

USC Race and
Equity Center

MEANINGFULLY INTEGRATING RACIAL TOPICS ACROSS THE CURRICULUM

By James Bridgeforth, Ph.D.

Racial Equity Guidance for K-12 Teachers



ABOUT THE AUTHOR



James Bridgeforth, Ph.D.
Author

James C. Bridgeforth is an educator, researcher, and policy advocate. He has extensive experience collaborating with practitioners and conducting equity-focused, policy-oriented educational research. Drawing on his professional experiences across K-12 and higher education contexts, his nationally recognized scholarship critically examines issues of racism, power, leadership, and learning in K-12 schools. James holds a PhD in Urban Education Policy (University of Southern California '23), an MEd in Educational Administration and Policy (University of Georgia '17), and a B.A. in Political Science and Sociology (Georgia College & State University '13).

ABOUT THE SERIES

This practice brief is one of eight in a series of resources published by USC Race and Equity Center for every K-12 school and teacher education program across America. Guidance is offered to educators who are serious about achieving equitable learning conditions and outcomes for students, families, and teachers of color, despite increasing public scrutiny, executive gag orders, and legislative censorship. Each brief introduces research, practical examples, reflective questions, and useful strategies for educators advancing racial equity.

Meaningfully Integrating Racial Topics Across the Curriculum

A recent report by PEN America describes the depths to which educational censorship on teaching about race and racism has spread throughout the United States since their inception in early 2021. The authors explain that the impact of these legislative and executive actions have been far-reaching, stoking fear in K-12 educators that they will be targeted for teaching about racial topics in schools (Sachs & Young, 2023).

In particular, Black teachers, English/Language Arts and Social Studies teachers, and high school teachers of other disciplines have indicated that these policies have influenced either the ways that they teach or the materials that they teach (Woo et al., 2023). Furthermore, these policies have even influenced professional learning opportunities for teachers, as school and district leadership report reduced efforts to prepare teachers to introduce students to the cultural and historical backgrounds of racial and ethnic minority groups (Sachs & Young, 2023).

These reports aligned with my recent research exploring how K-12 school board members navigated racial crises within their districts. I conducted this study at the height of the “CRT Wars,” during which time state and local governments were actively engaged in ridding school buildings of what they described as Critical Race Theory. In reality, any mention of race or racism in schools was targeted. Several board members in this study explained that their intent was simple: returning to a “traditional” education. One board member explained “We want politics out of school. Gosh, we want our kids to go in there to learn English, to learn math, to learn academics, to learn history.”

This school board member, similar to what I observed in many communities, believed that discussions of race and racism were inherently divisive and had no place in academic discourse. Yet, this belies the fact that histories and understandings of race and racism are inextricably linked to the way that schools have operated and continue to function in our society. To advocate for the return to what has been described as a “traditional” education

is a fundamentally racialized position grounded in White backlash toward any semblance of racial progress (Anderson, 2016).

Therefore, it is imperative that educators increase their awareness of the ways that race and racism have shaped our education system, and advance their preparation to infuse racial topics across the broader school curriculum. Due to the ways that teaching about race and racism is often siloed in social studies and English/Language Arts courses (Epstein & Gist, 2015), this brief specifically focuses on recommendations and strategies for meaningfully integrating racial topics across Science, Technology, Engineering, and Math (STEM) curricula in ways that honor the dynamic lives, cultures, histories, and contributions of racially minoritized people in our society.

Remove Racist Math Assignments from School Curricula



Math classrooms often reproduce the disciplinary logic of objectivity in that math is portrayed to be objective and free from bias (e.g., the “numbers are neutral” logic) (Aguirre et al., 2017). Yet there is a growing body of research that demonstrates how math classrooms can be racially harmful and dehumanizing for students of color, particularly for Black girls (Joseph et al., 2019).

Recent approaches to interdisciplinary teaching practices have involved attempts to incorporate previously siloed topics such as math and social studies, yet King and Woodson (2017) offer insights into just how racially harmful these attempts can be for students of color. They describe a case of a 3rd grade homework assignment in Norcross, Georgia where students were tasked to answer several math word problems:

- 1). Frederick had 6 baskets filled with cotton. If each basket held 5 pounds, how many pounds did he have all together?
- 2). If Frederick got two beatings per day, how many beatings did he get in one week? Two weeks?

- 3). Each tree had 56 oranges. If eight slaves pick them equally, then how much would each slave pick?

They explain that these racist word problems were described as an attempt to learn history through math, incorporating multiplication and division concepts with a history lesson on Frederick Douglass (p. 6). Regardless of any efforts to explain how such a racially harmful learning activity was developed and taught, this case provides an opportunity to be clear about what not to do in math classrooms, and similarly offers an opportunity to consider what *should* be done.

