

Sense Making in an Era of Curriculum Change

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Making Mathematics Meaningful for Students in the Intermediate Grades: Fostering Numeracy.

W W Liedtke 2010. Bloomington, Ind: Trafford.

Werner Liedtke has been a long-time contributor to *delta-K*, so it was with great anticipation that I read his book *Making Mathematics Meaningful for Students in the Intermediate Grades: Fostering Numeracy*. This book offers strategies for working with our new elementary math curriculum and suggestions for addressing the process outcomes.

Drawing on his vast experience in math education, Liedtke describes sense making as including “number sense, spatial sense, measurement sense, statistical sense, sense of relationships, and developing and applying new mathematical knowledge *through problem solving*” (p 12) [italics in original]. While addressing all these senses is an ambitious undertaking, Liedtke clearly delineates background research on cognition, goals for students, assessment and reporting, and diagnosis and intervention that informs changes in our understanding of teaching and learning mathematics. Each chapter following the introduction provides a rationale for the importance of the specific math strand, presents practical suggestions for activities and problems, and includes questions to prompt reflection.

Although other books that address mathematical content for teaching and learning exist, what is

specifically helpful about Liedtke’s writing is his insertion of practical examples from his experience working with children. These examples are based on observations in classrooms, excerpts from videotaped lessons and assessment interviews conducted with students. I was impressed by how his practice has informed his writing to a great extent.

The author addresses the number strand in great detail. However, I believe that the integration of the various senses might contribute to a more comprehensive understanding of making sense of mathematics. For example, the author writes, “There exists a similarity between the act of counting sets of discrete objects and the act of using measuring to describe parts of continuous quantity” (p 145). Yet, he organizes the book into separate chapters without a more detailed explanation of such similarities.

For me, the strength of this book is the practical teaching ideas that are presented alongside research and student examples. The content is arranged in a consistent format that allows for a thorough investigation of math teaching and learning through problem solving. I believe that teachers will find this book to be a practical addition to their library of curriculum resources. Certainly its strong connection to the Alberta Mathematics K–9 program of studies prompts us to think deeply about the tasks we engage our students in.