

Demographic Realities and Methodological Flexibility in Literacy Teaching and Research

C. Patrick Proctor
Chris K. Bacon
Boston College

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ABSTRACT

In this introductory chapter, teacher education and research in literacy are viewed through a *demographic lens* that recognizes the racial, ethnic, and linguistic breadth that characterizes children and youth in schools today. Such a lens brings into focus the need for an expansion of methods beyond those that have historically constrained the literacy field. The chapter begins by exploring the paradox between the evolving demography of student populations and the static demography of the teaching population, and examines how this paradox interacts with literacy outcomes and policy. From there, the focus moves to literacy teacher education, with attention to the content and methods of preparing teachers for engaging with the diverse and variable contexts of today's schools. Next, the demographic lens is trained on representation of both participants and researchers over time in literacy research, and on the methodological approaches that are used to make research-to-practice inferences. Ultimately, in order to keep pace with demographic realities, literacy education and research must be more inclusive, drawing on a broad range of methodological approaches that appropriately represent the racial, ethnic, and linguistic diversity of student populations in today's schools.

Demographic Realities and Methodological Flexibility for Literacy Teaching and Research

The ability to comprehend text and interrogate its credibility has become increasingly critical in an era of information saturation, from both digital and print sources. As a result, literacy, now more than ever, is the foundation upon which content knowledge and informed citizenship are built, which places a special emphasis on quality literacy instruction for children and youth. The unique racial, ethnic, and linguistic pluralities in the United States interact with this reality, demanding that we as educators and researchers become more linguistically and methodologically flexible as we tackle thorny issues of generalizable literacy research and the means by which that research is translated into practice across tremendous variability in the instructional contexts in which children and youth are learning.

Our goal in this introductory chapter is to present a vision of literacy education and literacy research for the current era. We argue that, when it comes to literacy, both education and research are inescapably impacted by racial, ethnic, and linguistic diversity. This requires that we, as educators and as researchers, be methodologically flexible in the means by which we structure literacy teacher education and literacy research. In other words, the dramatically heterogeneous set of demographic circumstances and variable policy landscapes that define national and international contexts have profound impact on how we prepare teachers for literacy instruction, and for how we tackle the empirical questions and findings that guide literacy research. We see these as related issues, and thus envision educators and researchers engaged in mutual and ongoing exploration of questions about how languages and literacies vary across instructional and demographic contexts, with implications for a broader and more comprehensive understanding of literacy and its development vis-à-vis instructional practice.

In the first section of this chapter, we describe a demographic lens of race, ethnicity, and

language through which literacy education and research are refracted. This section includes attention to student and teacher demographics, the mismatch between them, and the policies that have historically affected the means by which teachers are trained and researchers are constrained. In the second section, we turn specifically to literacy teacher education, defined broadly as teacher preparation (pre-service) and professional development (in-service). We locate literacy within these domains of teacher education, describing their characteristics, how literacy is framed within them, and specifically how the demographic lens creates a need for methodological flexibility in relation to how teachers are prepared to deliver literacy instruction. In the third and final section, we turn to literacy research and explore how demographic realities are, or are not, reflected in this arena. We argue that attention to demographic range (among both participants and literacy researchers themselves) is critical for informing our understandings of research findings and their relation to practice. We finally argue that methodological flexibility is critical to informing good literacy practice.

We note that, in our focus on demography, we do not directly engage issues of sexuality, disability, neurodiversity, and other critical dimensions of identity and culture that can impact literacy teaching and learning. We focus specifically on race, ethnicity, and language because we view these as core to many national contexts in which children and youth develop literacy, in part through schooling. Additionally in this chapter, we focus specifically on the U.S. context where race, ethnicity, and language are core to the country's founding, and thus relevant to both its failings and its potentialities with respect to literacy and schooling.

Ultimately, then, our challenge to the reader is simple: To apply this demographic lens to contemporary understandings of literacy, and to reflect on whether and how methodological flexibility allows us to better focus on these critical demographics in literacy work. It is our hope

to set this challenge specifically for this *Handbook of Reading Research*, and more generally for literacy educators and researchers working in today's exhilarating and fraught contexts.

THE DEMOGRAPHIC LENS: STUDENTS, TEACHERS, AND POLICY

Any profession must respond to the demographic realities of its time. In education, this response involves alignment between student populations, teacher practice, and educational policy. Literacy itself is likewise affected by a complex interplay across these categories. Literacy standards inform student outcomes (and vice versa), while teachers are expected to respond to policy changes and meet standardized performance benchmarks in the face of varied levels of student need and language background. Paradoxically, education has been critiqued as “conservative” (Lortie, 1975), slow to respond to change as a profession. Below we use the demographic lens to highlight a paradox characterized by heterogeneity in the U.S. student population, alongside a “conservatism” in teacher demographics, contextualized in a shifting landscape of literacy standards and educational policy.

