

HANDBOOK OF READING RESEARCH VOLUME V

Editors

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Handbook of Reading Research, Volume V

In a time of pressures, challenges, and threats to public education, teacher preparation, and funding for educational research, the fifth volume of the *Handbook of Reading Research* takes a hard look at why we undertake reading research, how school structures, contexts, and policies shape students' learning, and, most importantly, how we can realize greater impact from the research conducted. A comprehensive volume, with a “gaps and game changers” frame, this handbook not only synthesizes current reading research literature, but also informs promising directions for research, pushing readers to address problems and challenges in research design or method.

Bringing the field authoritatively and comprehensively up-to-date since the publication of the *Handbook of Reading Research, Volume IV*, this volume presents multiple perspectives that will facilitate new research development, tackling topics including:

- Diverse student populations and sociocultural perspectives on reading development
- Digital innovation, literacies, and platforms
- Conceptions of teachers, reading, readers, and texts, and the role of affect, cognition, and social-emotional learning in the reading process
- New methods for researching reading instruction, with attention to equity, inclusion, and education policies
- Language development and reading comprehension
- Instructional practices to promote reading development and comprehension for diverse groups of readers

Each volume of this handbook has come to define the field for the period of time it covers, and this volume is no exception, providing a definitive compilation of current reading research. This is a must-have resource for all students, teachers, reading specialists, and researchers focused on and interested in reading and literacy research, and improving both instruction and programs to cultivate strong readers and teachers.

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Patricia Enciso, and Nonie K. Lesaux*

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Preface

We begin Volume V of the *Handbook of Reading Research* by raising questions that ground this research in the demands of the past, present, and future. As in previous volumes, some of these questions are fundamental and perennial: How do we define “reading”? What is the current state of reading research, and what are the possibilities moving forward? What are the challenges of studying reading development and learning in the United States and around the world? What research methods might help us more fully attend to the challenges of reading development and learning? In this volume, we explore these questions as well as others that reflect the unique and rapidly evolving demands of the current era, one filled with both gaps and possibilities. Although the word “gaps” may call up the oft-used language of achievement or opportunity, our use of the word is meant to convey the disconnect we see between research production and research applications. In this time of increasing access to rapidly changing texts, tools, and technologies; new forms of social engagement and connection; evolving workplace and societal demands with respect to the literacy skills of the individual; and growing linguistic and ethno-racial diversity, researchers are presented with new opportunities and new responsibilities to conduct research that builds understanding across groups and breaks down unproductive disciplinary, methodological, and discursive differences. We therefore situate our review of the latest advances in reading research in the phenomena that are changing the playing field of reading, learning to read, and teaching others to read.

Minding the Gaps

As the editors of this volume, we have chosen to explore several areas of opportunity and disconnect in reading research. Ultimately, understanding – and narrowing or closing – these gaps will help us match the science of reading, learning to read, and teaching reading to the diversity of today’s classrooms, the complexities of a new digital age, and the changing demands of 21st-century workforce and community participation. In this volume, we note four gaps that persist in reading research, each of which is tightly related to and implicated by or in the other three. These gaps are:

- *Translational research gap*: This focuses on the gap between the research conducted in laboratories or other controlled settings and research conducted in practice. The focus here is on both the gap between basic and applied research, and the gap that occurs as researchers translate – or fail to translate – both basic and applied research into discourse and knowledge that

is meaningful and useful in contexts of teaching and learning. This translational gap has enormous implications for the implementation gap because it is often the case that many critical dimensions of research findings are lost in translation from controlled settings to actual conditions of teaching and learning.

