, studies that identify the emotions of teachers and students in the mathematics classroom, mathematics teaching approached from an inclusive, innovative and reflective society, among others. Nor can we forget how the use of new technologies in the teaching and learning of mathematics enhances the dynamic management of some mathematical notions, or how some new contexts require adaptation through new methodologies. In the Mathematics Teaching-Research Journal (MTRJ) we aim to address all these types of studies, and to promote research in mathematics education that is of interest to experienced teachers and researchers as well as to novice and trainee teachers. Among these papers, we are particularly interested in studies that describe, analyse and integrate teaching and research in the classroom, and in which the teacher's voice is central.

In this issue, **Vol. 14 No. 5**, Winter 2022, MTRJ publishes 10 new manuscripts from 7 different countries: USA, Nepal, Indonesia, United Arab Emirates, Morocco and Malaysia.

In the first one, Brandt and Columba (USA) explore students' motivation and the learning strategies they put in place in a blended learning environment with a paper entitled “**Choice in Blended Learning: Effects on Student Motivation and Mathematics Achievement**”.

Subsequently, we find three articles that deal with mathematical notions linked to geometry. Thapa, Dahal and Pan (Nepal) use GeoGebra to help secondary school students remember and understand the notion of a circle, through group work and student motivation, “**GeoGebra Integration in High School Mathematics: An Experiential Exploration on Concepts of Circle**”. Herawati, Herman, Also, the paper entitled “**Concept of Polygon: Case Study of Elementary Students' Difficulties**” written by Suryadi and Prabawanto (Indonesia) determine from qualitative research the difficulties pupils have with the properties of polygons. Relating geometry to multiplication, we find the study “**A visualization approach to multiplicative reasoning and geometric measurement for primary-school students: a pilot study**”. Jain, Leung y Kamalov (UAE) provide tasks that encourage the application of multiplicative reasoning when students are asked to measure the areas of geometric figures.

The next paper was written by El Guenyari, Chergui and El Wahbi (Morocco) with the title “**A study on the effectiveness of some cognitive activities in teaching integrals in secondary school**”. They analysed three levels of the Moroccan educational curriculum on the mathematical

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notion of the integral: the design, the implementation and what is supposed to be learned. A mathematical notion of calculus is also addressed by Sulastri, Sulastri, Prabawanto and Cahya (Indonesia). In their manuscript, “**Epistemological Obstacles on Limit and Functions Concepts: A Phenomenological Study in Online Learning**”, they explore the barriers to learning various concepts related to function limits that are misunderstood by secondary school students,

From Indonesia, Jabar, Gazali, Ningrum, Atsnan and Prahmana, present an article entitled “**Ethnomathematical Exploration on Traditional Game Bahasinan in Gunung Makmur Village the Regency of Tanah Laut**”. This research analyse the traditional game Bahasinan, which is to be played in a group, and with which some mathematical concepts, e.g., rectangles, can be developed.

Furthermore, Yazgan-Sağ (Turkey), with the title “**Views on Mathematical Giftedness and Characteristics of Mathematically Gifted Students: The Case of Prospective Primary Mathematics Teachers**”, interview with prospective teachers linking mathematical giftedness, social environment and effort.

The ninth article, entitled “**Children’s Errors in Written Mathematics**”, was written by Liew, Leong, Julaihi, Lai, Ting, Chen y Hamdan (Malasya). The authors consider the errors in mathematics are essential to learning, design and contextualise new instruction based on written errors in a primary school classroom on numbers, operations and statistics. After that, we find the article by Pacheco-Muñoz, Nava-Lobato, Juárez-López and de León-Palacios (México), who in their article entitled “**Division problems with remainder: A study on strategies and interpretations with fourth grade Mexican students**” analyse the responses of primary school students in relation to the resolution and interpretation of non-routine problems, precisely measured division and division-partition with remainder.

Finally, in the **Problem Corner section**, our Problem Corner Editor Ivan Retamoso presents the best solutions received for Problems 8 and 9, hoping to enrich and improve the mathematical knowledge of our international community. Two new problems have been proposed.

Mónica Arnal-Palacián
Didactics Editor of MTRJ

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