Student Populations

Demographically, 2014 was the first year in U.S. history in which White, English-speaking students comprised less than half of the public school enrolled population (NCES, 2017a). This shift is primarily driven by an increase in the enrollment of Latinx students, which rose from 9.0 million to 12.5 million between 2003-2013 (19% to 25% of total enrollment) and is projected to increase to 14.7 million in 2025 (29%; NCES, 2017b). Approximately one in five students is growing up speaking a language other than English at home (Ryan, 2013). These bilingual children and youth constitute the fastest growing population in U.S. schools (Shin, 2013), where English dominates as the language of instruction. While the majority of English learners were born in the U.S. (Batalova, Fix, & Murray, 2005), immigration contributes to an

evolving linguistic landscape, with a record 42.2 million immigrants living in the U.S. as of 2014 (13.2% of the nation's population). This figure is projected to increase to 20 percent by 2060 (Colby & Ortman, 2015). In such a context, the availability of technology and the increasingly fluid nature of global migration has led to increasing numbers of transnational youth who maintain significant ties to two or more countries (Oliveira, 2017; Skerrett, 2015).

While not a perfect correlation, there is no denying the associations between race, language status, and poverty in the U.S. Kochhar and Fry (2014) note that, between 2007 and 2013, median disparities in wealth ratios increased from 10 to 12.9 and 8.2 to 10.3 between Black and Latinx household net worth and White household net worth, respectively. In real dollars, this means that the 2013 median household net worth for White families was \$81,400 but just \$11,000 and \$13,700 for Black and Latinx families, respectively. Recent reports also indicate that low-income students are now a majority in U.S. public schools (Southern Education Foundation, 2015), with students of color being more likely than their white peers to attend high-poverty schools (National Equity Atlas, 2016). Economic instability and the adverse childhood experiences associated with poverty are stable predictors of literacy outcomes for children and youth in the U.S. Indeed, Phillips (2016) notes that poverty can affect early neurobiological development with implications for working memory, attentional control, error processing, impulse control, and self-regulation, all of which are known predictors of reading outcomes, and also impact the likelihood of students being drawn into school disciplinary systems from an early age.

In addition, the push in recent decades for inclusion and mainstreaming of students with special needs intersects with the broadening demographic realities of U.S. classrooms. Mixed evidence indicates that students of color and English learners are both overrepresented in some

disability categories (e.g., intellectual disabilities, general learning disabilities; Artiles, Klingner, Sullivan, & Fierros, 2010; Sullivan, 2011), but also underrepresented, for example, in being diagnosed with autism spectrum disorders (Jo et al., 2015; Mandell et al., 2009; Zuckerman et al., 2013, 2014). Both sets of findings point to systems for identifying students with special needs that have not kept pace with demographic and linguistic variability in U.S. schools.

Teacher Demographics

Unlike the rapidly evolving student population in U.S. schools, inertia grips the teacher demographic and sets up a demographic paradox. While students of color now comprise more than half the public school population, teachers of color are just 18 percent of the teacher workforce (U.S. Department of Education, 2016). And even though every state in the U.S. has a low ratio of teachers-of-color to students-of-color, this difference is most pronounced in the most diverse states, notably California and Nevada, states in the Southwest and Mid Atlantic (Boser, 2014), and in large urban centers.

The implications of this demographic paradox for literacy achievement have been thrown into sharp relief in recent years. Research has long demonstrated that U.S. schools privilege literacy practices that reflect White middle class language norms, while literacy practices that decenter those norms are often unrecognized or actively delegitimized (Delpit & Dowdy, 2008; Heath, 1982; Michaels, 1981). Delegitimization of non-White norms and expectations has been linked to the potential for imbalance in student disciplinary practices, especially suspensions and expulsions, which have been shown to affect Black and Latinx students at alarmingly disproportionate rates (see Gregory, Skiba, & Noguera, 2010 for a review). This trend is stable across the Pre-K - 12 spectrum. Gilliam, Maupin, Reyes, Accavitti, and Shic (2016) found evidence of implicit bias against Black children in varied disciplinary contexts, while Okonofua

and Eberhardt (2015), working with K-12 teachers, showed that student race exerted both a direct and an indirect effect on how teachers felt about when and how to discipline White versus Black students. In terms of consequences, students of color have been shown to be disproportionately removed from class relative to their white peers for comparable disciplinary infractions (Fenning & Rose, 2007; Wald & Losen, 2003).

Arcia (2005) showed how such actions have clear implications for literacy outcomes. In a 3-year longitudinal study (2001 - 2004) Arcia compared students who had been suspended at least once during that period ($n = 49,327$) to matched students who had received no suspensions during that time ($n = 42,809$). Analyses of state reading achievement data showed that non-suspended students' reading performance was significantly higher than for suspended students, and that number of days suspended (i.e., 1 - 10; 11 - 20; or ≥ 21) was inversely associated with reading outcomes. Yet when children of color are rated by teachers of color, they are considered to be less disruptive (Dee, 2005; Downey & Pribesh, 2004; Wright, 2015) and to have better work habits (Farkas, Grobe, Sheehan, & Shuan, 1990) relative to ratings provided by White teachers.