- *Implementation gap:* This gap exists between what we know about how reading develops and what we know about how to teach people to read – and what actually occurs in classrooms across this increasingly diverse nation, especially under conditions of poor resources, low-quality curricula, little sustained teacher education and professional development, and high accountability demands on teachers. In other words, how do practitioners actually *do* the things that we know from research could make a difference in people’s reading and learning lives? Why do the findings of research so rarely find their way into practice in any sustained or scaled way? Why does the gap between what we *know* and what we *do* rarely seem to close?
- *Relevance gap:* This gap refers to the disconnect between high-quality research and what practitioners really want or need to know to do their instructional work. It may be that the answer to the questions posed regarding the implementation gap lies in the relevance gap, which could be a matter of researchers not addressing the most pressing questions that education practitioners have. How, as researchers, do we close this gap without giving up the integrity of questions we care about and believe are important? When should researchers follow the questions of practitioners and when should researchers’ questions drive the field? What do we need to know about how to prepare readers to productively and critically engage with and within various communicative practices, particularly as those practices continue to quickly evolve?
- *Bridging gap:* Finally, the chapters address the gap in or lack of communication between and among complementary research fields, each of which could contribute to closing other gaps. How do we begin to look across various methods, epistemologies, and questions with the goal of advancing our knowledge? How do we ensure that we draw from multiple perspectives and methods without compromising the quality and integrity with respect to theories, methods, and perspectives?

To explore these gaps, we begin the volume by framing the “game changers” that demand a new approach to reading research. We then offer 23 expert reviews of both basic and applied research findings in areas with a strong existing research base. Building from our framework focused on gaps, these reviews offer significant substantive or methodological advances and are organized by their focus on addressing gaps related to readers’ identities and experiences; reading instructional practices, texts, and contexts; and reading research methodologies. These chapters offer not only syntheses but also implications for future research. Importantly, the authors themselves also bring diverse perspectives, methods, backgrounds, and experiences in the field, broadly-defined.

Following the 23 research reviews, we offer four snapshots of new research methods. Rather than provide a complete instruction manual for how to engage in a certain method, authors were asked to present a compelling portrait of what the particular method could offer to reading research. These design and methods essays are meant to inspire game-changing research to help reading scholars contribute to closing gaps.

We conclude the volume with our thoughts about the obstacles that stand in our way as we seek to close gaps, and we ponder what gap-closing work could do in the face of the game-changing conditions of the past decade and the next. In a departure from past volumes of the handbook, the conclusion starts by considering a major obstacle in gap closing: the way media present the problems of reading and education. We raise questions about how future research

might close gaps in today's challenging contexts, especially in the face of media influences on the value of evidence and knowledge production. This new generation of research has implications for the development of literacy programs, teaching practice, teacher education, systems of instruction in and out of school, conditions of schooling, and education policies.

It should be noted that the volume is organized around the field's dominant theory that comprehension and meaning making occur at the intersection of a reader, a text, and an activity, all situated in particular and multiple contexts, with parts focusing on those four dimensions (readers, texts, instructional activity, and contexts) of the interactive model of reading. However, because reading is about the intersection of those dimensions, in many cases a chapter dedicated to understanding readers might also implicate how texts work, or a chapter focused on instruction will, of necessity, attend to who readers are. Indeed, the blurring of the dimensions – although challenging for editors trying to organize the handbook parts – is a testament to the fact that the science of reading is never simple. Reading itself is a complex process, learning to read is more complex, and teaching people to read may be the most complex process of all.

Part I: Game Changers in Reading Research: Setting the Stage

In this introductory chapter, we – the editors – set the stage for the handbook by describing what we consider to be key *game changers* of the current era that shape the conduct of research, its transformative potential, and our abilities as researchers to close the gaps we have described. Some of these game changers were present, or were beginning to develop, when the last volume of the handbook was published, but, by and large, the changes we have outlined in Chapter 1 are new or are having a new impact. Some game changers will be unpacked even further in several chapters, and so we nod to them, but do not fully delineate them. Others that are less central to reading research, but that nevertheless have an impact on the work we do, receive more attention in this initial chapter.

Part II: How Increasingly Diversified Populations Change the Game for Readers, Teachers, Leaders, and Reading Researchers

Part II introduces the volume through a *demographic lens*, as Proctor and Chang-Bacon examine the characteristics of the student population and the teaching force before looking to current research and educational approaches that recognize the racial, ethnic, and linguistic breadth that characterizes children and youth in schools today. Pointing to the gap between increasingly culturally diverse student populations and the continuing static demography of the teaching population, Proctor and Chang-Bacon argue that literacy research and education must embrace a broad range of methods that will shape learning, education policies, and lifelong opportunities for future generations.

