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(Re)Considering STEM Education
Interrupting an Omnipresent Discourse

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Critical Education (CE) has a strong record of providing a space for radical departures from status quo education and educational research. Building on the journal's critical momentum, this series dives into the philosophies and contexts of educational priorities set by today's global elite and the role of STEM Education in the political and economic restructuring of education and educational research. Given the state of world, we approached the editors of CE with a proposal to foster a dedicated space for diverse scholars to deconstruct and reconstruct the interdisciplinary, ubiquitous, powerful and perhaps dangerous STEM (Science, Technology, Engineering and Mathematics) education. Chesky and Wolfmeyer (2015) examining STEM as an omnipresent discourse assert that "STEM may be the most indicative educational reform discourse of our time and has grown to become one of the primary foci of educational reform" (p. 2). The series title, *(Re)Considering STEM*, reflects our concerns with the power of STEM as an ominous or auspicious discourse and suggests a space for dedicated inquiries taking up oppositions to—and substantive and timely reframings of—STEM. It is the desire of the editors of this series to cultivate a series of articles from a diverse array of educational research occurring both within and from outside the critical-foundations community. The special series

continues a long tradition of such critique, at least those occurring in STEM related journals like *For the Learning of Mathematics*, *Journal of Urban Mathematics Education* and *Cultural Studies of Science Education*, and the first among few locations in education research dedicated specifically to critical explorations of STEM education on the whole.

We aim for the series to contribute to understanding and defining STEM education in a variety of ways, from critical curricular and pedagogic explorations of STEM contents on their own and in total, to broader conception of STEM such as the infiltration of STEM culture throughout higher education and research programs. In considering STEM, we sought explorations (re)considering how STEM perpetuates systems of domination and hierarchy while potentially offering unexpected moments for reformations that foster alternatives. In other words, how is mainstream STEM a part of the problem? In (re)considering STEM, we hope to provide the opportunities for scholarly projects that range from policy to grant research, curriculum to media, experiences in STEM education from diverse students, and from teacher innovation to student resistance.

The series serves as a space for critical examinations that move beyond the traditional perspectives reproducing the dominance of STEM. Such endeavors might include but are not limited to a variety of frameworks appropriate to critical-foundations work, including critical theories like, ecojustice education, critical race theory and critical disability studies and with goals that counter neoliberal projects and embrace community, democracy, anarchism and anti-capitalism. In general, this series seeks to foster an ongoing scholarly conversation through manuscripts that broadly engage the question: *How are critical scholars engaging and working within STEM educational spaces and/or habits of mind?*

The first grouping of articles, presented here as *Critical Education's* Volume 8 Issue 15, interrupts mainstream notions of STEM education by destabilizing the neoliberal and Eurocentric currents in STEM. The series of papers starts off with two articles that explicitly trouble the racial, and Eurocentric, hierarchies embedded in STEM education and both papers suggest a need for STEM educators, and educational researchers, to consider frameworks from outside of the current dominant paradigms of theory and practice. In the first paper—*Bridging Theory and Practice in the Urban Science Classroom: A Framework for Hip-Hop Pedagogy*, Adjapong connects theory with practice in detailing educational debts of urban youth in STEM and, using culturally relevant pedagogies that include Hip Hop, provides practical directions that STEM must take. Second, Cole and O'Riley, in *Performing Survivance: (Re)storying STEM Education from an Indigenous Perspective*, move well beyond the Eurocentric boundaries of STEM's underlying Western dominant philosophies by stressing Indigenous knowledges as a frame pointing to STEM as the perpetuation of social ills and a "restoried" STEM as more hopeful work for society. Following, the next three articles focus on examining status quo STEM education and policy as a problem and the authors of these papers point to alternate directions in social and cultural foundations of education. Kelly, in *STEM Deserves an F: The role of Foundations of Education in the UTEACH Model of Teacher Preparation*, details the clear policy motives regarding STEM teacher education for failing to teach critically important concepts of educational foundations for teachers in STEM fields. Bulfin, in *InSTEMnifying Youth: STEM, Capital, and Power*, explicates the higher education STEM landscape pointing to STEM's neoliberal force. Finally, Wolfmeyer, Lupinacci, and Chesky—in *Three Ontologies of STEM Education: An Apolitical Curricular Trend, Eurocentric Economic Policy, and Discursive Episteme*—build upon Chesky and Wolfmeyer (2015) in outlining three ontologies of STEM

education from their examination of potential spaces for interrupting the dominance of STEM education as a discourse. We intend these articles to build towards an 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 the series and that scholars are inspired to contribute to the ongoing scholarly dialogue here at *Critical Education.*

Reference

Chesky, N. & Wolfmeyer, M. (2015). *Philosophy of STEM education: A critical investigation.* New York, NY: Palgrave Macmillan.

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