

Racial Equity and Justice in Teaching and Teacher Education: Progress, Tensions, and Open Questions

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Executive Summary

Marginalization of students who are Black, Indigenous, and other People of Color (BIPOC) in U.S. schools has been well-documented. For decades, research on teaching and teacher education has sought to understand and counter this marginalization, primarily by opening access to academic content and by implementing culturally rooted, asset-based frameworks.

In this paper, I review the past 10 to 15 years of research on teaching and teacher education for racial equity and racial justice. The review covers general education research, as well as research in particular disciplines (literacy, social studies, science, and mathematics).

Findings reveal important areas of progress: (a) increasing attention to the sociopolitical context of teaching and teacher education, including the use of race-specific critical theories and perspectives; and (b) the emergence of new goals and frameworks related to the education of BIPOC students, including humanization and sustaining cultural practices and communities. At the same time, tensions persist regarding the goals of racial equity/justice-focused teacher preparation. Further, the field continues to seek a robust evidence base from which to gauge the efficacy of both teacher education programs and classroom-level efforts to foster racial equity and racial justice.

Based on this review, I conclude with four recommendations for the field related to research and practice, which hold implications for policy and funding priorities:

1. Develop robust measures of racially equitable and just teaching.
2. Explicitly name and focus on race and specific types of racism.
3. Build infrastructure for race-focused teacher education.
4. Clarify definitions and goals for “racial equity” and “racial justice.”

Keywords: Race, racism, equity, justice, teaching, teacher education.

Racial Equity and Justice in Teaching and Teacher Education: Progress, Tensions, and Open Questions

Racism in the United States is a five centuries-long historical fact and modern reality (Goldberg, 1993; Kendi, 2016). For much of that time, teachers and the institutions that prepare them have been complicit in racist projects: Indigenous erasure perpetrated by federal boarding schools (Spack, 2002), the educational exclusion of Black people during slavery and post-Reconstruction through Jim Crow (Anderson, 2015), and so on. At the same time, history has also seen moments where—through the leadership of BIPOC communities—the education system has been a site of anti-racist resistance: community-based advocacy by Black educators pre-*Brown* (Walker, 2013); efforts by Mexican American families to gain access to education in segregated school systems (Moll, 2010); programs and schools with a mission to protect and proliferate Native languages and cultural practices (McCarty, 2018); and lobbying for bilingual education to counter anti-Asian and anti-Latinx English-only policies (Hakuta, 2011).

Amidst this devastating and sometimes hopeful history of BIPOC children and families in U.S. schools, education research continues to play an important role. Racism in education is a systemic, multi-level phenomenon, but two key parts of the system are particularly impactful: teaching and teacher education. Teachers are the most direct and frequent way that BIPOC students interact with the U.S. education system. In turn, how teachers teach bears significantly on whether anti-Blackness, color-evasiveness, and other forms of racism are attenuated or amplified. Relatedly, teacher education programs—and the ways they prepare pre-service teachers (PSTs) around issues of race and racism—play an important role in shaping BIPOC students' educational experiences and trajectories.

The purpose of this paper is to identify broad trends and debates over the last 10 to 15 years in the research literatures on teaching and teacher education for racial equity and justice. I focus primarily on U.S.-based research conducted across four major disciplines—literacy, social studies, mathematics, and science—and on pre-service, university-based teacher education. This is not intended to be a systematic review of these literatures. Rather, the goals here are to: (a) summarize recent progress in the field; (b) distill points of consensus and outstanding tensions; and (c) identify open questions the field has yet to resolve. In light of these goals, reporting findings from individual empirical studies was generally beyond the scope of this paper. As such, in this paper I leverage insights from review articles and handbook chapters where possible.

A Note on Focus and Terminology

This paper focuses on research related to the topic of racial equity and justice in teaching and teacher education. However, the decision to focus on race should not be construed as minimizing marginalization related to other social markers, which of course do intersect with race. It is also important to note that definitions of terms like “equity” and “justice” cannot be assumed. Is “equity” the same as “justice,” or are these overlapping but distinct ideas? How does “anti-racism” relate to concepts like “racial equity” and “racial justice”? I do not attempt to resolve these questions or settle on single definitions. Indeed, I found that few articles in the literature defined these terms, let alone acknowledged the multiplicity of available definitions. My approach here was to honor each article’s own framing as being pertinent to equity and justice issues for BIPOC students. I did not impose my own definitions or extant theoretical perspectives on these terms to evaluate whether a given piece of scholarship “qualified” for the review. For that reason and for the purpose of this review, I use the broad phrasing “racial equity and justice” throughout the paper.

Structure of the Paper

The paper begins with a discussion of the method used to conduct the review. This is followed by a brief summary of research on learning as a cultural and racialized process. Although the focus of the paper is teaching and teacher education, research on the learning of BIPOC students has proven influential in both domains of research. Next, I synthesize major trends in the teaching and teacher education literatures. I organize both of these sections as follows: (a) a brief summary of the state-of-the-art circa 2007; (b) major conceptual and empirical developments in the period since; and (c) outstanding tensions and open questions in the field. Finally, I conclude by offering recommendations for ways the field might proceed with respect to research and practice, which hold implications for policy and funding priorities.

Methods

The review presented here was conducted in two parts. First, in order to establish temporal bookends for the review, I began by identifying relevant chapters in past handbooks and in more current handbooks. These included handbooks on teaching and teacher education in general, as well as discipline-specific handbooks. Typically, neither past nor more current handbook chapters were specific to racial equity or racial justice. For chapters with titles and abstracts that mentioned BIPOC students and that involved terms like “equity,” “justice,” and “diversity,” however, I deemed these readings relevant and reviewed them in detail. From the period circa 2007, I reviewed these handbooks:

- *Handbook of Research on Teacher Education: Enduring Questions in Changing Contexts* (Cochran-Smith, Feiman-Nemser, McIntyre, & Demers, 2008)
- *Handbook of Reading Research* (Kamil, Pearson, Moje, & Afflerbach, 2010)
- *Handbook of Research in Social Studies Education* (Levstik & Tyson, 2008)
- *Handbook of Research on Mathematics Teaching and Learning* (Lester, 2007)
- *Handbook of Research on Science Education* (Abell & Lederman, 2007)

For those chapters that reviewed empirical studies, I catalogued broad trends in findings that indicated the state-of-the-art at the time. In particular, though, past handbook chapters illuminated field-wide debates and recommendations for future research, which helped capture how prominent scholars then envisioned the next 10 to 15 years of work in the field. With respect to handbooks published most recently to 2020, I also reviewed the following:

- *Handbook of Research on Teaching* (Gitomer & Bell, 2016)
- *The SAGE Handbook of Research on Teacher Education* (Clandinin & Husu, 2017)
- *Handbook of Urban Education* (Milner & Lomotey, 2014)
- *Compendium for Research in Mathematics Education* (Cai, 2017)
- *Handbook of Research on Science Education* (Lederman & Abell, 2014)

The second part of the review process involved hand searches of key journals for relevant articles. As the goal of this review was not an exhaustive survey, I did not use research databases (e.g., ERIC). Instead, I focused on the field's most-cited review journals and disciplinary journals. A limitation in this approach is that it risks reproducing elitism by marginalizing valuable contributions published in other journals. However, reviewing this subset of journals was sufficient to illuminate broad trends in contemporary field-wide debates. I conducted a hand search of relevant articles from 2009 to 2019 for each of these journals: *Review of Educational Research*; *Review of Research in Education*; *Journal for Literacy Research*; *Reading Research Quarterly*; *Theory and Research in Social Education*; *Science Education*; *Journal for Research in Mathematics Education*; and the *Journal of Teacher Education*. It was often the case that reference lists in these articles also contained pertinent articles; I followed up on these and included them in the review when they added new dimensions to main trends and issues already identified.

