“Act locally, publish globally”: international/ multi-disciplinary research efforts needed to understand the impact of globalization on science education

Sonya N. Martin

Received: 8 April 2010 / Accepted: 8 April 2010 / Published online: 22 April 2010
© Springer Science+Business Media B.V. 2010

As I sit to write this editorial, I cannot help but reflect on my experiences over the last year serving as Lead Editor for this issue. Inviting different members of the editorial Review Board to serve as Lead Editors for upcoming issues is a new way *CSSE* is seeking to expand participation to a greater number of scholars in science education and to expand readership of the journal to a wider network of social scientists. By way of introduction to this issue, I describe what I have learned about the editorial process that is unique to this journal—as well I share how this experience has helped me to recognize the critical need for more international and multi-disciplinary research efforts, if we, as science educators are to both understand and actively inform/reform the ways in which globalization is shaping science education around the world.

For the past 4 years, the Editors and Board Members of the journal have invited other science educators to meet and discuss sociocultural issues and research in science education. Each year there is a theme for the meeting and several of the manuscripts for this issue originated from research presented in 2007 at the inaugural Springer Forum held in Chicago. This issue contains four sets of papers organized around four original manuscripts that are loosely developed around the theme of *Glocalization* and is the second of three special issues to focus on science education in a global context. The first paper, co-authored by Lyn Carter and Ranjith Dediwalage, examined a school-based project entitled *Sustainable Living by the Bay* through the lens of globalization and offered a critical analysis of how neoliberal and neoconservative agendas in Australia are being expressed through government funding policies, which in turn, informed the development and implementation of K-12 science curricula that (re)produced Western canonical scientific knowledge at the expense of all other ways of knowing and doing science. Tali Tal and Iris Alkaher, in the second paper, examined the experiences of Bedouin and Israeli students who participated in an education for sustainability (EfS) project designed to bring together Arabic and Jewish youth and their teachers to engage in a cross-cultural exchange about a socio-environmental conflict related to the disputed use of a local creek and

S. N. Martin (✉)
School of Education, Drexel University, Korman Center, Rm 233, 3141 Chestnut Street,
Philadelphia, PA 19104, USA
e-mail: sonya.martin@drexel.edu

surrounding lands. In the third contribution to the issue, educational anthropologist Katherine Richardson Bruna, employed a class-first analysis to examine the intersection of the history of Mexican immigrant labor in rural Iowa with that of the globalizing agri-foods industry and described the local effects of this intersection on school and science classrooms for students, teachers, and community members in a rural meatpacking community. In the final paper, Heidi Carlone, Sue Kimmel, and Christina Tschida examined global- and community-level contexts that influenced the science curriculum of a newly created math, science, and technology elementary magnet school in a rural community in the southern United States facing economic instability due to the loss of manufacturing jobs. Serving as the core papers for the second issue of Volume 5, these authors each explored ways in which individual teachers, students, and their communities were experiencing the affects of globalization on science education within differing local contexts.

After being assigned a collection of manuscripts that are accepted through the journal's initial open peer-review process, Lead Editors work with the authors to further refine their manuscripts before moving to the next stage of journal's review process, the Forum. During the Forum development process, Lead Editors are responsible for identifying participants who would be willing to author a Forum response using either a review essay format as a single author or by engaging in a metalogue with other scholars, including the author of the original manuscript, to develop an interactive dialogue around themes taken from the original manuscript. The intent of either the review essay or the metalogue is to advance the conversation beyond a critique of the work to generate new knowledge and understandings about the central themes as they relate to sociocultural perspectives about science teaching, learning, and research. As the focus of this issue was on globalization, my primary goal as Lead Editor was to encourage more international participation so our readers could access more global perspectives on science education. In addition, as we are seeking to expand the journal's readership, I wanted to engage authors who have not previously published with the journal and, when possible, to include scholars from fields outside of science education to join in the Forum process.

