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From Małgorzata Marciniak, Managing Editor of MTRJ

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Due to the large volume of submitted and accepted papers, the Editors decided to increase the number of issues published per year. Thanks to that decision, now the journal appears with its first Early Spring edition. The weather during the season of Early Spring is usually unpredictable and may equally likely bring snow or shine. Coincidentally, this journal issue happens to be about the weather-like nature of the mind observed via metacognition. Thus, self-awareness of the math-related states of mind is the main theme of the current journal issue.

Vol 15 no 1 opens with three metacognitive papers in which each one focuses on a different aspect of metacognition. The first one, **Thinking Beyond Thinking: Junior High School Students' Metacognitive Awareness and Conceptual Understanding of Integers** submitted by authors Janina C. Sercenia, Edwin D. Ibañez, Jupeth T. Pentang from the Philippines, discusses the role of metacognition for the purpose of improving math skills. Student interactions within a group as a tool for regulating self-awareness are studied in the paper **The Emergence and Form of Metacognitive Regulation: Case Study of More and Less Successful Outcome Groups in Solving Geometry Problems Collaboratively** authored by Anis Farida Jamil, Tatag Yuli Eko Siswono, Rini Setianingsih from Indonesia. Another team of authors from Indonesia, Alifiani, et al, in their paper **Metacognitive Intervention: Can It Solve Suspension of Sense-Making in Integration Problem-Solving?,** discuss the possibility of using metacognition for finding the weaknesses of the process of integration.

Psychological aspects of problem-solving are analyzed in the paper **High School Students' Beliefs about Mathematical Problem Solving: A Cluster Analysis** by South African authors Edgar J. Sintema, Mogege Mosimege. Their questionnaire is particularly interesting. Practical problem solving is demonstrated by our Corner Editor, Ivan Retamoso, in the Problem Corner, where new solutions and new problems are posted.

The next two papers in the issue are devoted to analysis of the thinking process applied in abstract algebra courses. Authors Nihayatus Sa'adah, et al. from Indonesia in their paper **Students' Mathematical Thinking Process in Algebraic Verification Based on Crystalline Concept** discuss examples of students' work while solving abstract algebra problems. While the authors Indriati Nurul Hidayah, et al from Indonesia in **Creative Conjecture: Abductive Reasoning to Generate Some Ideas in Algebra** analyze a particular way of thinking in mathematics which does

not use direct implications. This approach may be confusing to students and thus needs increased attention.

In the paper, **Building on Students' Prior Mathematical Thinking: Exploring Students' Reasoning Interpretation of Preconceptions in Learning Mathematics,** authors Robert Wakhata (Rwanda), Sudi Balimuttajjo (Uganda), Védaste Mutarutinya (Rwanda) present a study on 11th grade students' mathematical preconceptions and misconceptions.

The two papers that follow analyze early development of students in primary and secondary levels. Halil Önal from Turkey presents **Primary School Students' Understanding of Four Operation Symbols (+, −, x, ÷, =) and Using Them in Arithmetic Operations and Word Problems,** while Elif Nur Akgul and Rezan Yilmaz from Turkey present **Secondary School Students' Construction Processes of Square Root Concept with Realistic Problems: An APOS Perspective.** The abbreviation APOS means Action-Process-Object-Schema (APOS) and the theory is rooted in Piagetian theory of cognitive development. The issue closes with a metacognition-like view on teaching topology in which the authors analyze how the literature of pedagogy has been treating the teaching of topology. This statistical approach entitled, **Teaching of Topology and its Applications in Learning: A Bibliometric Meta-Analysis of the Last Years from the Scopus Database,** is delivered by authors Diego Vizcaíno, Victor Vargas, and Adriana Huertas from Colombia.

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