Researcher Positionality

My own research focuses on race, racism, and processes of racialization in classroom spaces. Given that much of my work has taken place in the context of STEM education, I was more immediately familiar with issues and trends in mathematics and science education. However, in order to produce a more comprehensive review, I consulted with multiple colleagues with expertise in literacy and social studies, who provided additional recommendations that complemented my own searches of handbooks and journals in these disciplines. For example, a social studies education colleague pointed me to the book *Critical Race Theory Perspectives on Social Studies: The Profession, Policies, and Curriculum* (Ladson-Billings, 2003); while it fell outside the designated time period of the review, I opted to include it due to relevance.

In my time as a university-based teacher educator, professional developer, and former high school teacher, moreover, I have tried to support teachers in balancing theory with practice. For example, I have encouraged teachers to reflect on their racial biases and the racial ideologies that undergird them, while also linking that work to the development of teaching practices and classroom structures that might attenuate racial inequity. This dual emphasis is likely informed by the urgency I feel as a person of color committed to racial equity and justice for my own two children, as well as for other people's children of color. These prior experiences informed how I read the literature, posed questions, and offered recommendations in this review.

Brief Summary of Research on Learning as Cultural and Racialized Process

Teaching for racial equity and justice—and preparing teachers to teach for racial equity and justice—begins from an understanding of learning as a racialized process. This involves first acknowledging foundational work in the learning sciences that established a knowledge base on the cultural nature of learning (Gutiérrez & Rogoff, 2003; Nasir et al., 2020; National Academies of Sciences, Engineering, and Medicine, 2018). Rather than a purely “in the head” process of knowledge acquisition, cultural perspectives have conceptualized learning as involving people's dynamic participation in contextually mediated social practices (Lave, 1996). For example, Indigenous knowledge systems and perspectives on learning and development have emphasized the importance of *place*—specifically, land and waters—as central to the education of Indigenous students (Bang, 2016; Simpson, 2014).

This theoretical shift was especially important for BIPOC students. Historically, the essentialist idea of different racial groups having different “learning styles” has prevailed in U.S. education, where the learning styles of BIPOC students are typically seen as inferior (Gutiérrez & Rogoff, 2003). In contrast, cultural perspectives have emphasized heterogeneity in the ways that individuals participate in community practices, which opens more productive ways to think about designing learning environments for BIPOC students that leverage the diverse resources they bring (González et al., 2005). In debunking reductive, deficit conceptualizations of BIPOC learners, this body of work has fostered racial equity and justice.

Subsequent research has built on this foundation in several important ways. Alongside social practices, a key insight from the early situative and sociocultural work on learning was how learning is always co-extensive with becoming a certain type of person—in other words, “identity” (Lave & Wenger, 1991; Wenger, 1998). Acknowledging the importance of the relationship between learning and identity was significant because it put learning in a broader context: rather than mere information processors, learners were understood as human beings in pursuit of goals that also transcend the learning of academic content. For BIPOC learners, who have been consistently dehumanized by the U.S. education system, this was an especially important moment of recognition for the field (Nasir, 2002).

Although race and racism were not always explicit in this earlier work on learning, this has shifted in more recent work. For instance, scholars recognize that learning experiences themselves *are* racialized experiences, as students navigate racist structures of schooling and negotiate their racialized identities tied to learning academic content (Martin, 2006; Nasir, 2011). These racialized experiences are organized by racist ideologies and discourses that circulate in society, but that also permeate the classroom walls and mediate teaching-learning interactions (Shah & Leonardo, 2016;

Wortham, 2004). Critical discussions of racism take the local learning experiences of BIPOC students—which are too often erroneously understood as “neutral”—and link them to society’s long, damaging history of racist ideas (Kendi, 2016).

Overall, research on learning during the last two decades has made two major advances concerning racial equity and justice. First, in recognizing learning as both a cultural process and racialized process, the field has made headway in illuminating the distinctions between culture and race in learning settings. Certainly, honoring the cultural practices of BIPOC students and their home communities is a central priority. However, this is not exactly the same as accounting for the racist cultural practices to which they are subjected (Goldberg, 1993). Second, compared with earlier culture-focused theoretical perspectives, the field has taken up power more explicitly (Esmonde & Booker, 2016). As I will discuss, recent research on teaching and teacher education have also trended towards a more concerted focus on power, race, and racism.

Teaching for Racial Equity and Justice

The first part of this section focuses on the state of the field circa 2007. Major themes include: a pivot from “achievement gaps” to opportunities to learn; the proliferation of cultural asset-based frameworks; and the use of critical pedagogy. The next part focuses on where the field has gone since then. Broadly speaking, research on teaching for racial equity and justice has engaged more deeply with issues of power and ideology, as well as with theories of race and racism. In addition, key trends include: grappling with implementing asset-based and critical pedagogies; critiquing and extending those frameworks; and the emergence of “core practices” as an equity intervention. The section concludes with a discussion of ongoing tensions and open questions in the field.

Past Research: Opportunities to Learn, Cultural Assets, Critical Pedagogy

For decades, racial “achievement gaps” have driven much of the discourse and research on race and racism in education. While there has been broad consensus that such “gaps” are byproducts of disparities in opportunities to learn (Grossman et al., 2008; Lee & Luykx, 2007; Schoenfeld, 2002), scholars have also been critical of the limits of gap-focused studies and rhetoric in terms of how they propagate racist, deficit views of BIPOC students and communities (Gutiérrez, 2008). For instance, Ladson-Billings (2006) has long since called for a pivot from “achievement gaps” to the “education debt,” which better captures the historical, sociopolitical, economic, and moral conditions that precipitated racialized disparities in student performance. And yet, few studies link gap-focused analyses to histories of structural racism (Pang et al., 2011 is an exception). Despite its limitations, some gap-focused research has been useful in drawing attention to processes of teaching and learning as key mechanisms of racial equity and justice. From this perspective, access to dominant forms of academic content (i.e., the closing of racial “achievement gaps”) constitute an important pathway to racial equity and justice (Grossman et al., 2008; Ladson-Billings, 1995; Schoenfeld, 2002).

