Book Review: The Anti-Oppressive Role of Inclusive Mathematics in Global South and Global North Educational Contexts

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Inclusive Mathematics Education:
State-of-the-Art Research from Brazil and Germany

Edited by David Kollosche, Renato de Souza Marcone, Michel Knigge, Miriam Godoy Penteado and Ole Skovsmose (2017).

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Judging by the title of this book, readers may get the impression that it is a mere constellation of empirical research reports. Despite this initial perception, one soon finds that this edited volume contains a series of chapters with powerful metatheoretical and inclusive practice reflections relevant to anti-oppressive and inclusive equity scholarship. Tacitly centered on the tradition of Disability Studies in Mathematics Education (DSME, e.g., Padilla & Tan, 2019), several of the chapters in this volume establish powerful sociopolitical analogies between the micro-level dynamics of deficiency-centered models of dis/ability versus normalcy and anti/post-colonizing notions such as Said’s Orientalism or Fanonian political philosophy accounts (for example, Marcone’s chapter in Part II). Decolonial and postcolonial paradigms have demonstrated great potential for examining intersectional dimensions of dis/ability and racialized othering resistance in Global North and Global South contexts (Padilla, 2018).

The book contains nine parts. Part I introduces the comparative landscape. It situates the reader within the conceptual and disciplinary significance of comparing inclusive mathematics practices in a Global North country with those of a Global South nation whose policies and inclusive teaching practices are recognized as being in many respects more advanced (see, for example, the introductory paragraph in the book’s Preface), contrary to the prevailing Eurocentric biases of other scholarly comparisons of this sort.

Parts II and III contain outstanding conceptual chapters. Part II is highly critical of naïve conceptions of inclusivity in mathematics education. Thus, for instance, Baraldi, Rosa, Capellini, and Miranda demonstrate very persuasively in their chapter that reflexive teacher formation and pedagogical practices are a prerequisite for genuinely caring and equity-driven inclusivity to be possible (Tan & Thorius, 2018). Part III, on the other hand, stresses the need for deep conceptual and empirical exploration of core inclusive education constructs such as learning environments, so-called “learning office,” dialogic learning, and landscapes of investigation.

Parts IV and V zoom in the lens to address issues pertaining to specific dis/abilities, hearing impairment and autism respectively, in relation to inclusivity in mathematics education. Peixoto’s chapter is worth a special mention. It analyzes the unique meaning contours of problem solving in deaf students’ sense of conceptual agency and
representation of unique thinking schemes. Peixoto indicates that, although Brazil incorporates deaf students into their mathematics classrooms with hearing students, deaf individuals using sign language whose everyday experience is extremely visual are a minority in a world whose main language modality is oral-auditory. Peixoto studied the preferred mathematical schemes of deaf students in his sample, arguing that educational situations for deaf learners should consider their schemes, valuing gestures in coordination with Libras (i.e., Brazilian sign language), to promote meaningful mathematical communication with teachers and co-learners in inclusive contexts. On the other hand, Hagelgans’ chapter relies on design-oriented problem-solving mathematics research. It targets students with dis/abilities whose self-motivation has been limited by environmental factors. Hagelgans shows in a German speaking context that there are instances when students with intellectual dis/abilities characterized by strong problem-solving skills opt not to write their answers grounded on their prior negative experiences with exclusionary learning environments (Straehler-Pohl & Pais, 2014). This, in turn, protects their self-concept and gives them a sense of being in control, determining what is to be done and not done in the lesson.

The last four parts of the book address the relevance of language, emotional dimensions, special institutional circumstances, and teacher education for the fostering and stifling of inclusive equity in mathematics education. Concerning teacher education, Bock, Siegemund, Nolte, and Ricken’s chapter is at once interesting and paradoxical. The interesting aspects are connected to its collaborative emphasis in the learning fields relevant to general and special education teacher candidates in Germany. Authors show that such collaborations can in principle foster interdisciplinary understanding among teacher candidates. Paradoxically, their findings show that pre-service teachers preparing to work with “special needs” students (note that this European word choice centers on needs rather than agency) emphasize students’ motivation instead of mathematics skill building. However, general education pre-service teachers are more likely to stress skill building. Under a deficits model, students with dis/abilities are likely to face “specialized” teachers in inclusive settings who are preempted in their relational approach and in the design of lessons by presumptions that do not privilege their unique student assets and their skill-building learning preferences (Tan, 2016 & 2017).

In sum, this edited volume expands the horizons of anti-ableist, inclusive equity in mathematics education scholarship, giving a special place to Global South perspectives. It is true that some of its essays remain anchored in traditional views of students with dis/abilities in mathematics education settings (e.g., the chapter by dos Santos Carmo, Gris & dos Santos Palombarini and the chapter by Orbach, Herzog & Fritz, both of which are concerned with mathematics’ anxiety). However, in general terms, critical and anti-oppressive theoretical and practice-driven concerns are given preeminence, resulting in a well-balanced work that promises to help transform the field of anti-ableist mathematics inclusivity for years to come.
References


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Alexis C. Padilla is a recent Ph.D. graduate from the Language, Literacy, and Sociocultural Studies department at the University of New Mexico. Dr. Padilla is also a lawyer, sociologist and conflict transformation engaged scholar. His work explores emancipatory learning and radical agency in the context of decolonial Latinx theorizing and critical disability studies. His contributions emphasize the activist/dis/ability advocacy vantage point combined with actionable dimensions of inclusive equity research and practice.