I accepted the role of Lead Editor for this issue in particular because my own research had become focused on issues related to globalization in the context of K-12 science teaching and learning. In Philadelphia, we have an increasing number of students entering science classrooms as English language learners—both as recent immigrants to the country and as US born citizens for whom English is not spoken in the home. The classroom teachers I collaborate with are seeking ways to better support their students to not only learn science, but also English. In most of these classrooms, there are over 30 students and about one-third of them are classified as English language learners. Further complicating the issue is that few of the students share a common first language; within a single classroom there are students who speak Vietnamese, Khmer, Bahasa, Cantonese, Mandarin, Fujianese, and Spanish! Thus, I welcomed the opportunity to become immersed in this literature—imagining I would easily locate a large community of science educators engaged in sociocultural research with a focus on globalization. My experience as Lead Editor has expanded my understanding of the need for more published scholarship discussing the implications of globalization on education, specifically examining its impact on K-12 science classrooms and on science teacher education in different countries.

As I sought to identify participants who could contribute to the Forums, I found a great deal of interesting research being conducted on economic and political issues related to globalization, but relatively little work being published that focuses on science teaching and learning, especially at the pre-collegiate levels. As there were few science educators who are publishing in the area of globalization who had not already published in *CSSE*, my

greatest challenge as Lead Editor was to locate researchers from outside of our field whose expertise overlapped with the research described in this issue's featured manuscripts.

I began this process first by asking the authors of the four original papers to recommend scholars they thought would be able to provide a thoughtful analysis of their work and who could also advance the conversation around globalization/glocalization and science education by highlighting connections to their research. I shared with them my goals for extending participation to scholars with diverse expertise in globalization and we made lists for each core paper, which was added to by a second phase of analysis involving an extensive literature review around globalization and science education. I began this process with an analysis of the top-tier science education journals, identifying papers that discussed globalization. I reviewed these papers' references, developing a list of the most common published journal articles and book titles that specifically examined globalization. Next I expanded the search to include other top journals in teacher education and I added new key word searches to include the names of authors from my previous search, as well as new searches pairing globalization and educational policy, multicultural education, and teacher education, and other variations to identify authors, institutions and programs that focus on Global Studies in Education or International or Comparative Education. I then researched individuals and programs at different universities and institutions around the world to identify both senior, mid-level and junior scholars whose publication records indicated complementary research strands even though they were not necessarily in the fields of education or science education.

Working from a list of 17 scholars whose research and publication record demonstrated expertise in the areas of globalization in the context of science/education, I then cross-listed these names with people who had previously published in *CSSE* and reduced this list to nine. I combined the six names generated by the authors of the four core articles, the nine from my review of the literature, and four more who I identified while reviewing university websites to compile my final list of potential Forum participants. For my first round of invitations, I considered issues such as geographic location, number of citations, career level (senior/junior/etc.), field of study, and institutional affiliations as well as issues such as gender and race/ethnicity in an effort to select a diverse pool of contributors. I began the invitation process by writing an introduction describing the journal, the open-peer review process, options for engaging in the Forum, and a description of the manuscript and authors around whose work the Forum would be written. Next I invited two scholars per original manuscript, to be the first eight potential Forum participants. I was cautiously optimistic that at least some of the people I contacted would respond, but acknowledged that people may choose not to reply to a request from a person they do not know to write for a journal that is not in their field. However, I found it particularly rewarding to explain the unique open peer-review process of our journal to those who were not familiar with *CSSE* and to interact with colleagues around the world.

Over a three-month period, I contacted over twenty people in nine different countries at twenty different institutions, and all but five people responded to my queries. Several of those invited who could not commit to the Forum, such as Sonia Nieto or Deborah Fink, took the time to identify and introduce me via email to other scholars whose research and theoretical perspectives were well aligned to the manuscript topics. In most cases, the names provided by experts verified the comprehensive background work already done, but in two cases I was introduced to new scholars who accepted my invitation. During the remaining 9 months, I worked with the Forum authors to develop their review essays and metalogues and I coordinated communication between the authors of the original manuscripts and the Forums. Authors of the core manuscripts are encouraged to read drafts of

the Forums while simultaneously being offered time and support to improve their papers based on the reviews of Forum participants. This is a radically different process than in most journals as the intent is to engage scholars in on-going development of their ideas through dialogue and revision. For some participants, this involves reviewing and editing one another's submissions, co-authoring metalogues involving the original author and Forum participants, and in the event that authors find time and thought has provided them with new ideas that will advance the conversation even further—rejoinders can be published within the same set of papers.