Another point of broad consensus in the field has been that racially equitable and just teaching should account for research on the cultural nature of learning (Castagno & Brayboy, 2008; Howard & Aleman, 2008; Nieto, 1999). From this perspective, scholars understand racialized gaps in opportunities to learn as cultural “mismatches” between the cultural practices of BIPOC students and those of White students (Lee, 2007; Milner, 2010). Based on this premise, over the past two decades a variety of culture-focused, asset-based pedagogies have informed extant research and practice related to the teaching of BIPOC students, including: multicultural education (Banks, 1995); culturally relevant pedagogy (Ladson-Billings, 1995); culturally responsive teaching (Gay, 2000); third space (Gutiérrez et al., 1999); and funds of knowledge (González et al., 2005). These pedagogical frameworks have had wide influence across the disciplines, such as literacy (Au, 1980; A. Ball, 1997; Kirkland & Jackson, 2009; Lee, 2007; Li, 2010; Morrell & Duncan-Andrade, 2002; Rueda, 2010); science (McKinley, 2007; Warren et al., 2001); and mathematics (Diversity in Mathematics Education, 2007; Nasir et al., 2008). Much of this work centers access to dominant forms of academic content as a primary goal, but also argues that such access is impossible without fully accounting for the cultural dimensions of teaching and learning.

A third major strand of extant work employs critical theories and perspectives to take a broader view of what it means to teach for racial equity and justice. Scholars in this tradition argue that access to dominant forms of academic content is necessary but insufficient—that racially equitable and just teaching must also involve students learning how and

why to critique the status quo, and actively address local community issues to create a more just society (Ladson-Billings, 1995). One line of work in this area has drawn on the critical pedagogy of Paulo Freire (1970), as exemplified by Grande's (2005) work on "red pedagogy" in the context of Indigenous education and hooks's (1994) work in the context of Black feminism. Broadly speaking, this perspective has also been taken up across the disciplines (Alim et al., 2011; Calabrese Barton, 2007; Gutstein, 2006; Ladson-Billings, 2003).

Current Research: Power, Race-Specificity, Cultural Sustenance, Core Practices

The most significant trend in the last decade of research on teaching for racial equity and justice has been a deeper engagement with power and the sociopolitical contexts of teaching and learning (Cutierrez, 2013; Nasir et al., 2016). In part, this work has been fueled by the aforementioned advances in research on learning. Whereas power was certainly implicit in previous formulations of learning as a cultural process, more recent research has been increasingly explicit in conceptualizing learning as power-laden and structurally and historically mediated (Darling-Hammond et al., 2019; Esmonde & Booker, 2016; Nasir, 2019; Philip et al., 2018). For example, several scholars have examined how hegemonic ideologies in education (e.g., neoliberalism) operate across multiple levels of the education system to facilitate racial inequity and injustice at the classroom level (Cochran-Smith et al., 2016; Louie, 2018; Philip et al., 2018; Trujillo & Woulfin, 2014). Relatedly, ideological analyses and critiques of predominant equity-related discourses, such as "for all" and "diversity," have become more common across the disciplines (Abrams et al., 2014; Basile & Lopez, 2015; Cochran-Smith et al., 2016; Martin, 2003, 2019; Morrell, 2017).

Another notable trend is more direct engagement with theories of race and racism (Martin et al., 2017; Navarro & Howard, 2017; Parsons, 2014). Prior research based on cultural frameworks typically conceptualized race in terms of the cultural practices and identities of BIPOC students; racism was generally conceptualized in terms of deficit perspectives enacted in classrooms. In response, more recent scholarship has taken up race and racism in more structural and historical ways. One way this has played out in the literature is through wider application of CRT across the disciplines. Since its introduction to education by Ladson-Billings and Tate (1995), CRT was in limited use in the early 2000s, such as in work by Ladson-Billings (2003) and colleagues in social studies research. However, multiple disciplines have since taken up CRT in order to analyze how racialized structures affect opportunities to learn academic content (Jett, 2012; Navarro & Howard, 2017; Parsons, 2014; Sheth, 2019; Warren & Rosebery, 2011; Woodson, 2016).

As part of this trend toward greater theoretical sophistication in racial analysis, scholars have been expanding beyond CRT to leverage an increasingly wide

array of critical frameworks and perspectives related to racialization (and their application across disciplines). These include, but are not limited to: sociological frameworks (Martin, 2009; Smith, 2016), Black feminism (Vickery, 2017), poststructural theory (Shah, 2019) and decolonial theory (Bang, 2016; Mutegi, 2011). In addition, a growing number of studies use intersectional and anti-essentialist analyses that account for the nuanced and multifaceted nature of the racialization that students experience. Examples across the disciplines include: in literacy (Brooks, 2017; Compton-Lilly et al., 2017; Sciarba, 2017); in social studies (Santiago, 2019; Vickery, 2017); and in mathematics (Gholson & Martin, 2014; Leyva, 2017).

Having noted these broad trends in the recent literature on racially equitable and just teaching, in the rest of this section I highlight three specific areas of emergent research: (a) studies on efforts to implement extant asset-based frameworks and critical pedagogies; (b) critiques of extant frameworks and the emergence of humanizing pedagogical frameworks; and (c) "core practices" as an equity intervention.

Implementations of Extant Asset-based and Critical Pedagogies

Research continues to build on and study implementations of the culture-focused, asset-based pedagogies developed at the turn of the 21st century, as well as Freirean approaches. For example, Keehne et al. (2018) recently proposed what they termed an "indigenous framework" for supporting literacy learning and cultural identity, which builds on Au's (1980) foundational work with Native Hawaiian students. One longstanding gap in the literature has been documentation of the processes by which teachers implement cultural asset-based and critical pedagogies in classrooms. In a large-scale study using national survey data, Vincent et al. (2017) found that teachers of American Indian and Alaska Native students rarely reported implementing teaching practices known to support the literacy learning of students from these minoritized communities. Complementing this quantitative work, several studies have used ethnographic methods to examine specific teaching practices employed in the service of cultural asset-based pedagogies, including May's (2011) analysis of culturally relevant read-alouds in a literacy setting, as well as Adjapong and Emdin's (2015) study of Hip Hop-rooted pedagogical practices in a science classroom.

Similar work has investigated dynamics among teachers and students during implementations of critical pedagogy (Esmonde, 2014; Parkhouse, 2018). In mathematics education, Gutstein (2006) drew on the work of Freire to argue for the integration of social justice concepts and pedagogy into the dominant mathematics education curriculum. Building on that work during the following decade, Brantlinger (2013) and Gregson (2013) studied attempts to implement "critical mathematics" at the high school level. Both scholars documented dilemmas

and challenges in reconciling demands of the dominant curriculum with philosophical tenets of critical pedagogy, even questioning whether tensions between these paradigms could be reconciled at all. Critiques that problematize the process of turning theory into practice are healthy for the field, and a stronger empirical base of studies must focus on issues of implementation at the grain size of teaching and learning interactions.

Critiques and Extensions of Extant Frameworks

The last decade has also seen critiques and extensions of the predominant asset-based pedagogical frameworks. For example, Rodriguez (2013) utilized CRT to problematize limits in the school-based focus of work that is rooted in funds of knowledge. Other scholars have leveraged decolonial frameworks to examine and stretch traditional sociocultural theories and asset-based pedagogies (Bang, 2016; Ndimande, 2018; Souto-Manning et al., 2019). A notable trend in the literature that has garnered substantial interest is a “loving critique” of culturally relevant pedagogy and culturally responsive teaching, which has resulted in a framework called “culturally sustaining pedagogy” (Paris, 2012; Paris & Alim, 2014). Paris (2012) explains:

The term *culturally sustaining* requires that our pedagogies be more than responsive of or relevant to the cultural experiences and practices of young people—it requires that they support young people in sustaining the cultural and linguistic competence of their communities while simultaneously offering access to dominant cultural competence. Culturally sustaining pedagogy, then, has as its explicit goal supporting multilingualism and multiculturalism in practice and perspective for students and teachers. That is, culturally sustaining pedagogy seeks to perpetuate and foster—to sustain—linguistic, literate, and cultural pluralism as part of the democratic project of schooling. (p. 95, italics in original)

Similar to other asset-based pedagogies, the aims of culturally sustaining pedagogy go beyond closing racial “achievement gaps,” albeit while acknowledging the continued importance of access to dominant forms of academic content. However, it also proposes broader goals of schooling: “What if, indeed, the goal of teaching and learning with youth of color was not ultimately to see how closely students could perform white middle-class norms but to explore, honor, extend, and, at times, problematize their heritage and community practices?”

