

## AN HISTORICAL EXPLORATION OF ACHIEVEMENT GAP RHETORIC: A CRITICAL DISCOURSE ANALYSIS OF FEDERAL EDUCATION LEGISLATION

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*This article presents initial findings of how the ideas of achievement and the achievement gap are presenting throughout U.S. federal education legislation. Through the lens of Critical Race Theory and governmentality, I highlight the ways in which achievement is used in legislation as well as how that connects to discussions of race and equity in mathematics education. The discussion links to research on how current trends in language use perpetuate policy as performance as well as anti-Black sentiments within U.S. mathematics education. In conclusion, I join the calls for altering conceptions of what achievement means beyond the performance on assessments.*

Keywords: equity & diversity; marginalized communities; policy matters; social justice

Mathematics education holds a unique position within the curriculum of K-12 education in the United States (U.S.) given that the National Assessment of Educational Progress (NAEP) has legislated periodic testing since 1969. This assessment requirement, together with legislated concern about the existence of achievement gaps in education, focuses attention on the disaggregated data of student test scores broken up by race. More specifically, the continued existence of a test score gap between Black and white students raises questions about how racism plays a role in legislation and what the focus of that legislation should be if not the gap between test scores.

The continued inability for Black students to obtain a proficient status on mathematics assessments (U.S. Department of Education, 2019) is manifested in mathematics classrooms through the master-narrative that racialized students, and Black students in particular, are unable to achieve in mathematics (Martin, 2009; Nasir, Atukpawu, O’Conner, Davis, Wischnia, & Tsang; 2009). This narrative exists within ideologies such as the myth that “mathematics is a white male subject” (Gutiérrez, 2008; Stinson, 2013) that lead to students having racialized experiences, where “the socially constructed meaning for race comes to be a deciding factor in who gets to do mathematics and who does not” (Martin, 2006, p. 223).

As a way to illuminate the entrenchment of racism within mathematics education teaching and practice, I focus on how the messages of the master-narrative and racialized experiences exist within legislation in the U.S. To that end, this paper aims to explore the beginnings of the achievement gap conversation through an historical exploration of U.S. federal education legislation in an attempt to question if a focus on the achievement gap actually maintains ideas of racial neutrality within policy, when really there should be a more pointed focus on race as it impacts education (Bonilla-Silva, 2014; Martin, 2003). In the end, this research shows that the continued removal of references to race, racism, and racialization as they relate to achievement is a continuation of an unequal and highly stratified education system based on race.

### Theoretical Framework

There are two theories that I rely on to provide grounding for my research; they are Critical Race Theory (CRT) and governmentality. The importance of CRT stems from the ultimate goal to eliminate racial oppression while simultaneously working to rid society of all forms of subordination (Gutiérrez, 2013; Ladson-Billings & Tate, 1995; Solórzano, 1997, 1998; Tate, 1997; Yosso, Parker, Solórzano, & Lynn, 2004). CRT research in mathematics education uses the five elements of CRT to

acknowledge how practices such as tracking and intelligence testing actively work against students of color (Berry, 2008). The second part of my theoretical framework is governmentality, which works with CRT to engage with policy documents and to uncover how the discourses of race have, in Foucault’s (1991) terminology, disciplined our way of thinking about particular topics. In essence CRT and governmentality together seek to find, acknowledge, and name the ways in which power functions within the actions of mathematics classes in relation to education legislation.

### Methodology

The methodology that I rely on to guide my analysis is historical ontology which allows for both a historical and philosophical analysis simultaneously. Essentially, historical ontology uses history, temporally, in an effort to understand how particular vocabulary can be used to limit how an idea is understood in the present (Hacking, 2002). Thus, looking at how a specific word is used in a particular time and place, and following its trajectory through time, it is possible to see how present ideas around that same word are constrained by the ways in which the word was used in the past. In this way, historical ontology works together with both CRT and governmentality to address issues of power through the use of vocabulary within legislation.

### Results

In order to historically analyze vocabulary around achievement and the achievement gap, I used the historical record of U.S. federal education legislation starting with the Elementary and Secondary Education Act of 1965 (ESEA) including all of the subsequent reauthorizations of that Act. This includes the well-known reauthorizations such as No Child Left Behind (NCLB), as well as the Reagan era reauthorization which occurred within the Omnibus Budget Reconciliation Act of 1981. The method used to conduct this research is Critical Discourse Analysis (CDA) which provides a way to both search for and analyze underlying ideologies present within educational discourse (Fairclough, 2010). CDA allows for policy analysis to look beyond explicit rhetoric that exists within the policy documents to determine if present legislation is maintaining previous trends (Atkins & Wallace, 2012).