Linguistic differences further complicate the demographic paradox. The majority of U.S. teachers are monolingual English-speakers (Howard, 2016), and the majority of schooling takes place exclusively in English. Thus, multilingual students are expected to accommodate the monolingualism of the teachers and texts they encounter in schools. This raises barriers to parent and family involvement (Cherng, 2016; Toldson & Lemmons, 2013), literacy instruction that engages students' full range of language abilities (Durán, 2017; Escamilla, 2009; García & Kleifgen, 2010), and assessment of students within and across languages (Proctor, Silverman, & Haring, 2017; Soltero-González, Escamilla, & Hopewell, 2012). Linguistic research also

demonstrates the legitimacy and inevitability of dialect variation (Adger, Wolfram, & Christian, 2007; Lippi-Green, 2012; Rickford, 1999) alongside findings that suggest such variation remains stigmatized in educational settings (Bacon, 2017; Smith, 2016), particularly when used by students of color (Baker-Bell, 2013; Flores & Rosa, 2015). Teachers unfamiliar with their students' linguistic aptitudes may misinterpret dialectal differences as decoding errors (Wheeler, Cartwright, & Swords, 2012), as a lack of grammatical awareness (Dyson & Smitherman, 2009), or may dismiss students' language use altogether as "broken" English (Debose, 2007).

Shifting Policy Landscapes

The demographic paradox between teacher and student populations intersects with shifting educational policies and literacy standards. Without doubt, the need for a highly literate citizenry has resulted in unprecedented attention to education reform and teacher quality issues among policymakers (Cochran-Smith & Villegas, 2016). Since the Clinton-era *Goals 2000: Educate America Act* of 1994, we have seen a persistent focus on standards-and-outcomes based education reform, predicated on particular beliefs about what students need to know for a literacy-heavy economy, and, just as importantly, on being able to measure that knowledge. Following the Clinton Administration, George W. Bush launched the *No Child Left Behind Act*, which built on Goals 2000 in part by establishing penalties for schools that underperformed on standards-aligned literacy assessments. Under Barack Obama's *Race to the Top* initiative and the *Every Student Succeeds Act*, assessment paradigms remained in place, along with the requirement that high-stakes tests be attached to academically challenging literacy standards aligned with college entrance requirements and the state's career and technical education standards (ASCD, 2016).

More recently, the Common Core State Standards (CCSS) and the Next Generation

Science Standards (NGSS) provide, for states that have adopted them, a set of linguistically complex standards that are founded on the types of language and literacy skills deemed relevant for 21st century knowledge economies. Holding aside concerns about banking models of education (Freire, 1970), the CCSS and have been the subject of focus among literacy educators and researchers specifically for their linguistic dimensions. Similar literacy expectations emerge in the NGSS, specifically around discipline-specific ways in which scientists speak, write, and reason (Lehrer & Schauble, 2006; McNeil, Lowenhaupt, & Katsch-Singer, in press), and in the service of constructing and critiquing scientific knowledge (Pruitt, 2014).

Some have suggested that these standards lack sufficient supports and direction for a systematic implementation by districts, schools, and teachers (e.g., Calderón, Slavin, & Sánchez, 2011). On the other hand, López (2016) notes that it is “the focus on the explicit use of language as the medium of content acquisition that is lauded by scholars who have dedicated their careers to promoting equitable education...” (p. 8). This includes the *Understanding Language* group (<http://ell.stanford.edu/>) who have argued that the insertion of language into content learning is critical, and provides meaningful opportunities to leverage the standards in service of threaded literacy instruction (e.g., Bunch, Kibler, & Pimentel, 2012). Rymes, Flores, and Pomerantz (2016) further suggested that these new standards “articulate the need for students to apply language knowledge purposefully, yet flexibly, to accomplish specific tasks in particular contexts” (p. 258). Here, then, we see the direct injection of language and linguistic possibilities into language arts and science standards, which can be viewed through the demographic lens as a start point for teachers and students to make instructional sense of them.

Summary

In this section, we established a demographic lens by highlighting key characteristics,

incongruities, and challenges across students, teachers, and educational policy. From a teaching perspective, the reality of the demographic paradox is fraught, with implications for cultural, racial, and linguistic mismatches that can affect learning outcomes for students, particularly in the midst of linguistically intricate language, literacy, and content standards. In this time in history, students come from broad experiential and linguistic starting points, but are held to common sets of linguistic standards that are typically only in English, and implemented by teachers whose backgrounds are often more aligned with the standards than with the students. The need for broader representation and increased linguistic awareness among teachers is a clear implication of the demographic paradox. Second is the need to assess the monolingualism of our standards and the research that informs these standards to consider how broad linguistic variability interacts with large-scale implementation of linguistically complex expectations. We explore these factors below as they relate to teacher education and literacy research.

TEACHER EDUCATION

In order to create and sustain literate citizens, we need good teachers who are knowledgeable about how language and literacy develop, and the most effective ways to teach to that development. Across demographic and policy contexts, Sleeter (2014) reminds us that “[t]eachers do not just teach reading, or fifth graders, or social justice, or English learners, or standards; they do all of these things simultaneously” (p. 151). As it stands, we have two primary approaches for promoting quality literacy instruction in schools: teacher preparation and professional development (PD), both of which are forms of teacher education. While it is beyond the scope of this chapter to provide a comprehensive review of teacher preparation and PD, we highlight these two domains as critical vehicles for aligning teachers’ literacy instruction viewed through the demographic lens. In this section, we frame literacy practices in the context of

teacher education and then focus on how demographic shifts intersect with both teacher preparation and professional development. Based on these factors, we conclude by offering five critical competencies for literacy teacher education to better reflect the demographic realities of today's schools and classrooms.