In summary, eight people contributed to the four original articles and thirteen people authored or co-authored the nine accompanying Forum responses, and more than two-thirds of these authors were first-time contributors to *CSSE*. Also appearing within this issue are two additions to the journal's continuing special features, the Key Contributors to Science Education and the Book Review, which all have a connection to themes related to science education in a globalized context. Representing a wide range of nationalities, disciplines, and research interests, the participants in this issue express diverse views on globalization and science education from different regions in Australia, Mexico, Canada, China, Israel, Hong Kong (SAR), Malawi, India, Central America, and central and southern areas in the US. Notably, several papers in this issue offer Executive Summaries in languages other than English, including Chinese, Hebrew, Arabic, Spanish, and Hindu. *CSSE* continues to support the development of this feature for the journal in an attempt to make content accessible to a wider audience. It is with great pleasure that I now introduce and describe the articles accompanying each of the four sets of papers, as well as the other feature articles in this issue.

Overview of contributions

Globalization and science education policy

The first set of papers in this issue focuses on Lyn Carter and Ranjith Dediwalage's analysis of the impact of globalization on science education reforms, policy, and funding initiatives in Australia. Carter has published several important articles on the topic of globalization in science education, and this paper is part of a series of publications to come out of Carter and Dediwalage's analysis of the *Sustainability by the Bay* project. In his review essay, John Lawrence Bencze, offers further evidence to support Carter and Dediwalage's assertion that neoliberalism and neoconservatism are having adverse effects on school science. Bencze reasons that economized school science emphasizes competitive and unequal distribution of capital, serving to disempower students and isolate them from one another, their communities, and from *doing* science. Bencze suggests an epistemological and ideological framework informed by communitarian principles as a possible means for subverting global economization and the development of a socially just and environmentally sustainable science education.

Director of the Global and International Education program at Drexel University, Rebecca Clothey collaborated with two graduate students living in China and the US, Michelle Mills and Jacqueline Baumgarten, to co-author the second Forum around Carter and Dediwalage's paper. Examining trends in the global economy over the last 150 years, Clothey, Mills, and Baumgarten highlight the importance of understanding the ways in which historic global developments have, over time, shaped educational funding, curriculum development and implementation, and teacher preparation and education around the world. Using examples to

underscore this point, their essay encourages researchers to analyze educational policy changes from economic, cultural, and historical perspectives to be able to make sense of the impact of globalization on science education at both the micro and macro levels.

The final essay in this set is by social scientist, Su-Yan Pan from the Hong Kong Institute of Education. Pan's contribution rounds out this set of essays by suggesting that education researchers, including Carter and Dediwalage, can gain a better understanding of how globalization is shaping science education by expanding current methodological and theoretical frameworks to identify other mediators of globalization, including "supranational organizations, transnational corporations, nation states, and local political, economic, and educational elites." Pan's essay provides examples to demonstrate how by using these broader analytical frameworks, researchers can better understand the "relationship between policy intent and policy action in the translation of global imperatives for education into local processes of science education reform."