#### Achievement in the Legislation

As a way of exploring how achievement appears within the legislation, I searched through all of the reauthorizations for the words achievement and achievement gap. Table 3 presents the breakdown of those searches, together with a representation of how many sections address both the achievement gap and contain racial terminology to see if and where these ideas appear together.

**Table 1: Individual Uses and Section References to Achievement and the Achievement Gap**

	1965	1966	1968	1970	1972	1974	1976	1978	1981	1983	1988	1994	2002	2015	Total
Achievement (all uses)	3	1	1	5	9	10	1	33	1	0	65	110	535	215	989
Achievement gap, phrase	0	0	0	0	0	0	0	0	0	0	0	4	6	2	12
Achievement gap, sections incl. racial terminology	0	0	0	0	0	0	0	0	0	0	0	2+1	4+1	0	6+2
<i>Note. Full sections that include racial terminology relating to one theme are counted as “1” and sections that include racial terminology relating to more than one theme are counted as “+1” to indicate any partial sections referring to a particular theme.</i>															

The word achievement on its own becomes more common in recent legislation, although it is present throughout most of the reauthorizations. A notable shift seems to have occurred with the 1978 reauthorization, likely due to the introduction of the NAEP examination to the legislation. Clearly with language referencing student test scores and discussing the level of achievement of

students, the introduction of a new federal testing regime would account for the increased use of the word achievement in the 1978 reauthorization. The other interesting shift to note is the almost quintupling of the use of the word achievement from 1994 to 2002. Arguably, this increase could be largely due to the stated purpose of NCLB as desiring to pay closer attention to the achievement gap. However, this does not explain why there is such a drastic decrease immediately following NCLB where the legislation maintains a similar stated purpose.

Despite a proliferation of research after NCLB extremely concerned about testing requirements and achievement gaps, the phrase achievement gap originates legislatively in 1994.

Thus, according to historical ontology, the idea of the achievement gap presented in IASA feeds into the understanding of the achievement gap presented in NCLB. In addition, it is interesting to note how the use of achievement gap follows a pattern similar to the term achievement, in that the peak usage is in the 2002 reauthorization, followed by a drastic decrease in 2015.

The third and final line of Table 3 represents a thematic analysis of sections within the legislation that contain racial terminology pulled from my dissertation (Hawks, 2019). This data was created by first searching for racial terminology, then thematically analyzing each section. For this data the theme of achievement gap was used for all sections of the legislation that indicated that a funded program was meant to focus on either eliminating the achievement gap or increasing minority student achievement. One of my assumptions when I created this category was that testing requirements and achievement gap sections would have a significant correlation with racial terminology given concerns about racial testing disparities in research (Meier & Wood; 2004; Rothstein, 2004). However, as Table 3 shows, there are very few connections between the use of racial terminology and references to achievement within the legislation. In fact, comparing the 6+2 sections that use both racial and achievement gap terminology with the instances of the phrase achievement gap shows a lot of overlap between the two measures. This trend is especially true for NCLB where the only mentions of the achievement gap that are not also linked with racial terminology are two sections which set aside funding to present recognition and awards to schools that have made substantial gains in closing the achievement gap between student test scores. The overlap lends credence to Hilliard's (2003) conclusion that references to the achievement gap are implicitly referencing the *racial* achievement gap.

## Discussion

One of the most intriguing elements of the achievement gap rhetoric is the simultaneous focus, and yet complete ignorance, of how race plays a factor in gauging achievement. For example, in a section of NCLB a definition of the achievement gap is proffered which identifies that one of the gaps of interest is the one between racial and nonracial students (P.L. 107-110, sec. 1503(d)(3)). This specific use of the term nonracial in relation to a definition of the achievement gap actually seems to suggest a self-correction within the legislation, simultaneously acknowledging how race plays a factor in the creation of the achievement gap while also indicating that there are those who do not fit within a "race" per se. The self-corrective nature of this turn of phrase and use of the term nonracial could be a further indicator of the anti-Black nature of U.S. education as theorized by Danny Martin (2019).

The biggest problem with race falling to the background of the overall legislation is that when we begin to talk about the achievement gap and how that impacts racialized students, we are unable to engage with how racism, and racialization play roles in how those scores have come into being. Essentially, highlighting the racial achievement gap puts a spot light on disaggregated student test scores which then reifies the master-narrative around which students are able, or capable, of achieving well in mathematics. Thus as mathematics educators responsible for student performance in the subject most often tested and highlighted in achievement gap rhetoric, by avoiding race in our research and teaching we inadvertently, or intentionally, are complicit in maintaining the structures

that uphold racist ideologies. In a similar vein, Schick (2011) argues that moving from specific language around ensuring that racialized students do well to language around all students doing well, shifts the focus of policy away from the importance of considering how racialization impacts racialized students.

