

# **A SYMPOSIUM ON OPENING THE RESEARCH TEXT: CRITICAL INSIGHTS AND IN(TER)VENTIONS INTO MATHEMATICS EDUCATION**

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*Opening the Research Text: Critical Insights and In(ter)ventions into Mathematics Education* (de Freitas & Nolan, 2008) is a new mathematics education research text that poses difficult questions about school mathematics, educational research, and power. What makes this research text unique is its approach to interweaving theory and practice by alternating core research chapters with arts-based response chapters, or “insights and in(ter)ventions”. Through poetry, collage, fiction or lived experience narratives, the response chapters function as a “lived theory” where the ideas being advocated in the author’s research text are lived out through diverse and multiple forms. This symposium is designed to actively and critically engage the audience in an introduction to, and dialogue on, this innovative and provocative edited collection.

## **AIMS OF SYMPOSIUM**

This symposium aims to engage the audience in a critical discussion on a new and provocative book in the field of mathematics education. *Opening the Research Text: Critical Insights and In(ter)ventions into Mathematics Education* is a recently published edited collection in Springer’s Mathematics Education Library (2008, volume 46). The book uses multiple lenses to explore the political context of school mathematics, focusing less on the “situated” nature of learning, and more on the power relations that structure learning experiences within dominant educational discourses. *Opening the Research Text* represents an important contribution to the expansion of the research field because of its unremitting interrogation of “common sense” practices. Contributors in this volume were asked to take risks in their writing, to critique and disrupt cherished notions embedded in the field, and to “speak truth to power” by whatever means they deemed necessary. The result is a collection that is sometimes uncomfortable to read; a collection that troubles many taken-for-granted assumptions about mathematics education and research.

The research text is comprised of two types of contributions: core chapters and response chapters. The core chapters in this collection pose difficult questions about school mathematics, educational research, and power. These core chapters

tackle the political facets of mathematics education using different theoretical lenses to examine the ways that power relations constitute, and are constituted by, the cultural practices of mathematics education. The response chapters in this collection open up the research texts and offer diverse reading practices that are both inventions and interpretations of the core chapters. These “insights and in(ter)ventions” function as linking responses and “what if not” exercises, building on and extending the discussions found in each core chapter. The intent of such an approach—each core chapter being followed by two or three response chapters—is to entice readers into engaging the research text and actively pursuing its implications. Each response is meant to complement the research paper by triggering critical reflection, dialogue and action. The response chapters—the “insights and in(ter)ventions”—are not intended as authoritative applications of the more theoretical research text, but rather as suggestive multi-directional supplements that challenge reader ambivalence and engender dialogue. Response formats in this collection include narrative, fiction, teacher self-study, collage, concept maps, graphic novels, conversations, and poetic renderings, often highlighting the messiness and ambiguity of the research/writing process—a process that is often only acknowledged by its absence in a “finished” text.

The diverse response formats in the collection return again and again to the struggles and challenges of theory-practice transitions in mathematics education research. What research calls for in theory, on the one hand, often seems elusive in practice. What is needed is a “lived theory” where the ideas being advocated in the author’s research text are lived out through diverse and multiple forms. The arts-based response chapters, together with the core chapters, draw attention to the methods by which we might interweave theory and practice in new styles of research-writing.

This symposium, which turns the pages of *Opening the Research Text*, aims to create more openings than closures, and will do so by actively and critically engaging the audience in multiple ways, thereby reaching different people differently. In creating a dialogic text in which a variety of voices and positions are enacted, and in relying on arts-based forms of representation that fly in the face of more traditional forms of research text, the result is a research-based text that breaks the norm in mathematics education.

## **RELEVANCE OF SYMPOSIUM**

The poststructuralist philosophy that informs *Opening the Research Text* demands a vigilant critique of the cultural habits associated with mathematics education - a critique sustained indefinitely because the job of interrogating the status quo is never complete, and readers are not allowed, or at least not encouraged, to settle for easy answers and comforting narratives. The writing in this collection is therefore “sous rature” (under erasure) (Derrida, 1976, p. 3) in the sense that the authors’ claims to research truth or insight are subject to the

same inquisitive probing that each has tactically deployed as a means of examining school mathematics. This kind of deconstruction is the hallmark of poststructuralism— building on the strengths of structuralist programs (in this case, traditional semiotics, psychology and Marxist-inspired sociology), but employing these theoretical frameworks reflexively and without reliance on positivist epistemologies.

The provocative contributions to *Opening the Research Text* reflect current interest in the political and cultural underpinnings of mathematics education. With 22 contributors including both established researchers and newcomers, this innovative research-oriented volume challenges traditional theories and "comforting narratives" of pedagogy through realistic, non-linear scenarios reflecting the ambiguities and power relationships of the classroom. By alternating research chapters with inventive responses (including poetry, concept mapping, graphic novel, and collage), the book presents theoretical as well as practice-based possibilities in areas as diverse as arts-based inquiry and social justice pedagogy, all in relation to mathematics education. Consistent with the philosophies and goals of the Mathematics Education and Society conference, this symposium will inspire the audience to:

- Rethink the accessibility and impact of their classroom work.
- Consider the value of poststructuralist strategies to curriculum theory.
- Explore alternate research paradigms in mathematics education.
- Trace the intersections of power, economics and mathematics.
- Critically examine the discourse of school mathematics and policy documents.
- Engage in self-study, writing their own stories of insight and in(ter)vention.

## **SYMPOSIUM PLAN**

The symposium will include presentations by the authors of three core chapters (Brown; Christensen, Stentoft & Valero; Ernest) along with presentations by the response authors for these chapters (de Freitas; Graham; Nolan). To begin the symposium, the editors (de Freitas & Nolan) will provide a brief overview of the book—the content, organization, philosophies, and theoretical underpinnings. Each core chapter author will then give a brief presentation on the nature of her/his research study along with emergent understandings and implications for mathematics education. Following each core chapter presentation, the response author will discuss both the content and form of her “insight and in(ter)vention” into the core chapter research text. The response author will draw on her own classroom practice and/or research to convey how and why the response text

was constructed—as a poem, personal experience narrative, concept map, collage, conversation or other arts-based format.

Our intent for this symposium is the same as that for the book— to open up the research text by inviting the audience/reader to speculate on the implications of the research for their own practice and the community at large. In addition, we hope that the symposium and book will inspire scholars in the field (both new and more established ones), who are searching for fresh theoretical perspectives that point to different ways of communicating and interpreting their research, to play with form in/as content and to consider tangible alternative strategies for writing research texts. And, in the process, we are always mindful of the socio-political perspectives that must always be at the heart of the enterprise.

Opening the Research Text asks teachers, researchers and scholars to add to the dialogue that is transforming the mathematics education field. This symposium will also add to that critical dialogue.

## **REFERENCES**

- de Freitas, E. & Nolan, K. (2008). *Opening the research text: Critical insights and in(ter)ventions into mathematics education*. New York: Springer.
- Derrida, J. (1976). *Of grammatology*. [Translation by Gayatri Chakravorty Spivak.] Baltimore: John Hopkins University press.