Environmental education (EE) in the context of global/local conflicts

The second set of papers discuss Tali Tal and Iris Alkahrer's study focusing on an environmental conflict involving social and political issues between Jews and Bedouin Arabs. This paper set highlights the work of three scholars from different fields who each provide a thoughtful critique of Tal and Alkahrer's education for sustainability (EfS) project centering around disputed rights to water and land use around Zalmon Creek in Galilee. In the first essay, leading scholar in the field of environmental education, David Greenwood (formerly Gruenewald), asks when and how should place-conscious educators foreground conflict, especially in contested places where there exists asymmetrical power relations, such as the case between the Arabs and Israelis in Tal and Alkahrer's study. Referring to the half-century war between Arabs and Israelis as "the body in the middle of the room," Greenwood urges environmental educators and researchers to consider a critical pedagogy of place as a theoretical framework for integrating cultural and ecological inquiries and to acknowledge disparate experiences associated with conflict as part of the larger "environmental problem" to be examined.

Writing from a framework of critical pedagogy, Carolyn Ali-Khan authored the second Forum in this set, in which she examines issues of power, identity, and political geography in Tal and Alkahrer's discussion of the Zalmon Creek project. Ali-Khan problematizes "conservation versus development" by questioning what it means to "share" land in a disparate landscape where even constructs such as time and space, are not equally shared. Ali-Khan offers a powerful critique underscoring the need for researchers to pay attention to power and positionality between not only the researchers and their participants, but also the places/spaces where the research occurs.

In the third review for this set, George Glasson draws parallels between Tal and Alkahrer's study and his own collaborative research in Malawi in southeast Africa with science educators encouraging education for sustainability through the Mobile Malawi project. Glasson discusses the importance of ethical and methodological considerations that promote prolonged interactions and shared experiences between researchers and participants as ways to cultivate mutual respect and understanding. Glasson argues researchers in the field of education for sustainability need to actively investigate eco-justice issues embedded within socio/historical/cultural/political connections to land/resources and he offers third space theory as a framework from which to deconstruct power differences and engage members of marginalized cultures in collectively addressing social inequities and developing new knowledge about living sustainably.

Insurgent science and the proletarianization of immigrant youth

In the third set of papers, Aziz Choudry and Laura Alicia Valdiviezo, each authored a review essay discussing Katherine Richardson Bruna's paper examining Mexican immigrant transnational social capital and class transformations in the context of a high school science classroom in a meatpacking town in rural Iowa. In his essay, Aziz Choudry, draws on his work with adult im/migrant workers in Canada to discuss the geohistorical context of knowledge production, both within the context of his research as well as within the science classroom where Bruna's research takes place. Choudry challenges teacher educators to engage their students to examine issues of global/local justice in an effort to provide teachers with an understanding of how individuals can act to disrupt hegemonic practices at the classroom level, which in turn, could provide immigrant students with expanded opportunities for learning science. Specifically, Choudry suggests Walter Dignolo's theorization of 'border thinking' as a framework for engaging teachers in critical reflection about the colonial nature of power/knowledge and the ethics and politics of teaching and inquiry. Finally, Choudry introduces global and institutional ethnography as methodological considerations, enabling researchers to attend to the mutual shaping of local theory when there are multiple sites to be described and analyzed—such as the town in Mexico from where the majority of the immigrants to the meatpacking town in Iowa originated. Choudry suggests such practices could enable Bruna to “unravel and map webs of social relations” connecting the two towns which could help make “explicit the possibilities for transformation” beyond the scope of the current study.

Laura Alicia Valdiviezo began her review essay of Bruna's paper with an insightful comparison between Latin American and North American traditional analyses of class and continues by suggesting that a class-first analysis is not sufficient for making sense of the “class-conflict nature of the capitalist society and the role of schools in fulfilling this nature.” Instead, Valdiviezo offers a class analysis continuum rather than an isolated analysis of class as she notes this perspective obscures the ways in which class intersects with social constructions surrounding issues of language, ethnicity, and gender. To argue her point, she offers examples from her ethnographic research with teachers in Indigenous schools in South America where Valdiviezo and her collaborators employ diverse epistemologies to conduct vertical comparisons of global, national, and local forces, which include analyses of time and space, to make sense of how these forces shape the construction of schooling. She ends her review by discussing how knowledge generated by social science research from a class-first or class-continuum perspective can be applied in teacher education programs to promote transformative practices in science classrooms.