In the end, mathematics education and the achievement gap are inextricably linked through both rhetoric and practice and what this analysis shows is that attempts to understand discrepancies in educational attainment and achievement is completely without a race analysis of any kind. This is partially because the ways in which race and achievement are used together, or linked, in the legislation are so limited as to be almost meaningless. For example, the main stream mathematics education literature that strives to discuss student test scores, merely uses race as a category to assist in the disaggregation of data as a comparative measure (Harwell et al., 2007; Post et al., 2008; Price, 2010; Stiefle, Schwartz, & Chellman, 2007; Wei, 2012). This practice is also used in the presentation of scores for *The Nation's Report Card*, which is also the basis for claims of the existence of an achievement gap between Black and White student test scores in mathematics. At a very basic level, these practices ignore, or attempt to simplify, the extremely complex nature of the idea of "race" to a categorical comparison between groups of students. What occurs because of this ignorance or inability to engage with the realities of racism and racialization in K-12 schooling, is that the master-narrative is reified into existence and pseudo-scientific claims of hierarchies of intelligence are able to flourish unacknowledged in the background. Therefore, the danger of mathematics education policies and federal education legislation systematically removing references to race as they relate to achievement is the continuation of an unequal K-12 education system that is highly stratified based on race.

### Conclusion

This conclusion suggests that if future legislation maintains the goal of eliminating the achievement gap(s) then it must be reframed to not only focus on the children of low-income families, but also the children of racialized families. Thus, if the goal of federal education legislation is actually to reduce or eliminate the achievement gap(s) there needs to be a stronger and more purposeful focus on issues that are impacting racialized students. Including the ways in which the legislation and policies have a tendency to refer to achievement as an individual characteristic rather than acknowledging the system of policies and assessments that define how achievement is to be understood. This includes, but is not limited to, acknowledging the historical ways in which racialized people have been systematically devalued, how that process continues in K-12 schooling today through tracking and testing requirements, and the importance of noting how the process of racialization treats students differently on both an individual and systemic level. Without these, and other measures to actively engage with how race impacts schooling, the systems that maintain the existence of the achievement gap(s) will continue unfettered. In conclusion, as Spencer (2009) suggests, a way forward is for legislation to redefine what it means to achieve, by renegotiating the focus from achievement to success, which includes the role of resistance as a response to the limitations of schooling.

### References

- Atkins, L. & Wallace, S. (2012). *Qualitative research in education*. Los Angeles, CA: Sage.
- Berry, R. Q., III (2008). Access to upper-level mathematics: The stories of successful African American middle school boys. *Journal for Research in Mathematics Education*, 39(5), 464-488.
- Bonilla-Silva, E. (2014). *Racism without racists: Color-blind racism and the persistence of racial inequality in America* (4th ed.). Lanham, MD: Rowman & Littlefield Publishers, Inc.
- Elementary and Secondary Education Act of 1965 (ESEA), Pub. L. 89-10, 79 Stat.
- Fairclough, N. (2010). *Critical discourse analysis: The critical study of language* (2<sup>nd</sup> ed.). Routledge.