(Paris & Alim, 2014, p. 86). Here, Paris and Alim call for the valorization and sustenance of BIPOC people’s cultural practices as an end unto itself, as opposed to as a means to access dominant culture. More recent work has called for cultural resurgence (see Tzou et al., 2019), which Cornthassel (2012) characterizes as “having the courage and imagination to envision life beyond the state” (p. 89).

This perspective resonates with “whole child,” systemic views of “teaching for equity” that center human development alongside—and indeed, integral to—traditional content learning (Darling-Hammond et al., 2019). As Nasir (2019) reminds us, the intersection of human development and academic engagement for BIPOC children is always a matter of racialized subjective experience. Overall, by prioritizing humanization, frameworks like culturally sustaining pedagogy conceptualize “racially equitable teaching” as contributing to the repair of historical injustices wreaked against BIPOC communities.

“Core practices” as Equity Intervention

A third major trend in the literature has been the emergence of the “core practices” approach within practice-based teacher education, and its positioning as an equity intervention (Grossman et al., 2018; Thompson et al., 2016; Windschitl et al., 2012). Core practices (or “high-leverage practices”) refer to specific instructional practices—which can be taught to novice teachers, in particular—that are deemed essential both to the work of teaching and for fostering students’ learning of dominant forms of academic content (Ball & Forzani, 2011). For example, researchers have proposed practices like “supporting evidence-based argumentation” and “engaging students with data” as candidates (Windschitl & Calabrese Barton, 2016). Still, broad consensus about which practices should be considered “core” has not been established.

Given the scope of the core practices scholarship, characterizing the full diversity within this body of work is beyond the scope of this paper. Instead, drawing on Kavanagh’s (in press) review, I note several commonalities and shared commitments across the literature. Broadly speaking, the call for core practices was partly motivated by a perceived fragmentation in teacher education curricula. Some have argued that organizing teacher education around particular core practices could support teacher learning and facilitate efforts to build a knowledge base about how to prepare teachers (Ball & Forzani, 2011). Scholarship on core practices claims theoretical roots in sociocultural theory, where what teachers do in classrooms is mediated in complex ways by perceptions of students, understandings about how learning happens, and their identities as professionals (Kavanagh, in press). This perspective is positioned as a response to behaviorist views, which conceptualize teaching in terms of bounded teaching moves that teachers learn through repetition.

With respect to equity, one group associated with the core practices movement—the Core Practice Consortium (2019)—has stated its intent to “counter longstanding inequities in the schooling experiences of children, particularly youth from communities that continue to be marginalized in the US.” Although core practices work varies in how it connects to issues of racial equity and justice, access to rich disciplinary content has been emphasized as a key pathway to equity. Proponents of core practices have

acknowledged the historical impact of oppressive structures in education (Grossman et al., 2008, 2018; Thompson et al., 2016), but until recently, much of the literature has not interfaced with culturally rooted, asset-based pedagogies.

Several researchers in science education have sought to make such connections. For example, Thompson and colleagues (2016) drew on principles from culturally responsive teaching (Gay, 2000) to conceptualize what they termed “rigor and responsiveness” in how teachers support the development of students’ ideas. In addition, Braaten and Sheth (2017) drew on Banks’s (1995) ideas in a case analysis documenting the difficulties in integrating more traditional science teaching with concerns for equity.

In reflecting on their findings, Braaten and Sheth note that lack of attention to “critical consciousness” was a gap in the core practices work, and caused them to ask: “Is ambitious science teaching an equity pedagogy?” (p. 158).

Indeed, others have called for moderation in framing core practices as an equity intervention, given the structural and historical nature of inequity that transcends classroom-level interactions among teachers and students (see Zeichner, 2012). Given the prominence of the core practices approach in the teacher education literature, as well as extant critiques (e.g., Philip et al., 2018), I return to these issues later in the paper.

Tensions and Open Questions

I conclude this section by specifying ongoing tensions within the current knowledge base on racially equitable and just teaching, as well as open questions with which the field continues to grapple. I organize these into three broad areas: (a) goals for racially equitable and just teaching; (b) race-specificity in pedagogical approaches; and (c) implementation challenges and measuring “effectiveness.”

Goals for Racially Equitable and Just Teaching

The field does not agree on *why* (i.e., for what purposes) we should teach for racial equity and justice. Goals matter because they shape the pedagogical frameworks we develop and employ. At a baseline, there remains a broad consensus that access to dominant forms of academic content is important, even while there is variation in how teachers should go about that (e.g., core practices, cultural asset-based approaches). However, in addition to academic content learning, scholars believe that racially equitable and just teaching should involve: actively supporting various kinds of identity development among BIPOC students; equipping students to critique and remedy racist structures in their communities; transforming the disciplines themselves to valorize minoritized knowledge systems; and supporting the sustenance and resurgence of BIPOC communities’ cultural practices. As several studies have found, reconciling “dominant” and “critical” pedagogical goals within mainstream U.S. classrooms is non-trivial (e.g., Braaten & Sheth, 2017; Brantlinger, 2013). It remains an open question whether we can actually pursue these goals in parallel.

Another issue more implicit in the literature is who we are talking about in discussions of racially equitable and just teaching. For good reason, nearly all of the literature focuses on the experiences and needs of BIPOC students and communities. However, one might argue that teaching to improve White students’ racial literacy (e.g., Esmonde, 2014; King et al., 2018) is just as necessary. This points to a conceptual issue: Is the goal to make the education of BIPOC students more equitable and just, or is the goal to teach in ways that produce more racial equity and justice for BIPOC communities? These goals overlap but are not the same. More broadly, these goals might suggest different underlying definitions of “racial equity” and “racial justice” in the context of education. The idea is not that we should be seeking consensus on particular definitions of these terms. Rather, definitions matter because they shape problem framings, as well as how we set goals and then go about addressing problems. Making explicit how we define “racial equity” and “racial justice” clarifies what aspects of racism we are and are not addressing with a given research study or a practice-focused intervention.

Race-specificity in Pedagogical Approaches

My review revealed variation in how explicitly the literature names or centers race and racism. In the 2000s, the language of “diversity,” “equity,” and “inclusion” permeated chapter titles in major handbooks, as well as in titles of review articles across the disciplines and in general education research. Authors and publishers typically deployed these terms in discussions and studies related to the marginalization of BIPOC students, but they also often covered other social markers like language proficiency. This may reflect the theoretical frameworks in use at the time, which centered on “culture” and advocated broadly anti-deficit perspectives. As I discussed earlier, the last 10 to 15 years has seen greater use of race-specific frameworks—including, but not limited to, CRT. Presumably, analyses informed by race-specific frameworks might be better suited to revealing racialized aspects of learning, thereby informing more sophisticated formulations of racially equitable and just teaching. But how greater race-specificity relates to our understanding of teaching is an open question.

