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Nota di contenuto	Preliminary Material / Frederick K.S. Leung , Kyungmee Park , Derek Holton and David Clarke -- How is Algebra Taught around the World? / Frederick K.S. Leung , David Clarke , Derek Holton and Kyungmee Park -- Solving Linear Equations: A Balanced Approach / Glenda Anthony and Tim Burgess -- Rethinking Algebra Teaching in the Light of 'Orchestration of Signs' -- Exploring the "Equal Sign" in a Norwegian Mathematics Classroom / Birgit Pepin , Ole Kristian Bergem and Kirsti Klette -- Traditional Versus Investigative Approaches to Teaching Algebra at the Lower Secondary Level: The Case of Equations / Jarmila Novotná and Alena Hošpesová -- Developing Procedural Fluency in Algebraic Structures -- A Case Study of a Mathematics Classroom in Singapore / Berinderjeet Kaur -- Eye of the Beholder: The Discrepancy between the Teacher's Perspectives and Students' Perspectives on Algebra Lessons in Korea / Kyungmee Park and Frederick K. S. Leung -- Construction Zone for the Understanding of Simultaneous Equations: An Analysis of One Japanese Teacher's Strategy of Reflecting on a Task in a Lesson Sequence / Minoru Ohtani -- Understanding the Concept of Variable Through Whole-Class Discussions: The Community of Inquiry from a Japanese Perspective / Toshiakira Fujii -- Understanding the Current Beijing Classrooms Through Linear Inequalities Teaching / Zhongdan Huan , Jianhua Li , Ping Ma and Li Fu -- Teaching the Graphical Method of Solving Equations: An Example in the Shanghai Lessons / Ida Ah Chee Mok -- Teaching Algebraic Concepts in Chinese

Classrooms: A Case Study of Systems of Linear Equations / Rongjin Huang , Ida Ah Chee Mok and Frederick K. S. Leung -- Promoting Mathematical Understanding: An Examination of Algebra Instruction in Chinese and U.S. Classrooms / Rongjin Huang and Yeping Li -- Different Opportunities to Learn: The Case of Simultaneous Equations / Johan Häggström -- The LPS Research Design / David Clarke -- Subject Index / Frederick K.S. Leung , Kyungmee Park , Derek Holton and David Clarke.

Sommario/riassunto

Utilizing the LPS dataset, Algebra Teaching around the World documents eighth grade algebra teaching across a variety of countries that differ geographically and culturally. Different issues in algebra teaching are reported, and different theories are used to characterize algebra lessons or to compare algebra teaching in different countries. Many commonalities in algebra teaching around the world are identified, but there are also striking and deep-rooted differences. The different ways algebra was taught in different countries point to how algebra teaching may be embedded in the culture and the general traditions of mathematics education of the countries concerned. In particular, a comparison is made between algebra lessons in the Confucian-Heritage Culture (CHC) countries and 'Western' countries. It seems that a common emphasis of algebra teaching in CHC countries is the 'linkage' or 'coherence' of mathematics concepts, both within an algebraic topic and between topics. On the other hand, contemporary algebra teaching in many Western school systems places increasing emphasis on the use of algebra in mathematical modeling in 'real world' contexts and in the instructional use of metaphors, where meaning construction is assisted by invoking contexts outside the domain of algebraic manipulation, with the intention to helping students to form connections between algebra and other aspects of their experience. Algebra Teaching around the World should be of value to researchers with a focus on algebra, pedagogy or international comparisons of education. Because of the pedagogical variations noted here, there is a great deal of material that will be of interest to both teachers and teacher educators.