Literacy in Teacher Education

There is no question that literacy research has made substantial strides since the National Reading Panel (NRP, 2000) identified reading comprehension, phonics, phonemic awareness, fluency, and vocabulary (the “big 5”) as key targets of literacy instruction. For example, the quantitative role of language in both reading and writing has undergone substantive investigation with broadly representative grade levels and demographic groups. Selected findings suggest that a limited focus on vocabulary is insufficient for understanding and impacting literacy outcomes, and more instructional attention to malleable linguistic factors is merited in literacy instruction, for example, morphology (Bowers, Kirby, & Deacon, 2010; Carlisle, 2010; Goodwin & Ahn, 2013; Kieffer & Lesaux, 2012; Kieffer, Petscher, Proctor, & Silverman, 2016), syntax (Foorman, Koon, Petscher, Mitchell, & Truckenmiller, 2015; Geva & Farnia, 2012; Proctor, Silverman, Harring, & Montecillo, 2012), and teacher language use (Gámez & Lesaux, 2015; Silverman, Proctor, Harring, Doyle, Mitchell, & Meyer, 2014). Likewise, qualitative research has continued to highlight the affordances of understanding literacy as situated and contextualized practice (Barton, 2007). Ethnographic and case-study research demonstrate the importance of considering context (Azano, 2015; Baird, Kibler, & Palacios, 2015; Rogers & Street, 2012; Scales et al., 2017) and identity (Hall, 2016; Hall, Johnson, Juzwik, Wortham, & Mosley, 2010; Muhammad, 2012; Wagner, 2016). Furthermore, research on multimodal composition has cautioned against "textual bias" in literacy instruction (Horner, 2013), which may fail to cover the range of literacy

practices students engage with on a daily basis across digital, visual, and sound-based mediums (Bartels, 2017; Dalton, 2012; Stornaiuolo, Higgs, & Hull, 2013; Wargo, 2017). In the aggregate, these advances in literacy research have provided increasingly nuanced suggestions for advancing school-based literacy outcomes while expanding definitions of literacy overall, with implications for the knowledge base of teachers.

To this day, however, coverage of the “big 5” can serve as a limited bar by which teacher education is evaluated. For example, the National Council for Teacher Quality (NCTQ) released its highly-contested 2014 *Teacher Prep Review* in which standards for early reading, English language learners, and struggling readers were almost entirely based on the NRP report (Greenberg, Walsh, & McKee, 2015). By contrast, the International Literacy Association’s (2010) *Standards for Reading Professionals* articulates a more contemporary focus on dimensions of reading research, including major theories of reading and writing, motivation and engagement, first language, second language, and bilingual reading development, and disciplinary literacy. Such discrepancies are indicative of broad variability in teacher education.

Beyond professional organizations, a range of suggestions have been made for how to frame, and teach to, literacy development in teacher education. Fillmore and Snow (2002) argued for an emphasis on equipping teachers with foundational knowledge of educational linguistics. Lucas and Villegas (2013) advocated a focus on second language acquisition principles in their framework for linguistically responsive teaching. Valdés, Capitelli, and Alvarez (2011) contended that grounding teacher preparation in sociolinguistic knowledge positions all students as possessing legitimate literacy competencies. Alim (2005, 2010) and Fairclough (1999) pushed for teachers to explore the relationships between power, ideology, and language use in society. Finally, Bunch (2013) and Galguera (2011) argued for *pedagogical language knowledge*, or

"knowledge directly related to disciplinary teaching and learning situated in the particular (and multiple) contexts in which teaching and learning take place" (Bunch, 2013, p. 307).

As these varied approaches suggest, teacher preparation and PD will differ with respect to how literacy is addressed. At the teacher preparation level, students require a broad understanding of literacy development, instructional approaches, and learning environments. Professional development models can assume some foundational knowledge, but must respond to expressed needs in a given setting (e.g., Rafael, Au, & Goldman, 2009).

Demographics and Literacy in Teacher Education

While teacher preparation programs have been targeted for failing to attend to the racial (Ball & Tyson, 2011; Castro, 2010; Milner, 2010; Silverman, 2010), linguistic (Endo, 2015; Lucas & Villegas, 2013; Schleppegrell, 2007), and socioeconomic (DeCastro-Ambrosetti & Cho, 2005; White, Mistry, & Chow, 2013) variability of contemporary classrooms, programs that develop teacher candidates' understandings around the complexities of language, race, and identity have shown some promise (Godley, Reaser, & Moore; 2015; Jupp & Lensmire, 2016). Further, community-based field placements have been shown to help some teacher candidates complexify their understanding of literacy practices and development, and to strengthen teacher-family relationships within communities (Bain & Moje, 2012; Brayko, 2013). While important advances, these approaches have also been criticized for their singular focus on helping the traditional White teacher candidate engage with multilingual and multiracial students (Willis, 2003) while sidelining teacher candidates of color (Brown, 2014).

Professional development approaches have also been criticized for overlooking demographic realities (Bolgatz, 2005; Coles-Ritchie & Smith, 2016). Teachers have described professional development for "diversity" as ineffective, unnecessary, or an imposition (Gay,

2005; Wiseman & Fox, 2010). Many see such conversations as separate from, or even at the expense of, academic instruction (Pollock, Bocala, Deckman, & Dickstein-Staub, 2016).

Teachers report coming away from such sessions maintaining the belief that they must simply renounce individual prejudices, rather than interrogate systems of structural inequality and how such systems might play out instructionally (Cross, 2010; Vaught & Castagno, 2008).