Core practices work does not specify particular social markers, race or otherwise. Does this matter? If core practices are implemented with BIPOC students, but none of the practices explicitly invoke race in some way, does this affect the forms and quantity of racial equity and justice generated in a classroom? In the first place, does a race-neutral framing affect how core practices are deployed among a racially diverse classroom of students (Sheth, 2019)? In the case of culture-focused frameworks, to what extent does using the language of “culture” instead of “race” shape the kinds of teaching these frameworks inform? Certainly, culture and race are related, but they are also distinct constructs. Overall, there are both affordances and constraints to any pedagogical approach, but as researchers begin to engage race and racism more directly, these kinds of questions become increasingly relevant.

Implementation Challenges and Measuring “Effectiveness”

A broader issue concerns the institutional and discursive contexts within which racially equitable and just teaching gets implemented. The vast majority of U.S. schools and educators are racially conservative (e.g., still endorsing myths of meritocracy). However, many empirical studies of implementation efforts involve teachers who already endorse racial equity and justice goals, or researchers in teaching roles studying their own efforts. If we intend for racially equitable and just teaching to be implemented across the entire U.S. education system, then the field must grapple with issues that come with teaching in racially conservative settings. For instance, how do teachers handle resistance from students, parents, or administrators? What structural changes are needed to affect the conditions of a given school or district in order to facilitate racially equitable and just teaching, beyond the pursuit of content learning?

These questions also fall under the umbrella of “teaching,” but for which little research currently exists.

Issues of implementation also relate closely to issues of measurement and evidence: How do we know that a given pedagogical implementation is actually fostering racial equity or justice? Over the last couple decades, the field has generated much in the way of rich and promising conceptual ideas. However, despite efforts to put theory into practice, there persists a lack of robust evidence of whether these pedagogies “work” (Bottiani et al., 2018). That is, for whom do they work, under what conditions, and over what time span is their impact evident (Philip et al., 2018)? Test scores are the primary outcome measure of interest to policymakers and many practitioners, but the extant literature is clear in the need for more sophisticated measures. Researchers must exercise creativity in developing new measures that align with concepts centered in new equity and justice frameworks. What would it look like to capture the development of students’ critical consciousness or activism in the short run during a school year, as well as in the years that follow? Would it be possible to measure—qualitatively, but perhaps even quantitatively through simple metrics—the degree to which a community’s heritage practices have been sustained?

Teacher Education for Racial Equity and Justice

This section on teacher education research mirrors the structure of the previous section on teaching. From research circa 2007, I begin by highlighting these major themes: a focus on White PSTs' racial beliefs; lack of coherence in teacher education program design; and arguments about the balance between “conceptual tools” and “practical tools.” The next part focuses on where the field has gone since then, which in some ways parallels the last 10 to 15 years of research on teaching (e.g., critique of neoliberal ideologies, greater race-specificity). Key trends include: limited evidence of the impact of multicultural and critical teacher education; continued focus on changing White PSTs' racial beliefs; and growth of core practices-based teacher education. The section concludes with a discussion of ongoing tensions and open questions in the field.

Past Research: White PSTs' Racial Beliefs, Incoherent Program Design, Conceptual vs. Practical Tools

In the teacher education literature from a decade ago, the field had reached consensus on a broad problem framing related to the preparation of new teachers to teach for racial equity and justice. Similar to the literature on teaching, there was agreement that teacher education should be organized to address opportunity gaps (Milner, 2010). Further, there was support for preparing teachers to support BIPOC students' access to dominant forms of academic content, while also accounting for the cultural nature of learning (Howard & Aleman, 2008). White pre-service teachers (PSTs) had become a focal point for teacher educators—specifically, researchers found White PSTs' racial attitudes, beliefs, and understandings to be significant impediments to racially equitable and just teaching (Lowenstein, 2009; Sleeter, 2008). Teacher educators widely employed reflection as a key method to help shift these attitudes, beliefs, and understandings (Sleeter, 2008), although some also expressed skepticism about the overall value of reflection (Grant & Agosto, 2008).

At the level of program design, Sleeter (2008) found that single “diversity course” (i.e., “multicultural/social foundations”) models were prevalent in teacher education programs, leading her to call for greater program-wide “coherence” around issues of racial equity and justice. This resonated with calls for better integration between “social foundations” or “social justice-focused” courses and “subject matter” or “methods” courses (Grossman et al., 2008). Sleeter also commented on “cross-cultural community-based learning” components, which were increasingly being incorporated into teacher education: she found that although such pedagogical approaches showed evidence of positive shifts in PSTs' racial attitudes, beliefs, or understandings based on survey measures, it was unclear how stable those shifts were over time.

Based on a reading of the *Handbook of Teacher Education* (2008), two major debates had emerged in the field at the time. First, a tension arose between so-called “conceptual tools” and “practical tools.” That is, although the field had produced many “conceptual tools” to support social justice-focused teaching (Grant & Agosto, 2008), some argued that there was a dearth of “practical tools” for actually preparing teachers to implement social justice-focused teaching. Still others noted the difficulty in distinguishing between concepts and practices in the case of anti-racist teacher education (Pollock et al., 2010). A second debate concerned the issue of standardization, specifically how new standards for teacher licensure were preventing BIPOC teachers from entering the profession.

Finally, it is useful to recall recommendations made at the time by prominent scholars in the field. Howard and Aleman (2008) urge the field to build a “culture of evidence” regarding the impact of teacher education programs on how teachers actually support BIPOC students. Relatedly, Sleeter (2008) calls for teacher education programs to implement better ways of assessing PSTs' effectiveness in relation to issues of racial equity and justice. Finally, scholars had seemingly reached a broad consensus that the field needed greater definitional clarity regarding the terminology (e.g., “social justice”) undergirding the design of teacher education programs (Apple, 2008; Grant & Agosto, 2008; Zeichner, 2006). These recommendations set the stage in the next section for a treatment of more current work, and how it has (or has not) taken them up.

Current Research: Limited Evidence of Multicultural and Critical Teacher Education's Impact, Continued Focus on White PSTs' Racial Beliefs, Core Practices

Broadly speaking, trends over the last decade in the race-focused teacher education literature parallel those in the literature on teaching for racial equity and justice in a couple ways. First, increasing attention has been given to the macro-level political contexts of teacher education (Carter Andrews et al., 2017; Philip et al., 2018). Specifically, scholars have expressed concerns about how neoliberal ideology and practices (e.g., standardized testing, mandated curriculum) have constrained teachers' capacity to teach for social justice (Agarwal et al., 2010). Historically, critical analyses of this kind in teacher education have not been the norm. In an extensive review of over 1,500 empirical studies published between 2000 and 2012, Cochran-Smith and colleagues (2016) found that “although many of the studies, across programs of research, were about ‘equity’ and ‘access,’ few raised questions about who does and does not have access in the first place, why and how systems of inequality are perpetuated, under what circumstances and for whom access makes a difference, and what the role of teachers (and teacher education) is in all of this” (p. 118).