Lee's chapter moves us from a demographic lens to an incisive analysis of the complex culturally shaped "problem space" that attends classroom interactions, text selections, curricular reforms, and assessments of reading comprehension. Like Proctor and Chang-Bacon, Lee recognizes the negative consequences for youth whose reading competence is assessed under assumptions of knowledge, experiences, and timelines that may not be universal. Lee argues for research methods informed by cross-disciplinary scholarship that recognize youth capacity – and motivation – to recruit and generate knowledge from multiple, diverse pathways as they produce and interpret texts in school and across the lifespan. Lee's interrogation of the limitations of existing assessments of comprehension, standards, and conceptions of text complexity suggests implications for the design of culturally-informed and supportive learning environments.

Finally, Smagorinsky, Guay, Lewis Ellison, and Willis examine reading and reading research through a sociocultural lens. Focusing primarily on African American students' historical

achievement gap in reading as determined by school testing, the authors explore the ways in which reading is subject to social and cultural mediation in practice, policy, and research, all of which contribute to our understanding of the state of reading development in the U.S. and its schools. The authors question a common assumption that views reading as an isolated act between reader and text – a view that minimizes readers’ unique backgrounds and experiences while defining “normalcy” in relation to the dominant culture. Ultimately, their review argues for the inclusion of more diverse perspectives across all facets of reading development assessment, practice, policy, and research.

Part III: How Do Expanding Forms of Texts and Everyday Communication Change the Game for Readers, Teachers, Leaders, and Reading Researchers?

Over the past decade, digital platforms have contributed to a surge in the availability of various types of texts for readers of all ages, with specific purposes and practices that extend well beyond the “one reader–one text” models that have long defined reading research. In a comprehensive review of models for multi-text reading across print and digital texts, Bråten, Braasch, and Salmerón outline the range of reader intentions and “epistemic thinking” with multiple texts, within and outside of classroom settings. While emphasizing the value of well-developed and useful starting points in existing research, they point to the astounding gap between current theoretical frameworks for understanding teacher-directed text analyses and readers’ self-directed, online critical reading across texts and platforms.

This gap in our understanding of readers’ digital experiences becomes especially apparent in Mackey’s review of online events during the summer of 2016, a pivotal time in the shifting landscape of reading and reading research due to the proliferation of non-traditional texts and mobile devices, the 25th anniversary of the World Wide Web, and the consequential role that social media played during the U.S. presidential election and the U.K. Brexit vote. Mackey confirms the trend toward an increasing range of digital texts and the related difficulty of accessing reliable data about readers’ usage, digital format, and content. Ultimately, her analysis contributes to our understanding of how readers select and interact with text in the digital age and highlights the importance of monitoring how critical, social, and deep reading play out across a range of text types and reading conditions.

Similarly, Baron’s review of international research on digital reading points to gaps in our understanding of the potential differences between how people read on digital screens versus print – in other words, exploring the question of whether the container matters. Baron synthesizes existing research on learners’ interactions with digital text and, like Mackey, she highlights the complexity and importance of obtaining reliable or focused demographic, cognitive, perceptual, and usage data. Baron concludes by suggesting future research questions focused on building a deeper, more meaningful understanding of digital reading with implications for pedagogical practice.

Finally, in the last chapter of this part, Campano, Nichols, and Player continue with questions about digital access and reader agency through the lens of multimodalities and colonization in literacy research. They argue that rather than explore diverse modes in ways that can reproduce hierarchies of competence and exclusion through a “confrontation between different literate traditions” (Rasmussen, 2012, p. 3), researchers should, instead, recognize the power of considering multimodalities through a postcolonial lens, whether in digital or face-to-face composing and reading. Through multimodal literacies, across print and digital platforms, a “multiplicity of identities (even within the self), languages, literacies, and meaning-making practices” (p. 106) are mobilized and reclaimed. This analysis has implications for practice and future research.