Meantime, teachers continue to report feeling unprepared to implement culturally and linguistically responsive literacy pedagogies (Gándara & Santibañez, 2016; Samson & Collins, 2012). For example, nationally, less than 30 percent of teachers of English learners (ELs) report having opportunities for PD targeting race, ethnicity, and language (Ballantyne, Sanderman, & Levy, 2008). While this figure climbs to 38 percent in urban areas, two thirds of this PD consists of fewer than 8 hours over the course of the school year (Rotermund, DeRoche, & Ottem, 2017). Another survey of special education teachers found that teachers of ELs received a median of only three hours of EL-based professional training over a five-year period (Zehler, et al., 2003). This general trend holds in states with large EL populations. In California, for example, Gándara, Maxwell-Jolly, and Driscoll (2005) found that approximately half of teachers whose classrooms consisted of at least 50% of EL students received no professional development or only one session on EL instruction over five years.

When teachers in preservice or PD contexts do receive language-specific professional development, it most often tracks back to a methods focus (e.g., Bartolomé, 1994) in which instructional approaches for scaffolding and differentiation of instruction are privileged.¹ Far less common are efforts to restructure school- or district-level systems to better support linguistically

¹ See, for example, the impressive efforts by the Massachusetts Department of Elementary and Secondary Education in their Rethinking Equity and Teaching for English Language Learners (RETELL) initiative to train *all* in-service teachers, in a relatively short period of time, for endorsement to work with EL students in mainstream settings. <http://www.doe.mass.edu/retell/>

diverse populations. Expedient acquisition of academic English for the purpose of performance on standardized literacy assessments thus becomes the primary emphasis, often at the expense of interrogating the social, cognitive, and linguistic complexities students navigate and how those interact with instruction.

Summary

Teacher preparation faces a dual front in training teachers for literacy instruction. The first is that preparation programs must work with current students to confront and resolve the tensions that arise as a function of the demographic paradox. The second is that teacher preparation programs need to diversify the pool of students who are coming into teaching. Haddix (2017) further contends that while teacher diversification is necessary, it too is insufficient, and teacher education must be restructured to support the preparation of a more racially and linguistically diverse teacher core.

Professional development research also finds that teachers often feel unprepared for working with multilingual and multiracial populations and indicate dissatisfaction with the content of PD that addresses literacy, demography, and policy. One potential reason for dissatisfaction is that there appear to be more frameworks and macro theories than there are actionable approaches that address the implementation of transformative literacy practices. In light of this, we recommend a set of 5 core literacy competencies that should be threaded into coursework and professional development for literacy teacher education.

1. *Foundational and contemporary literacy research.* There have been volumes written establishing a scientific foundation for reading development among children and adolescents. Notable among these are *Preventing Reading Difficulties in Young Children* (Snow, Burns, & Griffin, 1998) and the National Reading Panel Report (NRP, 2000). As

we noted above, however, literacy researchers continue to make strides in understanding what are malleable dimensions of literacy instruction, coupled with how instruction might be tailored to address variation in language, race, culture, and other critical contextual factors. These constantly evolving research foundations should be tracked and updated so that pre- and in-service teachers are provided with state-of-the-art literacy knowledge for effective instruction.

2. *First, second, and simultaneous language development.* Demographic trends in the U.S. show that multilingualism is typical and thus knowledge of language acquisition and its implications for instruction is critical (Takanishi & Le Menestrel, 2017). By language, we do not mean English language, but rather monolingual, bi- and multi-lingual, and dialectal languages that characterize the linguistic realities of the U.S. student population. Working with teachers in pre- and in-service settings requires an interrogation of what are the languages spoken in the schools and classrooms where teachers are working and how those languages are understood and leveraged in the service of meeting standards and acquiring literacy and content knowledge.
3. *Language development and disability.* Intersecting with Recommendation 2, late diagnoses and underrepresentation in special educational services (Samson & Lesaux, 2009) alongside overrepresentation and misinterpretation of data (Klingner & Eppollito, 2014) reflect the range of challenges that arise with demographic shifts and their intersections with literacy, language, and cognition. To date, the convergences between these issues are limited, and oftentimes confusing. Increased attention to issues of language and disability are critical for developing awareness of these complexities and are key to working with multilingual and multiracial populations.

4. *Functional roles of language.* It is becoming increasingly clear that understanding how language functions across disciplinary contexts and modalities is important for literacy instruction. As Brisk and Kaveh (forthcoming) argue, “[c]ontent area teachers must develop an identity as language teachers in charge of building students’ linguistic resources to be able to function expressing and comprehending knowledge in the discipline” (p. 9).
5. *Socio- and Racio-linguistics.* A focus on the social and linguistic contexts of teaching and learning environments undergirds how we understand language and literacy in teaching contexts. Emerging scholarship articulates a *raciolinguistic* perspective, arguing that language and race are systemically interconnected in ways that highlight how language functions to privilege some and marginalize others in schools and society (Alim, Rickford, & Ball, 2016; Flores & Rosa, 2015). Working with pre- and in-service teachers to interrogate these systems should undergird efforts that target each of the previous recommendations.