One systemic effect of neoliberalism in teacher education has been the proliferation of alternative teacher certification programs which, as a result of their proximity to charter schools, tend to funnel new teachers into minoritized communities (Carter Andrews et al., 2017). Further, these programs have strong backing with public and private funds and exert considerable influence on public policy (Cochran-Smith et al., 2016). Nevertheless, there remains broad commitment to and investment in university-based teacher education by scholars with a range of perspectives on what it means to prepare teachers to teach for racial equity and justice (Arbaugh et al., 2015; Philip et al., 2018).

Another parallel with the teaching literature concerns race-specificity. There have been some calls to center race and race-related intersectional markers in teacher education (Milner & Laughter, 2015; Pugach et al., 2019). In part, such calls are intended to counter generic “for all” framings typical in research on equity. However, they also respond to research that acknowledges multiple social markers without deeply focusing on any of them. For example, in a review of social justice-based teacher education research published between 1990 and 2016, Pugach and colleagues (2019) characterized half of the 53 empirical studies they reviewed as “holistically” focused on social justice—that is, these studies did not specify a focus on any particular social marker. Among the studies that did foreground a social marker, a majority highlighted race. To note, though, it was common for social markers to appear in the form of what the authors called “trinities” (e.g., “race, class, and gender”) or “laundry lists,” which they argued reified the “for all” rhetoric. Pugach et al. also found that authors rarely mentioned intersectionality: “the discourse this literature has to offer at the moment is marked by its limitations and contradictions, and a lack of certainty about exactly how best to convey how to be inclusive” (p. 214). Thus, race-specificity remains a challenge for race-focused teacher education.

In the remainder of this section, I key in on specific issues and trends in the teacher education literature related to racial equity and justice: (a) current research based on multicultural and critical approaches; (b) continued focus on White PSTs’ racial beliefs and resistance to engaging racism; and (c) the emergence of core practices-based teacher education.

Recent Trends in Multicultural and Critical Teacher Education Research

Multicultural and critical approaches to teacher education remain the dominant paradigms for preparing teachers to teach for racial equity and justice. Although neither literature tends to focus specifically or exclusively on race, research rooted in these perspectives centers concerns for BIPOC students. With respect to multicultural teacher education, there have been two recent reviews covering the last two decades of scholarship on preparing in-service teachers. Parkhouse et al. (2019) conducted a systematic literature review of 40 studies—all published between 2000 and 2017—on the forms of multicultural-focused professional development and their impact on teachers and students. The authors found considerable variation among professional development approaches, which made it difficult to generalize “best practices.” They noted that while culturally responsive teaching and culturally relevant pedagogy were most frequently cited as organizing frameworks, there were “some significant inconsistencies in the ways in which these approaches were conceptualized and operationalized across studies” (p. 426).

These findings corroborate those from another review, which focused on studies of culturally responsive trainings for in-service teachers published between 1998 and 2014 (Bottiani et al., 2018). In their review, Bottiani and colleagues (2018) sought to identify empirical studies that met standards of evidence explicated in the U.S. Department of Education’s What Works Clearinghouse (WWC) framework. Based on those criteria, they identified only 10 articles (8 qualitative and 2 quantitative). Similar to Parkhouse et al.’s (2019) review, Bottiani et al. characterize the empirical literature as being in a “relatively nascent stage” (p. 379). Overall, these reviews suggest that while many teacher educators are attempting to prepare teachers using multicultural frameworks, the field still lacks a robust evidence base regarding the impact of these attempts on teachers, their instruction, and their students.

With respect to critical teacher education, there also appears to be a dearth of empirical literature documenting impact and efficacy. Mills and Ballantyne (2016) reviewed studies in English-dominant countries (mostly U.S.-based, but also studies from Australia, Ireland, and Canada) focused on social justice in teacher education published between 2000 and 2014. From the small literature they identified—only 23 articles over the 10-year period—Mills and Ballantyne encountered similar difficulties as the aforementioned reviews: a limited base of empirical research precluded generalizations about the nature and impact of social justice teacher education efforts. Further, because the review did not specify how each article defined “social justice,” it was unclear how the articles could be compared to each other.

Still, the empirical literature notwithstanding, there remains considerable energy in the field behind the development of ideas and interventions based on critical theories and perspectives (Ellis & Maguire, 2017; Fowler-Amato et al., 2019). For example, Souto-Manning and Winn (2019) used Freire's (1970) critical approach to reveal ongoing "epistemological Eurocentrism" in teacher education, and call for teacher educators to learn from the rich history of Black teachers in the South as a way of countering Eurocentrism. Ellis and Maguire (2017) comment that, increasingly, perspectives such as CRT and ableism are being integrated with earlier forms of Freirean critical pedagogy. As they put it, the critical teacher education today can be characterized as "somewhat fragile but enduring" (p. 606).

Continued Focus on White PSTs' Racial Beliefs and Resistance

White PSTs' racial beliefs—and their resistance to learning about racism—have remained a primary focus of race-focused teacher education (Cochran-Smith et al., 2016; Liu & Ball, 2019; Mills & Ballantyne, 2016). In their extensive review of over 1,500 articles published since 2000, Cochran-Smith and colleagues (2016) found that three-fourths of those articles focused on PSTs' beliefs. Further, consistent with Sleeter's (2008) review from more than a decade ago, reflection remains a key method in the field in relation to changing PSTs' beliefs. For example, in their review of 109 articles published since 2000 in literacy-focused teacher education, Wetzel and colleagues (2019) found that teacher education programs regularly asked both White and BIPOC PSTs to reflect on their cultural identities as a way of building what they called "sociocultural knowledge" related to literacy.

And yet, despite this ongoing emphasis on changing beliefs, evidence that teacher education can change racial beliefs, attitudes, or understandings is mixed (Larkin et al., 2016; Mills & Ballantyne, 2016). Due to inconsistencies in program design and methodological rigor, it has not been possible for the field to distill strong claims about what "works," in what ways, for whom, and under what conditions. Yet there continues to be consensus that single "diversity course" models of teacher education are insufficient (Cochran-Smith et al., 2016; Mills & Ballantyne, 2016). Research has pivoted slightly toward attempts to understand the nature of White PSTs' resistance to espousing anti-racist stances (Berchini, 2017; Garrett & Segall, 2013; Wetzel et al., 2019). Critical Whiteness studies has frequently been used as a theoretical frame in such studies (see Matias & Grosland, 2016). Some scholars have argued for conceptualizing resistance as a normal part of White PSTs' learning of anti-racist teaching practice (Lowenstein, 2009; Neri et al., 2019).

Core Practices-based Teacher Education

Teacher education scholars have also been calling for greater focus on practices related to racially equitable and just teaching (Cochran-Smith et al., 2016; Liu & Ball, 2019; Mills & Ballantyne, 2016). While examples exist of practice-focused interventions centered on race (e.g., Lazar & Offenber, 2011), they are not the norm in teacher education. Indeed, the field has also not settled on a definition of "practice"—whereas some consider critical reflection to be a practice (see Liu & Ball, 2019), others consider practices to be what teachers do as they engage with students in the flow of instruction.

