

**BLACKNESS AND WHITENESS IN APPALACHIAN MATHEMATICS CLASSROOMS**

Sean P. Freeland  
West Virginia University  
sean.freeland@hsc.wvu.edu

Keywords: Equity and Diversity, Marginalized communities, Rural education, Social Justice

The inequitable experiences and outcomes for Black learners of mathematics is well documented in urban areas (Martin, 2012). There is less work on the construction of race in education in rural areas, specifically Appalachia. Because race intersects with multiple economic and social structures, it is necessary to attend to context when studying race in mathematics education (Ladson-Billings, 2005; Patel, 2016). This poster makes the case for a study of learning mathematics while Black in Appalachia and provides initial findings of research on Black students and White teachers of mathematics in West Virginia.

Critical race theory in education is based in the idea that racism is endemic to American society and its educational system. Also, American society was formed in and still continues to function based on property rights (Ladson-Billings & Tate, 1995). In Appalachia, property and economics is the focus of discourse in the region. Because this work in economics is centered on White rurality, racial issues are made invisible (Anglin, 2002). Race is also ignored in rural education as schools are sites of normative White cultures that lead to structural racism (Groenke & Nespor, 2010).

The theory also operates under the assumption that Whiteness is a form of property. However, this functions differently in Appalachia as White people in the region have been essentialized as “white trash” (Smith, 2004). This leads to a presumed “White innocence” in Appalachians and substitutes class issues for race issues making them invisible (Scott, 2009). As the vast majority of teachers in West Virginia are White, this has ramifications for the education of Black students in Appalachia. Particularly with labor strife rampant in Appalachian education, Black students are a “neglected minority within a neglected minority” (Cabell, 1985, p. 3). Critical whiteness studies are centered in the hyper-segregation in schools and explore the race consciousness of White teachers (Jupp, Berry, & Lensmire, 2016) Using critical Whiteness studies can provide a nuanced look at White teachers of Black students.

Critical race theory and Critical Whiteness studies provide insight into the way mathematics education functions in racialized ways. Mathematics is often viewed as a neutral, universal field free from politics (Gutierrez, 2013) and can serve as a “gatekeeper” to upper levels of mathematics and higher education (Moses & Cobb, 2002). STEM education is also a form of property and capital in American society (Bullock, 2017). Mathematics education is a White institutional space (Battey & Leyva, 2016), so it is essential to use these frameworks to study students and teachers in Appalachian mathematics classrooms.

This poster provides a framework for the study of Black learners and White teachers of mathematics in Appalachia. It also provides preliminary findings in a study of Black students’ experiences learning mathematics and White teachers’ perspectives on teaching students of color in the region. There is ample documentation of how race functions in urban mathematics classrooms. This work is designed to illuminate racist interactions and structures that oppress Black people in mathematics education in Appalachia which can lead to the disruption and dismantling of racism in rural education.

## References

- Anglin, M. K. (2002). Lessons from Appalachia in the 20<sup>th</sup> century: Poverty, power and the “grassroots.” *American Anthropologist*, 104(2), 565-582.
- Battey, D., & Leyva, L. A. (2016). A framework for understanding whiteness in mathematics education. *Journal of Urban Mathematics Education*, 9(2), 49-80.
- Bullock, E. C. (2017). Only STEM can save us? Examining race, place, and STEM education as property. *Educational Studies*, 53(6), 628-641.
- Cabell, E. J. (1985). Black invisibility and racism in Appalachia: An informal survey. In Turner, W. H. & Cabell, E. J. (Eds.), *Blacks in Appalachia* (pp. 3-10). University Press of Kentucky.
- Groenke, S. L. & Nespor, J. (2010). “The drama of their daily lives”: Racist language and struggles over the local in a rural high school. In K. A. Schafft & A. Y. Jackson (Eds.), *Rural education for the twenty-first century: Identity, place, and community in a globalizing world* (pp. 51-71). The Pennsylvania State University Press.
- Gutierrez, R. (2013). Why (urban) mathematics teachers need political knowledge. *Journal of Urban Mathematics Education*, 6(2), 7-19.
- Jupp, J. C., Berry, T. R., & Lensmire, T. J. (2016). Second-wave white teacher identity studies: A review of white teacher identity literatures from 2004 through 2014. *Review of Educational Research*, 86(4), 1151-1191.
- Ladson-Billings, G. (2005). The evolving role of critical race theory in educational scholarship. *Race Ethnicity and Education*, 8(1), 115-119.
- Ladson-Billings, G., & Tate, W. F. (1995). Toward a critical race theory of education. *Teachers College Record*, 97(1), 47-68.
- Martin, D. B. (2012). Learning mathematics while black. *Educational Foundations*, 26(1-2), 47-66.
- Moses, R., & Cobb, C. E. (2002). *Radical equations: Civil rights from Mississippi to the Algebra Project*. Beacon Press.
- Patel, L. (2016). *Decolonizing educational research: From ownership to autonomy*. Routledge.
- Scott, R. R. (2009). Appalachia and the construction of whiteness in the United States. *Sociology Compass*, 3(5), 803-810.
- Smith, B. E. (2004). De-gradations of whiteness: Appalachia and the complexities of race. *Journal of Appalachian Studies*, 10(1/2), 38-57.