These core competencies should be considered in light of recent research on the characteristics of effective professional development (e.g., Birman, Desimone, Porter, & Garet, 2000; Darling-Hammond & Richardson, 2009; Desimone, Porter, Garet, Yoon, & Birman, 2002; Salinas, Dwyer, Paratore, & O’Brien, 2012). This research broadly suggests that effective PD is: 1) *sustained* in its duration to allow for deeper subject-area focus, more opportunities for active learning, and more coherence with teachers’ experiences; 2) *collective* in its approach to participation among teachers from the same department, grade, or subject area who work together in service of a shared professional culture; 3) *active* in promoting learning via professional learning activities including classroom observations, common planning, and

reviewing student work; and 4) *coherent*, with clear links to school and system policies, standards and assessments, and other PD. With these characteristics in mind, we see promise in embedding the 5 core literacy competencies into impactful PD and teacher education more broadly. Expanding the scope of literacy teacher education should be accompanied by a similar broadening of methods used in literacy research to inform teacher education and practice.

LITERACY RESEARCH

As with the teaching profession, literacy research must respond to demographic and policy changes. First, sampling procedures must be designed to maximize the likelihood that findings are generalizable to the populations that characterize U.S schools. Second, literacy research must be operationalized to eventually inform classroom practice (Snow, 2015). No single study or method can accomplish these tasks entirely. Below, we argue for broadening the scope of literacy research, both in terms of populations and methodological approaches.

Demographic Trends in Literacy Research

If demographic realities interact with how we think about literacy teacher education, then they also ought to be reflected in literacy research itself. We begin by acknowledging that the same inertia that grips the demographics of the teaching profession also manifests among literacy researchers and the broader gatekeepers to literacy research and publication. Indeed, Rogers (2017) noted that scholars of color rarely serve as editors of literacy journals. In a telling review, she found that, since their inceptions (in 1952 and 1969, respectively), the two journals associated with the Literacy Research Association, *Literacy Research: Theory, Method, and Practice* and *Journal of Literacy Research*, had a combined total of 165 White editors and only 14 editors of color. This, alongside the cumulative effect of repeated citations of certain scholars versus others, in multiple journals over time, begets a literacy research paradigm that amounts to

“research policing” (Brooks, 2017) and excludes the variety of perspectives and approaches that are necessary to advance literacy research in needed ways.

In terms of sampled populations, the degree to which demographic realities inform literacy research is more challenging to evaluate given the sheer quantity of literacy research that is produced annually. Indeed, in our research for this chapter, we were unable to locate any published analyses that characterized the range of sample diversity represented in literacy research with respect to race, ethnicity, or language background. In an attempt to get an initial sense of where literacy research might be and where it is going with respect to this question, we conducted our own constrained retrospective and prospective analyses.

Retrospectively, we reviewed two major publication outlets noted for high quality literacy research: *Reading Research Quarterly* and *Scientific Studies of Reading*. We reviewed empirical studies published from both journals from 1996 - 1997, 2006 - 2007, and 2016 - 2017. We assessed the diversity of the research samples in these journals by noting the reported demographics with respect to race and language. Prospectively, we reviewed recently funded literacy-focused grants by the National Center for Educational Research through the Institute of Education Sciences. In so doing, we sought to get a general sense of the demographic characteristics of funded literacy research and the priorities of federal funding to date. Findings from these studies are likely to be published in literacy research journals and might be considered one barometer of sample variability to come in the future.

Table 1 shows that the retrospective analysis yielded 14 studies from each decade, resulting in 42 overall. Generally, racial and ethnic diversity were better represented than language diversity. Across all three time points, approximately half of the studies (48%) were conducted among predominantly (85%-100%) White populations, or did not report racial

demographics. This percentage varied, from 50% in 1996 - 1997, to 36% in 2006 - 2007, and 58% in 2016 - 2017. Notably, the 2016 - 2017 studies tended to dedicate more space to discussions of overall demographic characteristics than the 1996-1997 studies. Linguistically, fully 74% of the studies were conducted among predominantly monolingual populations, or did not report linguistic characteristics of the samples. These percentages were consistent across decades, with the only notable difference being that the 2016 - 2017 studies were more likely to explicitly report that research was conducted among English-speaking populations.

Prospectively, the outlook for language representation in literacy research remains similarly limited. Just 3 of the 57 projects funded in 2016 by NCER fell under the category “English Learners,” and 4 additional projects were explicitly designed to focus on Spanish-speaking children or dual language programs. Together, these comprised just 12% of funded projects. NCER also holds periodic “Technical Working Groups” (TWGs) in which researchers and other stakeholders convene to discuss the state of research, or gaps in research, on particular topics. While none of the seven TWGs between 2012-2015 convened specifically around the topic of linguistic diversity, the need for further research on English learning was discussed in five of the seven TWGs (NCER, 2016).

These brief analyses of sample composition and research foci suggest that racial and ethnic diversity are well-represented relative to linguistic diversity, which continues to lag. The review suggests that students designated as ELLs are at times excluded from broader analyses or the focus of research on special populations of language learners who are separate from the broader student population. While these approaches are methodologically valid, and have yielded important literacy insights, they also mask the demographic realities of today’s multilingual and multiracial classrooms.