Global networks of practice

In this final set of papers, Heidi Carlone, Sue Kimmel, and Christina Tschida attempt to make sense of a “science with character” curriculum employed at a new science, mathematics, and technology magnet school in a rural community in the southeastern United States. Using Jan Nesper's “networks of practice” lens to examine science teaching and learning in a rural elementary school enables these authors to consider the macro- and meso-level contexts influencing the (re)production of science education within this community. Carlone and her colleagues' findings suggest that globalization is dissolving boundaries in the economy, cultures, and in schools and, as a result, science classrooms are both influencing and being influenced by global networks of practice—necessitating that researchers broaden what they consider “relevant contexts” in studies of science learning.

Identifying the relationship between social fields, habitus, and the influence of neoliberalism on meritocracy in schools as key themes for discussion, Carol Brandt, Wesley Shumar, and Lorie Hammond reflect on their own experiences conducting ethnographic research while expanding the conversation to engage authors Carlone, Kimmel, and Tschida in a six-way metalogue. Speaking from individual and varied perspectives, the participants in this Forum “consciously interrogate one another concerning our assumptions about the purposes of schooling” and encourage one another to “consider larger political and market forces as they play out locally under the guise of science education.”

Key contributors to science education

In this issue of *CSSE*, we continue to expand upon our tradition of honoring Key Contributors to the field of science education by observing an institution supporting science education research and teacher education and a scholar whose work has indirectly influenced a growing body of research in science education. This section is connected to the larger theme of this issue as both papers address the ways in which the ideas and actions of individuals can shape science education within both local and global contexts.

Anthropologist Wesley Shumar highlights the work of Homi K. Bhabha, Director of the Humanities Center at Harvard university, whose work has been cited in 22 articles published in *CSSE* alone! Shumar acknowledges Bhabha’s many contributions to the development of postcolonial and poststructural theories while raising questions about “current pressures to reify and commodify” the ideas of theorists like Bhabha’s in educational research, referencing the growing use of hybridity and third space in science education. Shumar cautions scholars to resist this form of commodification, noting these theories cannot be easily applied to new and different social situations without appreciating the contradictions that arise, and instead, he suggests a more complex engagement with Bhabha’s theories in our work.

The second essay, by Sheila Vaidya, celebrates the accomplishments of Homi J. Bhabha, remembered as India’s “Father of Atomic Energy” and highlights both the contributions to science education and science teacher preparation in present-day India by Homi J. Bhabha through the posthumously built Homi Bhabha Centre for Science Education (HBCSE). In this essay, Vaidya offers the reader a historical overview of Bhabha’s life, and with it, a snapshot of the development of science and technology in India over the last 100 years. The HBCSE is the first Institute to be recognized as a Key Contributor to Science Education as a result of the Centre’s regional and national efforts to improve science teacher preparation and to expand primary/secondary students’ science learning opportunities through a number of innovative programs.

Book review

Bryan Brown offers a review essay examining Christopher Emdin’s new book from SensePublishers entitled, *Science education for the hip-hop generation* (2010). In his essay, Brown applauds Emdin’s efforts to integrate personal narrative and interpretation of hip-hop quotes and references with a critical analysis of the ways in which hip-hop culture and music can provide urban youth with expanded opportunities for learning school science. Citing the author’s belief that urban students are misunderstood because teachers do not understand hip-hop, Brown notes Emdin does “an incredible job of making subtle nuances

of hip-hop culture visible to educators and casts hip-hop in a new [more positive] role.” Brown acknowledges that more examples of how to engage in “hip-hop based science education” are needed and urges Emdin and other science education researchers to move this line of research forward in the future.

A need for international/multi-disciplinary researchers to “Act locally, publish globally”

While there is a growing body of literature examining the impact of globalization on economics and politics, little research has been published discussing the implications of globalization on education, specifically its impact on K-12 science classrooms, science teacher education, or science education research. This collection of work speaks to the fact that the processes of globalization, however, defined, are significantly transforming science teaching and science learning as it has traditionally been understood within varying local, regional, national, and international contexts. My experience as Lead Editor of this issue of *CSSE* enabled me to interact with researchers from around the world and from different fields in the social sciences. As a result, I have been introduced to many new theoretical and methodological frameworks from which to consider science teaching and learning from sociocultural perspectives.