Part IV: How Do Expanding Conceptualizations of Readers Change the Game for Teachers, Leaders, and Reading Researchers?

In recent years, reading research has faced many opportunities – and responsibilities – to better match and reflect the growing diversity (cultural, linguistic, and economic) among learners in the U.S., and to consider how these dimensions of diversity necessarily influence the conceptualization of reading and inform effective models of instruction. At the same time, there has been a well-warranted press to ensure that we are taking a sufficiently comprehensive view of the reader, focusing on the role of cognitive and non-cognitive factors in text comprehension, or by examining the pathway between language acquisition and reading comprehension, across different developmental stages, for example. In turn, this set of chapters is a reminder that a more expansive view of the reader should inform a next generation of theories, research, and instructional approaches, to ensure a 21st century knowledge base.

In their introductory chapter to this part, Uccelli, Phillips Galloway, and Qi examine the findings from studies conducted on adolescents' academic language – studies using both qualitative and quantitative methods. Uccelli and colleagues outline four research developments that have helped to transform the field's understanding of academic language, all of which point to a need for a more inclusive definition of this notion of school-relevant language. To this end, Uccelli and colleagues offer a new term, Language for School Literacy, defined as “the repertoire of discourse practices and academic language skills that learners gradually internalize as they flexibly enact the socio-cultural norms of reading, writing, and learning at school” (p. 156). At a time when the school-age population continues to diversify on many dimensions, and the press for developing students' academic language continues to increase, this more inclusive and integrated conceptualization of academic language offers an important contribution, and brings with it implications for future research and classroom practice.

Expanding the discussion of learner diversity, Fox explores the relationship between readers' affect-related and cognitively-based individual differences. Highlighting the role that readers' feelings and beliefs play in their interaction with and comprehension of texts, Fox argues that understanding this affective diversity is key to understanding why and how people read, as well as their reading-related outcomes. Fox concludes with suggestions aimed at closing the gaps between affect and cognition within the theoretical frameworks used to explore reading, and in the context of instructional practice.

Next, Khan and Justice address the divides in research, theory, and practice related to children's early language acquisition and later reading outcomes. This chapter seeks to bridge the gap between these bodies of work by highlighting connections between early language acquisition and future reading outcomes and by proposing a developmental model of reading comprehension designed to connect early and middle childhood. Khan and Justice also highlight classroom practices that have the most potential to foster the language-related skills that are key to later reading success, suggesting an interconnected view of language and reading development that has the potential to support instructional continuity across grade levels and, ultimately, “provide a more coherent learning pathway for children” (p. 206).

Building on this discussion of early language and reading development, Mancilla-Martinez and McClain attend to the gaps as they relate to our understanding of children's vocabulary learning. In this chapter, they synthesize the research related to the complex factors that influence how children from diverse backgrounds acquire vocabulary, paying special attention to the gaps between what we know and do not know when it comes to children's language environments, language acquisition processes, and their opportunities to hear and use increasingly sophisticated and diverse vocabulary at school and at home. Mancilla-Martinez and McClain close by

discussing promising practice-based approaches that support children's vocabulary development and by suggesting areas for future research.

Like vocabulary, prior knowledge plays an important role in helping children understand and comprehend texts. In their chapter, Cervetti and Wright explore and synthesize the research related to different types of topic, domain, general, and cultural knowledge, drawing connections between these forms of knowledge and children's language and reading development. Though a great deal of research has been conducted on the topic of knowledge and its relation to children's reading skills, much of this research has resulted in a largely singular instructional focus and approach – one aimed at activating children's prior knowledge to support their interaction with and comprehension of various texts. Cervetti and Wright argue that opportunities remain to further explore how supporting children to explicitly build and integrate knowledge shapes their language and reading skills. Ultimately, bridging the gap between our understanding of knowledge activation, knowledge building, and knowledge integration has implications for designing and enhancing discipline-specific and conceptually-rich instructional practice.