In this context, one takeaway from these findings is to consider the relative value and meaning of two broadly-used categories: English language learner (ELL) and Individualized Education Plan (IEP). Practically, carrying such labels results in the provision of individualized linguistic, cognitive, or behavioral supports in schools. Analytically, these labels can sometimes create unnecessary or unhelpful confounds. For example, ELL designations are primarily determined via English language assessments. If, for example, the researcher is trying to learn about how language functions to predict reading comprehension, an ELL analytic category may serve to explain away variation in the outcome that could be better understood with greater nuance using more precise measurement approaches.

Methodological Trends

Literacy researchers are frequently concerned with uncovering findings that have direct applicability to instructional practice. Given the inherent messiness of teaching and schools, these questions of diversity in literacy research should apply not only to demographics, but also to methodologies. Different approaches to conducting research are crucial if we want to know what processes are involved in a given outcome (e.g., vocabulary knowledge predicts reading comprehension), and how to teach to the development of those processes (e.g., approaches to vocabulary instruction that best promote its growth, which in turn boosts reading comprehension). In short, we want to know what works, why, and how. However, the translation of literacy research to practice has historically privileged a narrow range of research methodologies (primarily correlational designs) that identify those literacy skills that should be taught, alongside a similarly narrow view of the type of research that specifies how those skills are translated for practitioners (primarily randomized-control and quasi-experimental designs).

Pressley (2000) articulated this concern in his critique of the National Reading Panel's

(2000) approach to identifying phonics, phonemic awareness, fluency, vocabulary, and comprehension as the “big 5” literacy skills on which practitioners ought to focus. He argued that it was “puzzling that scientists as good as the ones on the Panel could have convinced themselves to take these conceptually and methodologically narrow approaches” (p. 169). Thus, in the early 21st century, there was concern among literacy researchers about privileging correlational and experimental designs to identify the literacy skills that children should be taught.²

Almost two decades later, it feels as if not much has changed. In the present policy era, the What Works Clearinghouse (WWC; <http://ies.ed.gov/ncee/Wwc/>) has emerged as an arbiter for translating instructional research to practitioners. The WWC has as its primary goal “to provide educators with the information they need to make evidence-based decisions,” through the use of “high quality” research. In this context, experimental designs, notably the randomized-control trial (RCT), reflect the gold standard. Riehl (2006) notes that the progression from correlational research to the RCT invokes a medical model to which the educational community is expected to aspire, and a model to which the literacy research community has been especially subjected.

The need for methodologically sound studies to guide the translation from literacy research to practice is clear. However, there is serious concern as to whether, by themselves, experimental designs are the most effective means of guiding that translation. Ginsburg and Smith (2016) provide a comprehensive overview of why RCTs in the social sciences are particularly challenging and vulnerable to a host of validity threats, both internal and external. Threats to external validity are clear in that most RCTs in the education field are conducted at a single time point and are typically not replicated elsewhere (see also Pressley, 2000). Thus, we cannot know if results of a given curricular intervention would generalize to different settings

² See Gee (1999), Snow (2000), and Gee (2000) for a thorough, and occasionally acerbic, debate on this topic.

with a new set of teachers and learners. As the authors put it, “no one argues that the results of a single RCT will necessarily generalize to different populations at different times and places” (p. 5). In addressing internal validity issues, Ginsburg and Smith (2016) highlight fully 12 potential threats to RCT implementation by examining 27 WWC-approved studies in mathematics from grades 1 - 12. While too long to enumerate here, the analysis makes clear that the unmapped social factors that impinge on the conduct of RCTs in educational research can serve to undermine the credibility of many reported findings.

IES Practice Guides (<http://ies.ed.gov/ncee/wwc/Publication#/ContentTypeId:3>) represent a relatively recent attempt to aggregate experimental and quasi-experimental studies on a given topic (e.g., reading comprehension instruction, English learners, writing, struggling readers). To date, Practice Guide findings are somewhat broadly disseminated to teachers and teacher educators through the Regional Educational Laboratories (<http://ies.ed.gov/ncee/edlabs/>) system, which arranges for broad-exposure PD for teachers in targeted districts, and through other national clearinghouse outlets. The question that arises from such dissemination is one of relevance. Gaps open before the practitioner who may struggle with texts, strategies, words, or approaches used in approved experimental studies that were tested in less-than-generalizable schooling conditions (Gitlin & Margonis, 1995).

As a result, there is a clear need to integrate diverse methodological approaches in literacy research so that we are not just asking *what works*, but also asking *why* and *how*. Indeed, Riehl (2006) notes that medical research, while often deferential to the authority of the RCT, is also characterized by a strong case-study focus that provides context to experimental findings. In educational research broadly, and literacy research specifically, we lack a coherent set of guidelines for determining whether methodologies other than experimental and quasi-

experimental designs meet rigorous empirical standards. However, such models do exist in medical research. Collingridge and Gantt (2008) outline standards for rigor in three qualitative research domains: ethnography, existential phenomenology, and grounded theory along with associated theoretical frameworks for data collection. In education, the federal Department of Education showed the will and ability to articulate rigor beyond the RCT when Kratochwill, Hitchcock, Horner, Levin, Odom, Rindskopf, and Shadish (2010) detailed procedures for effective single-subject designs in educational research. However, beyond these attempts, methodological range is not particularly well-represented when research findings are communicated with literacy practitioners. We contend that it is attention to exactly this kind of methodological detail and range that is needed to broaden our understanding of the why and how of effective literacy instruction in today's super-diverse districts, schools, and classrooms (McHugh, Park, Zong, & Yang, 2018).