The latter definition aligns with teacher education approaches based on "core practices" (Ball & Forzani, 2011; Grossman et al., 2009; Thompson et al., 2016). A common narrative in the U.S. is that good teachers are born, not made—this view implies that the only way for a teacher to improve is through experience over time, and that the impact of teacher education will be limited (D. Ball in Arbaugh et al., 2015). In contrast, core practices-based teacher education conceptualizes teaching as something that can and must be learned through continual experimentation and iteration (Grossman et al., 2009; Windschitl & Calabrese Barton, 2016).

Philosophically, some position this work as aiming to professionalize teaching and teacher education by developing common and specific professional standards (Ball & Forzani, 2011; Zeichner, 2012). Such standards would be organized around limited sets of recurring teaching practices deemed consequential for student learning. According to Forzani (2014), whereas historical versions of practice-based teacher education (e.g., "competency-based teacher education") produced long lists of atomized teaching practices, the current core practices approach seeks to avoid reductionist views of teaching and center academic content and student thinking. In part, the rationale for settling on a "core" of teaching practices is practical: proponents argue that this makes the complex work of teacher education more focused and feasible for both teacher educators and PSTs (D. Ball in Arbaugh et al., 2015). Assessment is also an important factor—rather than certification based on course completion, teacher candidates would be evaluated based on their proficiency with core practices.

Core practices identified in the literature do not explicitly invoke racial equity or racial justice. As I discussed earlier, though, the core practices approach is often presented as an equity intervention for minoritized students:

This movement is stepping up to the challenge of better preparing novice teachers to raise the quality of disciplinary learning for students in U.S. schools and disrupt deficit perspectives of what students and teachers can accomplish. By raising the quality of disciplinary teaching, a central goal of this work is to improve the learning opportunities

available to students of color, low-income students, and English language learners. The aim is to address the persistent inequities that overwhelmingly limit those students' opportunities to learn. (McDonald et al., 2013, p. 378)

Core practices supporters also make a structural argument where de-professionalization leads to underprepared teachers, who tend to work in racially minoritized communities on a disproportionate basis (D. Ball in Arbaugh et al., 2015). Of course, as with much of the teacher education literature, there remains a need for empirical evidence linking core practices-based teacher education to teaching that leads to racially equitable and just outcomes. Indeed, core practices has become part of the field-wide debate about how best to prepare teachers to teach for racial equity and justice, which I take up in the next section.

Tensions and Open Questions

Shifting Focus to Anti-racism in Practice

For the past two decades, PSTs' racial beliefs, attitudes, and understandings have been treated as key levers in teacher education for producing teachers equipped to teach for racial equity and justice. And yet, despite tremendous allocations of resources to this effort, reviews of the literature clearly show that PSTs' racial beliefs, attitudes, and understandings are very difficult to change during a teacher program (Larkin et al., 2016; Mills & Ballantyne, 2016). Far less attention has been paid to PSTs' learning of how to actually teach for racial equity and justice (Cochran-Smith et al., 2016; Sleeter, 2014). Liu and A. Ball (2019) explain:

In sum, it appears that consciousness raising through dedicated coursework and exposure to students of color has not produced the transformation of White teachers that early multicultural education theorists once envisioned. Moreover, even when White teachers claim transformation, their actual classroom behavior has not been examined. (p. 80)

The field appears to be at a crossroads: should we continue to prioritize changing racial consciousness, or should we re-balance this with a shift toward organizing teacher education more directly around the moment-to-moment, classroom-level practices of anti-racist teaching? Of course, racial consciousness and anti-racist teaching practices are not unrelated. However, the dominant logic model—that racial consciousness must change before anti-racist practice is possible—is not supported by the literature and bears re-thinking (Parkhouse et al., 2019). Still, pivoting to a more balanced model will be a challenge for the field. It will require the development of new theoretical perspectives and assessments, as well as new forms of teacher education pedagogy.

A related tension is whose consciousness and practices we are trying to change. Race-focused teacher education research has centered almost exclusively on White PSTs. This is not unreasonable, as most U.S. teachers are White, and White people are the primary perpetrators of racism (Bonilla-Silva, 2017). Still, there is broad consensus that more emphasis is needed on the teacher education of BIPOC PSTs (Liu & Ball, 2019; Villegas & Irvine, 2010). Whereas scholars have conducted considerable research and programmatic investment in the recruitment of new BIPOC teachers, we know far less about their retention and preparation (Cochran-Smith et al., 2016). Extant research on retention and preparation has focused on the racialized experiences of BIPOC teachers as they navigate White-centered teacher education programs (Haddix, 2010; Liu & Ball, 2019). There have also been studies of so-called “grow your own” programs, or community-based efforts to bring BIPOC people into the teaching profession (Gist, 2019).

As Haddix (2017) notes, “teachers of color are not supermen and superwomen” (p. 145); the burden is not theirs to redeem the racist history of U.S. schools. Still, BIPOC teachers are integral to a racially equitable and just education system, and thus deserve greater mindshare and material resources in teacher education and teacher education research.

Race-specificity in Relation to Local Contexts

Many teacher educators agree that teaching is a context-dependent activity, which requires adaptation and specification to the local histories and cultures of particular communities. But in spite of best efforts to tailor teacher preparation to pertinent issues in local settings, teacher educators cannot predict all of the various communities where teacher candidates will work throughout their careers. This means that teacher education curricula end up needing to operate at a certain level of generality.

At the same time, racism is also contextually mediated. Even as White supremacy remains a national problem, it also plays out in locally specific ways. For example, although they might both serve the interests of White supremacy, anti-Black racism differs from anti-Asian racism—both in form and in the remedies needed to resist it. Similarly, attenuating anti-Blackness may require certain interventions in rural Mississippi but others in Philadelphia or Minneapolis. So rather than responding to a single, monolithic racism, anti-racist work in education must address a multiplicity of racisms. This poses a significant challenge for teacher education.

Broadly speaking, there seems to be growing interest in facilitating anti-racism at the level of everyday teaching practice, but there are disagreements in the field about how to do this. In response to the core practices movement, Philip and colleagues (2018) express concern that “core practices scholarship . . . too often opts for subdued or superficial appeals to equity and diversity” (p. 258). In part, this concern may stem from the fact that core practices proposed in the literature do not typically name race, racism, or particular BIPOC groups. Practices like “supporting on-going changes in thinking” (Windschitl et al., 2012) are certainly important for students’ content learning, but from a racial equity and justice standpoint, the question beckons: Whose thinking is being supported? When superficially race-neutral frames are used, a greater burden is placed on teachers’ in-the-moment discretion to ensure that Black students’ or Indigenous students’ thinking, specifically, is supported. Given the pervasiveness of the ideology of Whiteness within the U.S. teaching force (Picower, 2009), color-evasive statements about supporting “all” students are unlikely to lead to equity and justice for BIPOC students. In contrast, pedagogies and frameworks in teacher education directly focused on race and racism seek to counter the problems of color-evasiveness (e.g., Shah & Coles, 2020; Varghese et al., 2019).

Another concern raised by skeptics of core practices is that centering this approach may marginalize critical perspectives on teaching and teacher education that more directly engage issues of power (Philip et al., 2018; Zeichner, 2012). Many practice-based teacher educators are careful to say that practices deemed “core” are not intended to be taken up as “best” or “universal” (see McDonald et al., 2013). Nevertheless, given prevailing conceptualizations of schooling as primarily a vehicle for learning academic content, as well as ongoing systemic denial of White supremacy as a problem in education, the marginalization of critical perspectives in practice is a legitimate concern (Major & Reid, 2017; Matsko & Hammerness, 2014; Smagorinsky, 2019).