Allen and McNamara close this part with an examination of the role of higher-order thinking and metacognition among diverse groups of learners. In their literature review, they explore distinctions between surface and deep comprehension with a focus on adolescent and adult readers, younger developing readers, second language learners, and adult literacy learners. They identify gaps between theoretical understandings of the role of higher-order thinking and metacognitive strategies, which research has shown to support children's reading comprehension, and applications of these theories in practice. Too often, they argue, educational practice prioritizes a linear conception of literacy skill development that introduces higher-order and metacognitive strategies only after readers have mastered basic decoding skills. Allen and McNamara conclude by offering suggestions for bridging these translation and implementation gaps.

Part V: How Do Expanding Conceptions of Teacher, Reader, and Text Interaction Change the Game for Reading Researchers, Teachers, Leaders, and Policy Makers?

Building on previous parts, Part V explores expanding conceptions of reading, readers, and texts in the contexts of learning and teaching people to read. Because the chapters in this part are situated within the contexts of teaching and learning, the authors have necessarily paid particular attention to the implementation gap – the gap between what is known about reading instruction and instructional responses in practice.

This part begins with chapters that focus on expanded conceptions of individual readers. Hanno, Jones, and McCoy move past assumptions that the relationship between self-regulation and reading is unidirectional, moving from self-regulation to reading, and review current literature to offer a conceptual model of the bidirectional relationship between self-regulation and reading through early literacy development, which has significant implications for practice. The authors review six intervention studies that encapsulate the bi-directional relationship between literacy development and self-regulation, and close by offering implications for instructional practice and research.

In the next chapter, Hwang and Connor continue to review studies on individual readers, expanding conceptions of the differences and influences that contribute to an individual's cognitive development in relation to reading. Also moving beyond a one-way directional view of reading proficiency, Hwang and Connor offer the Lattice Model as a way to portray reading development as a complex web of cognitive, linguistic, and comprehension processes that are influenced by an individuals' learning experiences in the home, school, and community. The

Lattice Model supports the notion of a reciprocal effect of reading comprehension on cognitive development.

Next, Skerrett examines the social and cultural differences in reading development and instruction. Following a review of the foundations of sociocultural perspectives on literacy, Skerrett discusses studies on aspects of reading instruction that have largely been informed by sociocultural perspectives, including those that explore reading identity, choice texts, shared texts, instruction across contexts, and integrating sociocultural and cognitive factors in reading instruction. In so doing, Skerrett attends to the individual reader as situated across multiple contexts, and thus provides an expanded conception of the influences of reading instruction.

Moving from readers to texts, Townsend, Barber, and Carter attend to what has long been a contested term: academic language. Informed by work in the area of Systemic Functional Linguistics (SFL), the authors define *academic language* and *academic literacy* as two, often overlapping, categories of instructional targets. They review intervention studies intended to improve academic language at the elementary and secondary levels and contrast this body of research with intervention studies aimed at improving academic literacy skills. In so doing, they clarify the distinction between these two overlapping, but distinct, domains, and discuss implications for future studies on the relationship between academic literacy, vocabulary, and reading comprehension. The authors raise questions about how to attend to ideological and raciolinguistic issues of what counts as academic language and literacy while drawing on a “neutral” framework, such as SFL, and call for instruction that makes space for critical conversations that explore the functions of academic language.

Gamez continues with a chapter that considers what it might look like for classrooms to make space for critical conversations, not just with an eye toward the functions of language, but also toward the ways in which classroom discussions influence reading comprehension, overall. Gamez expands notions of what makes for high-quality language experiences in school and at home, moving from a focus solely on the quantity of teacher or caregiver words to one that considers the syntactical complexity and vocabulary diversity of dialogue. She concludes by suggesting practical applications to increase high quality conversations in classrooms, including intentional read-aloud opportunities for younger readers and, for adolescent readers, text-based classroom discussion amongst peers.

