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(Re)Considering STEM Education *Continuing the critical opposition and proposition*

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Welcome to the second edition of the themed series *(Re)Considering STEM education* Volume 9 Number 16. As co-editors of the series, we would like to extend our sincere thanks to all those who have contributed manuscripts and to the amazing reviewers for the series who all contribute to the ongoing scholarship in the series and in *Critical Education*. It continues to be an honor to engage with such an inspiring group of diverse critical scholars. Building from the strong record of *Critical Education* (CE) and the momentum from the first collection of articles in Volume 8 Issue 15 (2017), the articles in this installment continues the critical dialogue on the philosophies and contexts of educational priorities set by dominant discourses of STEM education, policy, reform, and education research. Given the ongoing—and often empty—promises that STEM education deliver social justice and sustainability, as critical scholars we continue to work with and learn from poignant scholarship aimed at examining the multiplicities of what is encompassed by STEM. The series title, *(Re)Considering STEM*, emerges from our concerns with the power of STEM as an ominous discourse and invites inquiries taking up oppositions to—and substantive and timely reframings of—STEM (Wolfmeyer & Lupinacc, 2017). With the intention of cultivating a series of articles from a diverse array of educational research occurring both within and from outside the critical-foundations community, the authors in the series are responding from different disciplines but all engaging the question: *How are critical scholars engaging and working within STEM educational spaces and/or habits of mind?*

This grouping of articles, presented here as *Critical Education's* Volume 9 Issue 16, continues to disrupt and trouble dominant notions of STEM education by sharing thoughtful insight from scholarship that closely examines the ways STEM discourses operate through technology in early childhood education, project-based learning, radical possibilities for STEM, native philosophies, and critical media and gender questions. This instalment of the series begins with research that exposes the ways technology segregation are inextricably linked with school segregation. Tager, in the article *Segregation of Technology: Disrupting Racist Frameworks in Early Childhood Education*, shares how Black children are being denied technological access and how such denials affect learning. Furthermore, Tager illuminates how school funding and structural racism is working to exclude Black children from content learning opportunities. In the second article—*Bridges and boundaries to power: How teachers used project-based learning to design a radically inclusive STEM high school*, Jorgenson examines the experiences of teachers using project-based learning in a STEM high school with attention to the possibility of STEM education to reconceptualise STEM empowerment for power-marginalized groups.

The next two articles in this volume take a radical approach to reconsidering STEM and challenge assumptions about what currently constitutes STEM as a discourse and offer bold departures into possibilities for reconstitutions of STEM. Banack, in *Where STEM Binds, and ST(eee)EM Flows: A Case for the Where in STEM Discourse and Practice*, suggests there is a complex movement within STEM and proposes the infusion of environment, ecology, and ethics (eee) into STEM as STeeeEM. Examining this climate and movement with attention to his proposed infusion of eee, Banack suggests a need for a different criterion for assessing STEM learning anchored in health/wellbeing, environmental/sustainable ethics and practices, and what he refers to as learning stickiness. In the fourth article—*Toward a State-Critical STEM Education*, Teeple problematizes STEM education as a reform discourse. Critical of Bybee's comprehensive case for STEM education, Teeple illuminates how such STEM education maintains an oppressive status quo. Teeple turns to critical scholars responding to the status quo of schooling concluding with the call for more possibilities for more learning opportunities for students to learn about the status quo.

Runninghawk Johnson, in *Native Philosophies as the Basis for Secondary Science Curriculum*, responds to the ways in which Western approaches to teaching science creates barriers for Native American students and proposes teaching science through a curriculum rooted in Native philosophies. Examining if such efforts might minimize barriers, Runninghawk Johnson turns to relatedness, Traditional Elder Knowledge (TEK), indigenous realism, and pluralism to present a science curriculum more aligned with Native philosophies. This article offers insight to how Western science and Native philosophies can work together from and through a Native perspective. Finally, Chesky and Goldstein consider the “problem” of girls and STEM utilizing visual media to offer a critique of the ways STEM imagery in connection with STEM education foreground gender-normative and hetero-patriarchal assumptions.

We intend these articles to continue the dialogical and ongoing exchange and sharing of critical framings of, and interruptions to, the dominant discourses of STEM education that currently run amok throughout the US and Canada—and increasingly around the planet. We hope that readers take interest in the diverse perspectives shared in this issue, as well as in Volume 8 Number 15, and that these articles all serve as further catalyst to future contribution to the ongoing scholarly dialogue here at *Critical Education*.

References

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