To be clear, meaningfully incorporating racial topics in math classrooms should not involve reproducing racial traumas through racially insensitive math problems. This kind of learning activity can be a form of educative-psychic violence leading to negative experiences for students of color (King & Woodson, 2017). However, there are several promising practices for integrating racial topics in math classrooms in ways that are racially affirming and humanizing (Aguirre et al., 2013; Joseph

et al., 2019). For example, teachers should consider leveraging students' out-of-school experiences and racial and cultural knowledge bases to demonstrate the relevance and applicability of math concepts within schools (Leonard, 2018). Nasir's (2002) foundational research on Black students' mathematical practices offered insights into the power of leveraging out-of-school cultural practices (in this case, basketball and dominoes) to support the development of math identities in Black children.

Importantly, Kalinec-Craig (2023) reminds us that teachers should be mindful of potentially using racially or culturally stereotypical understandings in developing such learning activities. Meaningfully incorporating students' racial and cultural experiences into learning experiences requires a deep knowledge of the unique contexts, backgrounds, and lived experiences of the students within their school communities. For example, communities of color are dynamic and heterogeneous in many ways. It should not be assumed that all Black students love Hip-Hop or that the experiences of all Asian students will have the same racialized experiences or cultural understandings.

Questions for Consideration

1

Meaningful incorporation of racially and culturally affirming learning experiences for students requires educators to know their students and families. Again, it is important to be mindful of making racialized assumptions regarding the lived experiences of students and families when attempting to incorporate racially relevant topics across the curriculum.

- a. What are your current practices for learning about students' lived experiences? Consider how you might design and foster opportunities to build trust and learn about how you might leverage students' funds of knowledge and cultural gifts in planning to integrate racial topics in the curriculum.

Teaching Racial Topics in Science, Technology, Engineering, and Math

Like disciplinary logics in mathematics, science classrooms (e.g., biology, environmental science, chemistry, etc.) can suffer from an inclination toward objectivity and neutrality (Ash & Wiggan, 2018). Yet, we also know that racism has played a foundational role in scientific developments for centuries, often leading to disastrous impacts for people of color. One does not have to look far in the historical record to uncover the horrors of eugenics movements, the impacts of environmental racism, or the unethical use of Black bodies in scientific research, to name a few (Wiggan et al., 2023).

In response, critical scholars have proposed critical science pedagogies as a mechanism through which science education can serve an emancipatory purpose in service of collectively developing a critical consciousness that can disrupt dominant narratives in society (Ash & Wiggan, 2018). This form of teaching emphasizes the political nature of science and exposes students to the possibilities of science as a tool for liberation.

One method of developing students' critical consciousness around racial topics in science

classrooms could involve explorations of the impacts of environmental racism within our communities. The legacy of environmental racism is well documented (Henderson & Wells, 2021) and provides an ideal example of the intersection of race, racism, and environmental science. For example, educators often tackle issues of the importance of environmental stewardship through lessons on climate change, deforestation, pollution, etc. A critical race science pedagogical approach would extend these lessons to consider the racialized impacts of these issues and how their origins are often related to systemically racist policies and practices.

Teachers could develop an environmental science unit using photovoice as a method that allows students to document and explore their understandings of climate change (Herrick et al., 2022), while engaging in critical conversations around the intersection of environmental racism and climate change. Educators might foster opportunities for students to explore Indigenous ways of knowing and how land-based education might provide opportunities to challenge dominant narratives within their given contexts (Datta, 2018). These conversations and artifacts from such a unit might then be used in tandem with English/Language Arts and Social Studies courses to develop persuasive essays, poems, or informative letters to policymakers aimed at influencing local, state, and national environmental justice policies.

Questions for Consideration

1

Reflect on your assumptions of STEM as a field and how these assumptions influence your teaching practices. How do your understandings of race and racism influence the ways that you teach?

2

Consider natural areas of your curriculum where you might meaningfully integrate histories and present-day realities of race and racism in your practices. Meaningful integration does not have to begin with a wholesale reform of your curriculum or teaching practices. Recognize where you are and build from there. Identify one area where you might shift your practice and reflect on how you might go about making that change. Who do you want to be involved with and in what ways? What additional learning and development might you need to engage in this work?

Like many strategies for improving educational practice, much of the work in meaningfully integrating racial topics across the curriculum involves critical self-reflection and the interrogation of racialized assumptions in teaching and learning. While this brief focused on ways to integrate racial topics in STEM education, similar opportunities to enhance racially-just teaching practices exist in English/Language Arts and Social Studies contexts, in addition to Music, Art, and other learning contexts. Through engaging in critical self-reflection of their role and responsibility in creating the conditions for racially affirming educational environments through their content areas of expertise, all educators can play a meaningful role in advancing educational equity and justice for students of color in our schools.