Moving from primarily spoken language to language in written texts, Greenleaf and Hinchman delve into the research-based practices that support students to engage with disciplinary texts. Focusing on the domain of science, the authors take a “social practices” view of disciplinary literacy, exploring the role of texts in disciplinary inquiry and knowledge building, and the characteristics of such texts. Their review of the research reveals implementation gaps, particularly around how students learn to read specialized texts from a developmental perspective in contrast to a social practices view. When it comes to teaching with disciplinary texts, gaps exist between what is known about how to support teachers to use disciplinary texts in their classrooms and what is known about teachers’ understanding of the epistemologies and practices of their discipline. The authors call for more research on literacy instruction that simultaneously develops requisite skills, strategies, and dispositions for discipline-specific reading and reasoning; builds knowledge about subjects of study; and meaningfully engages with the lives and languages students bring to the classroom.

Also expanding our conception of texts in instruction, Nogueron-Liu and Lammers’s chapter reviews studies about the features and affordances of digital tools, and their implications for classroom-based practices. Literacy practices within classrooms can be understood as activities mediated by a wide range of meaning-making tools – including multiple languages, media, texts on various platforms (e.g., print books, CD-ROMs, websites), and devices to access content. The authors argue that by framing new technologies as mediational tools, researchers can better

understand the history embedded in digital platforms and software, and the ways in which they are constructed, adopted, and changed. The authors review studies that reveal how new forms and practices for reading texts can be shaped by the features of available digital tools, which are in turn driven by different equity-based goals. Teachers then select digital tools based on their needs to meet curriculum standards, as well as their efforts to teach and introduce new literacy dispositions.

Next, Thomas, Bean-Folkes, and Coleman review the history of critical literacy from its beginnings in the early 20th century, “for the place where a story *begins* influences the meaning that can be derived from that story” (p. 432). In restoring the traditions of critical literacy, the authors provide implications for youth who use participatory media sites to become civically involved, to construct and understand themselves in the context of the narratives that make up their world, and to choose to read texts that reflect themselves. The authors review studies of teaching practices that question and disrupt the status quo and discuss the hurdles that educators and researchers may face in bridging the definition, relevance, implementation, and translation gaps.

Finally, Sabey and Leander consider the relationships amongst ethics, digital literacies, and education within the global dynamics of this era. They begin by framing digital literacies as social practices that produce localizing and globalizing movements and contribute to the homogenization and heterogenization of the political, social, and cultural forces within any cultural realm of interpretation or “figured world” (p. 437). Within these tensions, the authors consider how literacy scholarship can engage more directly with the development of ethical digital social practices, to which they turn to the theory of cosmopolitanism. They review literature on the applications of cosmopolitanism to present a framework on how “unsettling encounters,” “critical reflections,” and “hospitable dialogues” all play roles in cosmopolitan interactions, with a goal towards more ethical digital literacy education (p. 439 ff).

Part VI: How Do Research Methods Change the Game for Reading Researchers and Policy Makers

As noted at the beginning of this preface, the handbook does not only review research; it also aims to frame future research agendas. To this end, this set of chapters focuses on research methods that offer significant advances to bridging gaps amongst reading research methodologies; reading instructional practices, texts, and contexts; and readers’ identities and experiences. Each chapter in this part is not intended to be an exhaustive review of the particular method, nor is it intended to teach readers how to enact the method, but rather to make readers aware of the assumptions that undergird the approach, the goals of using the approach, and the possibilities for using the approach to address, if not close, the gaps that frame this volume.

First, Rowan, Maher, and White examine the use of video data in reading research. The authors describe trends and opportunities related to video data collection, storage, labeling, and analysis in the context of qualitative and quantitative studies. Rowan and colleagues highlight the promise of video data as a potentially powerful tool for addressing or closing gaps in reading research, particularly in terms of bridging new and traditional research methods, narrowing the gap between basic and applied research, and addressing issues of classroom implementation. They close by describing their own research, which incorporates video data and suggests implications for future scholarship.

Next, Cho explores methods for studying reading across various forms of media, including through the use of concurrent verbal protocols, cued verbal reports, task-based discourses, ethnographic interviews, eye movement measures, and log files. In an increasingly complex digital age, Cho argues that researchers can and should use diverse research methods and measures to better

understand readers' cognitive engagement with a variety of media and text types. Ultimately, his review provides a reminder that "theory and methodology are symbiotic" and that a consistently evolving conception of research methods will be key to bridging understanding and implementation gaps given the multifaceted, complex, and complicated nature of reading in different media text environments.

