



"Show Me What You Know": Exploring Student Representations Across STEM Disciplines

Barbara M. Brizuela, Brian E Gravel

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Just like representations in everyday life, this book shows that representations are ubiquitous to science, technology, engineering, and mathematics—the STEM disciplines. *Show Me What You Know* showcases research on representations across a range of STEM disciplines and ages—from children as young as 2 years of age to professional mathematicians. The text highlights the importance of paying close attention to learners' interpretations and productions of different representations as a source of evidence for what learners understand, and another way for learners to "show us what they know." The text is organized around four themes: appropriation of representations, making meaning, highlighting, and representations as scaffold and supports.

Book Features:

- Focus on representations in specific STEM disciplines.
- An examination of how students across different ages engage with, produce, and use representations.
- Section reflections that serve to broaden our thinking about representations.
- Graphs, charts, and examples of students' drawings.

Contributors include David W. Carraher, Tina Grotzer, David Hammer, Richard Lehrer, Eduardo Martí, Ricardo Nemirovsky, Tracy Noble, Juan Ignacio Pozo, Leona Schauble, Analúcia D. Schliemann, Judah L. Schwartz, and Beth Warren.

Barbara M. Brizuela is an associate professor in the Department of Education at Tufts University. She is the author of *Mathematical Development in Young Children: Exploring Notations*. **Brian E. Gravel** is a lecturer and director of Elementary Education at Tufts University.

"We are provided not only with valuable source material for future theoretical development, but with profound encouragement for teachers and researchers to pay close attention to representations as they are generated and interpreted by students."

—From the Foreword by **Gerald A. Goldin**

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"Show Me What You Know": Exploring Student Representations Across STEM Disciplines can be one of your beginner books that are good idea. Many of us recommend that straight away because this reserve has good vocabulary that may increase your knowledge in terminology, easy to understand, bit entertaining however delivering the information. The article author giving his/her effort that will put every word into pleasure arrangement in writing "Show Me What You Know": Exploring Student Representations Across STEM Disciplines although doesn't forget the main place, giving the reader the hottest in addition to based confirm resource details that maybe you can be certainly one of it. This great information may drawn you into completely new stage of crucial thinking.

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