This year I also had the opportunity of serving, along with Kathryn Scantlebury, Yew Jin Lee, and Jennifer Adams, as co-organizers for the 4th Annual Springer Forum on Cultural Studies in Science Education. As a member of this committee, I shared my desire to expand the focus of the Springer Forum to expand the multi-disciplinary and international flavor of the Forum, a goal shared by my colleagues. In my closing remarks, I would like to share some highlights from this year’s Springer Forum. This year’s theme was *Theoretical and Methodological Issues in Socio-Cultural Studies*. To address this theme, we invited sociocultural studies scholars from different research disciplines to speak to about their research and ask specifically that they discuss the theoretical and methodological perspectives that frame their examination of sociocultural studies within their field of research. The Forum featured four keynote presentations by Ken Tobin, Paul Grobstein, Donna DeGennaro and Tiffany Brown, and Wesley Shumar.

Opening the Forum, Tobin discussed the need for more global, cross-disciplinary engagement of theories and research as a means to advance knowledge and understanding about how people teach and learn science. Grobstein, a neurobiologist, presented his research on the brain as a learning system with three different feedback loops used for conflict detection and resolution and he engaged participants in discussions about the advantages and challenges for science education to pay more attention to these loops to better understand interpersonal and intercultural differences between (brains)people. Shumar discussed the economization and commodification of universities, particularly referencing the impact on research in academe, including theoretical practice. DeGennaro and Brown presented their paper entitled, *Youth voices: Connections between history, enacted culture and identity in a digital divide initiative*, which was honored with the 2009 *CSSE* Best Paper award for their article appearing in Volume 4(1) last spring. Noting that the design of educational experiences is mediated by historical, institutional and social conceptions, DeGennaro and Brown illustrated this point in their analysis of an after-school course designed to support urban youth to learn about and connect technology to their lives. The format for the Forum is purposefully designed to maximize participant dialogue and interaction by featuring keynote presentations, around which small groups are organized to meet in breakout sessions, followed by plenary level discussions before

Fig. 1 Forum virtual attendees at the Drexel Virtual Consortium via Second Life

introducing the next keynote presentation. Attendees are assigned and rotated through small groups to maximize potential for cross-pollination of ideas from different participants.

The Forum was held at Drexel University in Philadelphia, PA on March 24–25, 2010 and we had record participation this year, with nearly 70 people registered for the two-day event. In an effort to be more inclusive of international guests, students, and scholars from outside the field—we held the Forum both in a face-to-face venue as well as virtually via Second Life! A total of 46 people attended the sessions in real life at Drexel University with an additional 15 virtual participants attending (Fig. 1).

All keynote presentations and whole group sessions were simulcast into Second Life via the Drexel Virtual Consortium. In addition, “Real Life” and “Second life” participants had opportunities to interact during the whole group interactions via both text and voice chat options. Of the face-to-face attendees, about 34% were international guests, 40% identified as racial minorities, and there were near equal representation of men and women. In virtual attendance, we had all humanoid avatars with the exception of one fantastically colorful Panda! This year’s Forum was attended by people who hail from different disciplines in the sciences and social sciences and from many countries, including South Africa, Korea, Northern Ireland, Luxembourg, Germany, the Netherlands, Canada, Australia, and the US, but to name a few.

Providing space for special issues on globalization in science education, implementing alternative editorial practices, sponsoring interactive Forums to engage sociocultural theorists from different fields around topics in science education research, and venturing into new technology realms to expand access for world-wide participants enabling for “virtual” presence at the Springer Forum are all ways in which CSSE is leading the way and sounding the call to pull together people from different perspectives to examine issues in science education that require international and multi-disciplinarian research efforts to address. My travels this year to Istanbul, Turkey to attend the biennial meeting of European Science Education Research Association and my recent research exchange with colleagues at the University of Luxembourg have further expanded my own understanding of the need for more sustained, collaborative exchanges between scholars around the world as we each have much to learn from and about the research being conducted in local contexts to make sense of how findings from these works can contribute to our growing understanding of how science is being understood and experienced in global contexts.