Seeking to bridge gaps within and between disciplines, Noble and Simon explore methods for studying the neurobiological basis of reading. The authors acknowledge the high costs associated with neuroscientific methods such as brain imaging, but they argue that there is, in fact, substantial value inherent in exploring reading by getting under the hood through this relatively new approach. Noble and Simon outline three central and promising areas of neuroscientific reading research ripe for further review, including the use of neuroscience to elucidate differences in the brain that may not be detectable through behavioral approaches alone, the use of neuroscience to predict reading impairments that may not otherwise be observable in very young children, and the use of neuroscience to generate evidence that is particularly compelling for decisionmakers and stakeholders across the fields of research, policy, and practice.

Finally, Martínez-Roldán illustrates the use of multiple methods for exploring how community and linguistic diversity mediate reading. These methods include some that are familiar – a traditional qualitative case study method, for example – as well as some that may be considered novel, such as a combination of a sociocultural approach influenced by Vygotsky's concept of mediation and by Cultural-Historical Activity Theory (CHAT). Martínez-Roldán describes how such an approach, which is characterized by a focus on both the use of cultural tools in learning and a conception of learning as an "activity system," can be used both to address translation and implementation gaps related to bilingual children's language and reading development and, ultimately to "generate social change and combat inequalities" (p. 492). The chapter closes with a discussion of the author's use of this generative research approach to bridge gaps between researchers, teachers, and teacher candidates who seek to understand and respond to emergent bilingual learners' unique strengths and needs.



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Part I

Game Changers in Reading Research

Setting the Stage



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Game Changers in Reading Research

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Patricia Enciso, and Nonie K. Lesaux*

To frame Volume V of the *Handbook of Reading Research*, we situate the examination of reading research in today's contexts of reading, learning to read, teaching reading, and using what we read in the world. In thinking about how reading is studied and practiced, however, we focus on uncovering some of the social, economic, and political conditions of research, teaching, and learning contexts—conditions that shape how reading occurs; develops; and is learned, taught, and studied. These contextual conditions also contribute to widening, mediating, and/or shrinking the gaps highlighted across the volume. Specifically, we interrogate the factors that change the game, in ways that may be positive or negative, for students, teachers, leaders, and researchers.

Whether researchers are concerned with examining the relationships between knowledge and comprehension processes, documenting the social and cultural practices that shape meaning making, or analyzing the impact of digital technologies on reading, they invoke interrelated systems with different levels and loci of influence, from macro (state and societal systems), to meso (school and education policies and systems), to micro (classrooms, informal learning spaces, homes, and families). The graphic in Figure 1.1 represents just some of the conditions that are changing the game for teachers, school leaders, families, policy makers, and reading researchers. Beyond state and national systems, researchers also recognize the influence of global inequalities, economies, and migrations requiring new approaches to educational practice and research that value diverse ways of knowing, being, and doing.

Many demands press on and push out of these systems, posing challenges both to teaching reading and to the conduct of reading research within the real conditions of schooling. These game-changing demands necessitate that we work *as a field* to close the gaps. Intersecting conditions across interlocking systems make intervening in any one condition—or outcome of a condition—in any given space incredibly difficult for teachers, leaders, policy makers, and researchers, especially if these players are not attempting to reach across the gaps. This volume highlights gaps in reading education and research that have widened and, we argue, must be addressed by our field. In particular, educators and researchers are increasingly aware of the responsibility to understand readers more fully—as social, emotional, cognitive, and cultural beings whose quality of life depends, in part, on supportive and informed learning environments. Taking up this responsibility, we identify the game-changing conditions that have shaped contemporary contexts for reading research and have influenced the organization of this volume and the research reviews that follow.