- Foucault, M. (1991). Governmentality. In G. Burchell, C. Gordon, & P. Miller (Eds.), *The Foucault effect: studies in governmentality* (pp. 87-104). Chicago, IL: The University of Chicago Press.
- Gutiérrez, R. (2008). A “gap-gazing” fetish in mathematics education? Problematizing research on the achievement gap. *Journal for Research in Mathematics Education*, 39(4), 357-364.
- Gutiérrez, R. (2013). The sociopolitical turn in mathematics education. *The Mathematics Teacher, Equity Special Issue*, 44(1), 37-68.
- Gutiérrez, R. & Dixon-Román, E. (2011). Beyond gap gazing: How can thinking about education comprehensively help us (re)envision mathematics education? In B. Atweh, M. Graven, W. Secada, & P. Valero (Eds.). *Mapping equity and quality in mathematics education* (pp. 21-34). Dordrecht: Springer.
- Hacking, I. (2002). *Historical ontology*. Cambridge, MA: Harvard University Press.
- Harwell, M. R., Post, T. R., Maeda, Y., Davis, J. D., Cutler, A. L., Andersen, E., & Kahan, J. A. (2007). Standards-based mathematics curricula and secondary students’ performance on standardized achievement tests. *Journal for Research in Mathematics Education*, 38(1), 71-101.
- Hawks, M. (2019). *A study of race and equity in U.S. mathematics education policy*. [Doctoral dissertation, University of Alberta]. [doi.org/10.7939/r3-enbb-8w92](https://doi.org/10.7939/r3-enbb-8w92)
- Hilliard, A. G., III (2003). No mystery: Closing the achievement gap between Africans and excellence. In T. Perry, C. Steele, & A. G. Hilliard, III (Eds.), *Young, gifted, and Black: Promoting high achievement among African-American students* (pp. 131-165). Boston, MA: Beacon Press.
- Ladson-Billings, G., & Tate, W. F. (1995). Toward a critical race theory of education. *Teachers College Record*, 97(1), 47-68.
- Martin, D. B. (2003). Hidden assumptions and unaddressed questions in *mathematics for all* rhetoric. *The Mathematics Educator*, 13(2), 7-21.
- Martin, D. B. (2006). Mathematics learning and participation as racialized forms of experience: African American parents speak on the struggle for mathematics literacy. *Mathematical Thinking and Learning*, 8(3), 197-229.
- Martin, D. B. (Ed.) (2009). *Mathematics teaching, learning, and liberation in the lives of black children*. New York: Routledge.
- Martin, D. B. (2019). Equity, inclusion, and antiblackness in mathematics education. *Race Ethnicity and Education*, 22(4), 4595-478. Doi: 10.1080/13613324.2019.1592833
- Meier, D. & Wood, G. (Eds.) (2004). *Many children left behind: How the No Child Left Behind Act is damaging our children and our schools*. Boston, MA: Beacon Press.
- Nasir, N. S., Atukpawu, G., O’Connor, K., Davis, M., Wischnia, S., & Tsang, J. (2009). Wrestling with the legacy of stereotypes: Being African American in math class. In D. B. Martin (Ed.), *Mathematics teaching, learning, and liberation in the lives of black children* (pp. 231—48). New York: Routledge.
- No Child Left Behind Act of 2001 (NCLB), Pub. L. 107-110, 115 Stat. 1425, codified as amended at 107 U.S.C.
- Omnibus Budget Reconciliation Act of 1981, Pub. L. 97-35, 95 Stat. 357, codified as amended at 97 U.S.C.
- Post, T. R., Harwell, M. R., Davis, J. D., Maeda, Y., Cutler, A., Andersen, E., Kahan, J. A. & Norman, K. W. (2008). Standards-based mathematics curricula and middle-grades students’ performance on standardized achievement tests. *Journal for Research in Mathematics Education*, 39(2), 184-212.
- Rothstein, R., Jacobsen, R. & Wilder, T. (2008). *Grading education: Getting accountability right*. Washington DC and New York: Economic Policy Institute and Teachers College Press. Published simultaneously by EPI and TCP
- Schick, C. (2011). Policy as performance: Tracing the rituals of racism. *Review of Education, Pedagogy and Cultural Studies*, 33(5), 465-483.
- Solórzano, D. (1997). Images and words that wound: Critical race theory, racial stereotyping, and teacher education. *Teacher Education Quarterly*, 24(3), 5–19.
- Solórzano, D. (1998). Critical race theory, racial and gender microaggressions, and the experiences of Chicana and Chicano scholars. *International Journal of Qualitative Studies in Education*, 11(1), 121–136. DOI: 10.1080/095183998236926
- Spencer, J. A. (2009). Identity at the crossroads: Understanding the practices and forces that shape African American success and struggle in mathematics. In D. B. Martin (Ed.). *Mathematics teaching, learning, and liberation in the lives of black children* (pp. 200-230). New York: Routledge.
- Stinson, D. W. (2013). Negotiating the ‘White male math myth’: African American male students and success in school mathematics. *Journal for Research in Mathematics Education*, 44(1), 69-99.
- Tate, W. F., IV (1997). Critical race theory and education: history, theory, and implications. *Review of Research in Education*, 22, 195-247.

- U.S. Department of Education (2019). NAEP mathematics assessment: Highlights. Retrieved from: <https://www.nationsreportcard.gov/highlights/mathematics/2019/>
- Wei, X. (2012). Are more stringent NCLB state accountability systems associated with better students outcomes? An analysis of NAEP results across states. *Educational Policy*, 26(2), 268-308. doi: 10.1177/0895904810386588
- Yosso, T. J., Parker, L., Solórzano, D. G., & Lynn, M. (2004). From Jim Crow to Affirmative Action and back again: A critical race discussion of racialized rationales and access to higher education. *Review of Research in Education*, 28, 1-25.