In part, how the core practices scholarship has tended to engage race and racism can be attributed to theoretical and historical lineage: practice-based teacher education has roots in discipline-based methods courses, as opposed to social foundations courses and scholarship (Kavanagh, in press). As a result, the robust learning of academic content has been a key goal in much of the core practices work, and racial equity and justice have been implicitly defined in terms of BIPOC students getting access to opportunities to learn. This has implications for the capacity of certain kinds of teacher education efforts to participate in anti-racism. For example, in a study of how a core practices approach prepared novice science teachers to teach for equity, Kang and Zinger (2019) found that core practices could “. . . alter their normalized views and expectations about disciplinary teaching and learning,” but they also found that “the core practices in and of themselves are limited, however, to increase novice teachers’ critical consciousness about racism and systemic inequity” (p. 24). Overall, this tension raises questions about how we as a field define racial equity and justice, as well as the educational outcomes and societal goals we consider desirable for BIPOC communities.

Of late, longstanding calls to integrate practice-based approaches and critical approaches have gained new momentum (Cochran-Smith et al., 2016; Richmond et al., 2017). This is reflected in recent efforts in teacher education to bring these perspectives in conversation with each other (see Dutro & Cartun, 2016; Kavanagh & Danielson, 2020; Schiera, 2020). What might “anti-racist core practices” look like? To what extent is such a synthesis even possible, given that teaching practices must be attuned to local racial dynamics. How might race frameworks like AsianCrit or TribalCrit support teacher educators to bring multiple levels of race-specificity to how they prepare teachers to work in specific communities? These questions open new directions for both research and practice in teacher education.

Research Designs and Policy Influence

Teacher education research should influence teacher education policy. However, the “culture of evidence” that Howard and Aleman (2008) call for—particularly evidence of the kind influential to policy makers—has not yet materialized. Racial equity and justice is a central concern for many teacher educators and researchers, and numerous articles have been published on the topic. At the same time, multiple reviews of the literature have found that the field tends to employ research designs that limit its ability to influence policy. Specifically, studies continue to: involve single data sources and qualitative methods (e.g., interviews only); be narrow in scope and duration (e.g., one methods course over a single semester); and omit robust measures (e.g., of impact on teaching or student learning) (Cochran-Smith et al., 2016; Mills & Ballantyne, 2016; Parkhouse et al., 2019; Sleeter, 2014; Wetzal et al., 2019). In short, while there are exceptions (e.g., Cherng & Davis, 2017), the prototypical study of racial equity and justice in teacher education is more than likely small-scale, qualitative, and de-coupled from what actually happens in K-12 classrooms.

To be clear, these kinds of studies are needed and important because they generate important theoretical insights and locally practical knowledge. However, they mostly avoid a question of great interest to policymakers: “What works?” To what degree is a given teacher education program actually producing teachers prepared to teach for racial equity and justice? Based on the literature, there is little evidence that many teacher education programs have race-focused assessment systems in place. How do we know that those teachers are actually supporting the learning, identity development, and humanization of BIPOC students once they enter the classroom? Short-term studies that do not follow teachers from pre-service to in-service cannot answer this question.

With good reason, teacher education researchers have been reticent to make causal claims about the effects of teacher education on teaching and student learning. In part, this reflects paradigmatic commitments endemic to qualitative research that acknowledge the complexity of teaching and teacher education. On the one hand, it would be inappropriate to reduce this complexity. On the other hand, we should not let complexity paralyze us to the point that we disqualify ourselves from consequential debates about teacher education policy. As Cochran-Smith et al. (2016) found in their review, there is a small but impactful research base—typically aligned with neoliberal goals—that is using large data sets to make causal claims that treat standardized test scores as a proxy for student learning. Even while much of the field might balk at this kind of research, its impact on policy is real and tangible. Thus, our dilemma is this: How do we generate research policymakers will take up while continuing to honor our epistemological commitments and ethical values?

Recommendations

Based on this review of the last 10 to 15 years of research on teaching and teacher education for racial equity and justice, I offer the following four recommendations for the field. Each recommendation holds implications for research and practice, as well as for the arrangement of funding priorities:

- 1. Develop Robust Measures of Racially Equitable and Just Teaching**
 - Measures should align with current theories of learning as a racialized process.
 - Measures should be quantitative and qualitative, and gauge processes and outcomes beyond standardized test scores (e.g., students' subjective racialized experiences as learners).
 - **For research:** Such measures should be used to link teaching practice to a broad range of indicators of racial equity and justice, as well as to assess the efficacy of teacher education programs in relation to BIPOC communities—for whom do they work, under what conditions, and in service of which goals.
 - **For practice:** Such measures should provide feedback to in-service teachers, and also be used to assess and support pre-service teachers' learning of racially equitable and just teaching practice.
- 2. Explicitly Name and Focus on Race and Specific Types of Racism**
 - “For all” and “diversity” language should be replaced with race-specific language.
 - Attend to distinctions and overlap between cultural and race-based frameworks.
 - Avoid “laundry lists” (e.g., “race, class, gender, language”); instead, engage various forms of racial intersectionality (e.g., race-class, race-gender).
 - **For research:** Utilize and expand on extant theories related to race and racism (e.g., BlackCrit, decolonial theory, poststructural race theory).
 - **For practice:** Coherently organize teacher education coursework and field experiences around race-specific theories.
- 3. Build Infrastructure for Race-Focused Teacher Education**
 - Funding is needed for large-scale, longitudinal research designs better positioned to influence race-focused teacher education policy.
 - **For research:** Study race-focused teacher education programs as a whole (as opposed to single courses), and study how pre-service teachers' learning of racially equitable and just teaching translates to the in-service setting.
 - **For practice:** Systematically incorporate a racial equity and/or justice focus throughout all facets of a teacher education program, and also provide time and support for teacher educators to align their pedagogies.

4. Clarify Definitions and Goals for “Racial Equity” and “Racial Justice”

- Treat “racial equity” and “racial justice” as constructs that require clear definitions.
- Draw on scholarship outside education research as needed to theorize these terms.
- **For research:** Conceptual and empirical work should include explicit definitions of “racial equity” and/or “racial justice.”
- **For practice:** Teacher education programs should include explicit definitions of “racial equity” and/or “racial justice” in all policy documents.

Conclusion

Many education researchers and teacher educators are deeply committed to equity and justice for BIPOC students. This is evident in the numerous conceptual articles and empirical studies that have been published over the last few decades. Indeed, the field is rich with sophisticated theoretical and pedagogical frameworks rooted in anti-racist stances. What this review makes clear, though, is that if education research is to make a tangible mark on problems of racism in education, the field will need to take up the challenges of practical design and implementation. We must also find ways to conduct empirical research that both honors the complexity of these challenges and is accessible and compelling to policymakers. Racial inequity and injustice developed over hundreds of years, and thus will not be repaired in the short run. Still, strategic funding for infrastructural research and coherent program design can help realize a future where overtly anti-racist teaching is the norm for BIPOC children.

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