A Practical Example

To illustrate what might be possible with a more diverse methodological framework guiding the research-to-practice paradigm, we offer the following description of two literacy studies with very different methodologies, that can serve to supplement one another. One study (August, Branum-Martin, Cardenas-Hagan, & Francis, 2009) is a WWC-approved study that reported on the evaluation of a language-based science curriculum in a single large district in the Rio Grande Valley of Texas. A total of 40 classrooms of students, with 10 teachers in 5 middle schools (890 total students, 98% Latinx, 562 ELs) participated. Each teacher had 4 classes, and those classes were randomly assigned to treatment or control. The treatment condition received a science instructional approach that targeted vocabulary development, oral explanations, and small group work to promote talk and language development via content instruction. The

researchers used multi-level ANCOVAs to assess treatment effects on vocabulary and science content knowledge outcomes at post-intervention. A likert-based fidelity measure was used to rate instructional quality for science instruction for the treatment and control groups. Results showed treatment effects on district-aligned, researcher-developed measures of science and vocabulary. These findings were used in a recent IES Practice Guide (Baker et al., 2014) to recommend: a) direct instruction of academic vocabulary; b) using media to promote language comprehension; and c) using small group work to discuss and write about content. However, there is no explanatory mechanism provided in the study that contextualizes the nature of the instruction or the small group interactions that took place.

The second study (Farnsworth, 2012) used a participant-observational multi-case methodology to qualitatively assess how Kindergarten-aged English learners “participate in knowledge construction in peer groups while developing language” (p.253). Farnsworth (2012) situated her study in the anti-bilingual context of an Arizona kindergarten classroom in a school where bilingual environmental print had recently been ordered removed as the result of a recent state program audit. Data sources included classroom observations, video recording, student and teacher interviews, and classroom artifacts. Discourse analysis of small group (n = 4) discussions of focal students comprising a small mathematics group were used to make sense of how students worked to construct arguments. The study examined the types of language children used in their small group discussions, particularly the means by which sophisticated argumentation skills were developed via conversations that might otherwise have been considered off-topic or non-academic. Findings articulated how students in small groups: a) learn to position themselves in these discussions; b) develop voices of authority; and c) use varied linguistic forms to develop arguments and argumentation skills. A broader of methodological perspective to inform

instructional recommendations might contextualize the findings of the August et al. (2009) RCT with Farnsworth's (2012) multi-case study to unpack the the Practice Guide recommendation to use small group work to discuss academic content. While the August et al. study used small groups in its instructional model and found effects on a content-based assessment, Farnsworth's study gave us a glimpse into the nature of small group discussions in a specific educational context. Other studies that use qualitative or mixed approaches to further unpack the broad recommendations associated with August et al.'s study would invariably provide greater ecological validity to the recommendations, and would also illuminate other important instructional details that RCTs fail to unearth, and that are germane to differing contexts in which instruction is takes place.

CONCLUSION

We began this chapter noting that in an era of information ubiquity, from both digital and print sources, literacy skills are more critical than ever. Language and literacy are the primary drivers of human communication, and viewed through a demographic lens, the sheer range of linguistic, ethnic, and race-specific factors that are likely to affect how literacy is taught and how it develops is awe-inspiring. We have argued that teachers, teacher educators, and literacy researchers must use this demographic lens to be mindful about what we are learning about literacy and its development, and how we provide literacy instruction for children and youth in this moment in history. We have further argued that what counts as quality research has been constrained in recent years due to the impact of policy expectations that limit translatable research to causal and correlational designs. Broader conversations across literacy studies that employ a spectrum of methods to answer diverse research questions will invariably spur more nuanced empirical insights and deeper instructional recommendations for today's distributed and

multifaceted literacy contexts. Ultimately, then, literacy education and research must evolve to meet the representational demands of our times. We hope this chapter sets that stage for this *Handbook of Reading Research* and for us as literacy educators and scholars who continue to learn, teach, and grow.

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Table 1. Overview of empirical studies reviewed for reporting of ethnolinguistic diversity, by race (primarily White) and language (primarily monolingual)

	Primarily White (PW)	Did not report race (DNRR)	Combined PW + DNRR	Primarily Monolingual (PM)	Did not report language (DNRL)	Combined PM + DNRL
2016 RRQ (7 studies)	2	2	4	3	2	5
2016 SSR (7 studies)	2	2	4	3	2	5
2016 Total (14 studies)	4 (29%)	4 (29%)	8 (58%)	6 (43%)	4 (29%)	10 (72%)
2006 RRQ (7 studies)	1	0	1	0*	5	5
2006 SSR (7 studies)	2	2	4	1	4	5
2006 Total (14 studies)	3 (21%)	2 (14%)	5 (36%)	1 (7%)	9 (64%)	10 (71%)
1996 RRQ (7 studies)	0	2	2	0*	5	5
1997 SSR (7 studies)	1	4	5	0*	6	6
1996/7 Total (14 studies)	1 (7%)	6 (43%)	7 (50%)	0* (0%)	11 (79%)	11 (79%)
OVERALL TOTAL (42 studies)	8 (19%)	12 (29%)	20 (48%)	7 (16%)	24 (57%)	31(74%)