For myself, this has meant forging new relationships with scholars in different countries, such as Takahito Yamasaki at Hiroshima University in Japan, Sungmin Im at Daegu University in South Korea, and Charles Max and Gudrun Ziegler at University of Luxembourg. All with whom I have been able to engage in collaborative research exchanges about how coteaching, cogenerative dialogues, and technologies including video editing/analysis and how on-line/virtual learning environments can be implemented in differing cultural contexts to improve science teaching and learning. As I conclude this editorial, I want to encourage others in the science education research community to reach out to researchers and theorists around the world to share your own work, learn about the work of others, and to collaboratively engage in research that will advance our understanding about science education in local communities as it relates to global contexts. Where possible, engage in real and virtual interactions, visiting one another's universities, research sites, and homes to exchange ideas and share experiences within differing local contexts. I encourage more scholars to seek employment and/or funding to support research exchanges in other regions and countries with the intent of sharing what you learn from cross-cultural/multi-disciplinary research exchanges with colleagues at your home institutions and within your own research networks. A growing network of US researchers within the *CSSE* community have had opportunities in the last 4 years to be hosted to visit science education researchers in Taiwan, Northern Ireland, Spain, Luxembourg, South Africa, Canada, The Netherlands, and England. Traveling to and visiting schools, universities and research groups in other countries—even via video conferences using Skype or virtual platforms such as Second Life—supports the cross-pollination and development of ideas that foster new schema, practices and foci which all serve to advance research in science education.

CSSE offers several outlets for publishing research and discourse stemming from such exchanges, including features like the Opinion Editorial, the Key Contributors to Science Education series, and the Book Review Essay. *CSSE* challenges our readers to make use of these outlets by submitting original works discussing important issues in your research, highlighting the contributions of a person, organization, or institution that has helped to advance science education in your country, and to introduce us to research from diverse perspectives by reviewing books from fields both within and outside of science education. In addition, *CSSE* encourages the use of metalogue between multiple authors to produce an original Forum article around which other Forum articles could be organized to respond to and discuss key themes raised in the original Forum. Each of these options provide opportunities for individuals and groups of researchers to advance ideas and research in science education by publishing in alternative formats which enable researchers to share their work in meaningful and legitimate venues in a timely manner.

I conclude by urging you all to not only engage in discourse around research exchanges, but also to publish globally, in many venues—including *CSSE*, other journals, books, blogs, and self-developed websites to make ensure that the wider science education community is benefitting from the research being conducted in local contexts. I would like to thank *CSSE*'s Editorial Board for providing me this opportunity to serve as Lead Editor and look forward to being introduced to more researchers who are engaging in collaborative research efforts and writing about their work in *CSSE*. I also hope to see more people joining us for real and virtual attendance at the 5th annual Springer Forum on Cultural Studies of Science Education, which is tentatively scheduled to be in Orlando, FL in April 2011, just before or after the NARST conference.

Author Biography

Sonya N. Martin is an assistant professor in science education at Drexel University. Martin taught science at both the elementary and secondary levels in the Philadelphia public school district for 5 years, during which time she earned two graduate degrees in Elementary Education and Chemistry Education from the *University of Pennsylvania*. Her current research focuses on video analysis and cogenerative dialogues as tools for introducing pre- and in-service teachers to an effective means for catalyzing changes that benefit the learning environment for both teachers and their students. She is an Editorial Board member for the international journal of *Research in Science Education* and the *Journal of Science Teacher Education* and a co-editor of the recently published book *Re-visioning Science Education from Feminist Perspectives: Challenges, choices and careers* (SensePublishers, 2010).