References

- Aguirre, J., Turner, E., Bartell, T. G., Kalinec-Craig, C., Foote, M. Q., Roth McDuffie, A., & Drake, C. (2013). Making connections in practice: How prospective elementary teachers connect to children's mathematical thinking and community funds of knowledge in mathematics instruction. *Journal of Teacher Education*, 64(2), 178-192.
- Aguirre, J., Herbel-Eisenmann, B., Celedon-Pattichis, S., Civil, M., Wilkerson, T., Stephan, M., ... & Clements, D. H. (2017). Equity within mathematics education research as a political act: Moving from choice to intentional collective professional responsibility. *Journal for Research in Mathematics Education*, 48(2), 124-147.
- Anderson, C. (2016). *White rage: The unspoken truth of our racial divide*. Bloomsbury Publishing USA.
- Ash, A., & Wiggan, G. (2018). Race, multiculturalisms and the role of science in teaching diversity: Towards a critical post-modern science pedagogy. *Multicultural Education Review*, 10(2), 94-120.
- Datta, R. K. (2018). Rethinking environmental science education from Indigenous knowledge perspectives: An experience with a Dene First Nation community. *Environmental Education Research*, 24(1), 50-66.
- Epstein, T., & Gist, C. (2015). Teaching racial literacy in secondary humanities classrooms: Challenging adolescents' of color concepts of race and racism. *Race Ethnicity and Education*, 18(1), 40-60.
- Henderson, S., & Wells, R. (2021). Environmental racism and the contamination of black lives: a literature review. *Journal of African American Studies*, 25, 134-151.
- Herrick, I. R., Lawson, M. A., & Matewos, A. M. (2022). Through the eyes of a child: Exploring and engaging elementary students' climate conceptions through photovoice. *Educational and Developmental Psychologist*, 39(1), 100-115.
- Joseph, N. M., Hailu, M. F., & Matthews, J. S. (2019). Normalizing Black girls' humanity in mathematics classrooms. *Harvard Educational Review*, 89(1), 132-155.
- Kalinec-Craig, C. A. (2023). Uncovering the mathematical challenges and connections when using mariachi music as a representation for teaching equivalent fractions. *Journal of Mathematics Education*, 4-21.
- King, L. J., & Woodson, A. N. (2017). Baskets of cotton and birthday cakes: Teaching slavery in social studies classrooms. *Social Studies Education Review*, 6(1), 1-18.
- Leonard, J. (2018). *Culturally specific pedagogy in the mathematics classroom: Strategies for teachers and students*. Routledge.
- Nasir, N. I. S. (2002). Identity, goals, and learning: *Mathematics in cultural practice*. *Mathematical thinking and learning*, 4(2-3), 213-247.
- Sachs, J. & Young, J. (2023) America's censored classrooms. <https://pen.org/report/americas-censored-classrooms-2023/>
- Wiggan, G., Pass, M. B., & Gadd, S. R. (2023). Critical race structuralism: The role of science education in teaching social justice issues in urban education and pre-service teacher education programs. *Urban Education*, 58(9), 2209-2238.

Woo, A., Lee, S., Tuma, A. P., Kaufman, J. H., Lawrence, R. A., & Reed, N. (2023). Walking on Eggshells-- Teachers' Responses to Classroom Limitations on Race-or Gender-Related Topics: Findings from the 2022 American Instructional Resources Survey. Research Report. RR-A134-16. RAND Corporation.

Shaun Harper and John Pascarella, Project Directors

Shaun Harper, Ph.D.

Founder and Executive Director,

USC Race and Equity Center

Provost Professor of Education and Business

Clifford and Betty Allen Chair in Urban Leadership

sharper@usc.edu

John Pascarella, Ph.D.

Chief Academic Officer,

USC Race and Equity Center

Professor of Clinical Education

pascarel@usc.edu

ABOUT THE USC RACE AND EQUITY CENTER

The University of Southern California is home to a dynamic research and organizational improvement center that helps professionals in educational institutions, corporations, and other contexts strategically develop and achieve equity goals, better understand and correct climate problems, avoid and recover from racial crises, and engineer sustainable cultures of inclusion and respect. Evidence, as well as scalable and adaptable models of success, inform our rigorous approach. Grants from the Ford, Lumina, Bill and Melinda Gates, W.K. Kellogg, Kresge, and Open Society Foundations have funded the Center's research and partnerships.

The Center is home to the USC Equity Leadership Academies (a professional learning and organizational change series for K-12 schools and districts), USC Equity Institutes (a professional learning and organizational change series for higher education institutions), the National Assessment of Collegiate Campus Climates (a quantitative survey), PRISM (a racial equity employee recruitment tech tool for higher education), and the Alliance for Equity, Diversity, and Inclusion in Business.