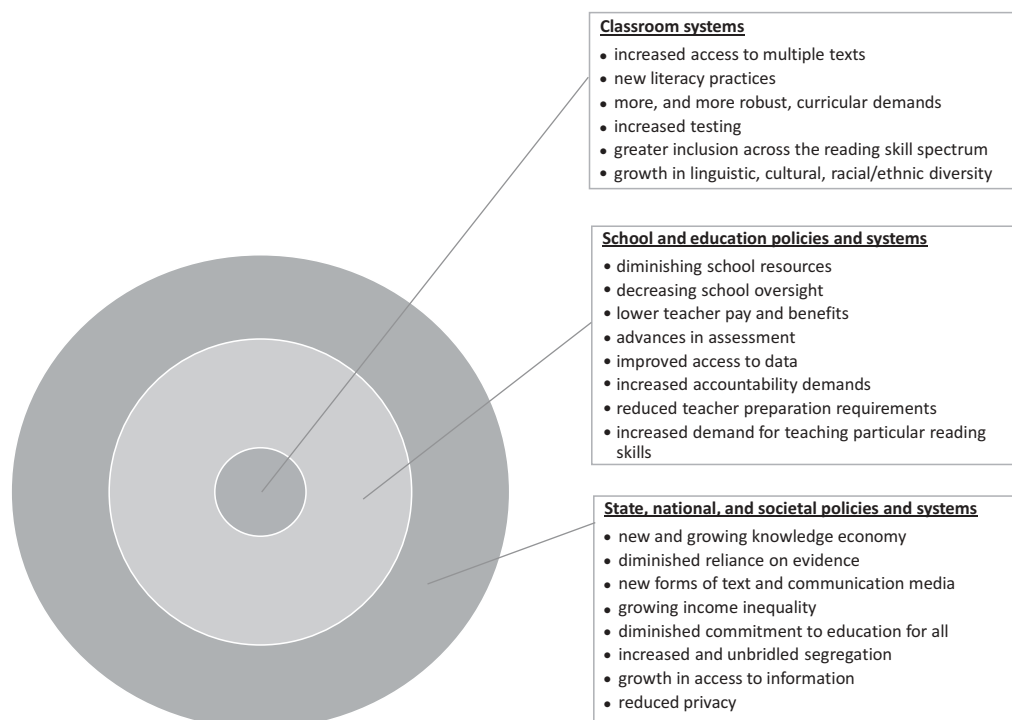


Figure 1.1 Conditions of education contexts that shape reading research and practice

Describing the Game Changers

Some of the conditions or game changers we outline below are familiar to those who have followed 21st-century literacies work in which education is shaped by an increasingly global, information-oriented “fast times” economy (c.f. Gee, 2000). Increasing availability of information—both filtered and unfiltered, edited and unedited, accurate and questionable—for example, is a game changer in terms of our thinking about what and how students need to learn, and especially about how they learn to read. Availability of information has also intensified in the sense that information is delivered constantly and in multiple forms (image, word, sound). Sometimes one bit of information delivered in a particular medium conflicts with other bits, delivered in different media, requiring readers to make sense of these various forms simultaneously, and at a speed not required in reading print on paper. The speed of access to that information has also changed how we think about literacy, and reading, in particular. Children and youth, some argue, do not only need to learn to read for meaning but also need to learn how to seek, sort, and evaluate the information they read because so much information is produced so quickly, and often with little verification or editing.

At the national level, other demands were ushered in with the education reforms of the Clinton, Bush, and Obama administrations. The disaggregating of test data promoted by every presidential administration since the Clinton administration revealed the ways that many children were, actually, being left behind. Disaggregation of data also illuminated the fact that who got left behind depended a great deal on race, socioeconomic status, and language skill (see Proctor

and Chang-Bacon, Chapter 2, this volume, for specific analysis of these demographic challenges to learning literacy and to academic and economic success writ large). Moreover, many U.S. policy makers argued that no child was learning at the levels necessary to ensure U.S. success in a global market; similar trends in global policy contexts—especially in Western developed countries—can also be seen as more and more countries sought increased learning outcomes for their children and youth (World Bank, 2019).

Coupled with decreasing economic prominence and increasing trade imbalances, the United States responded similarly in the late 1990s and early 2000s as it did in the Sputnik era of the 1950s, casting the education system as one in crisis, and demanding new standards and new accountability. The fear of being left behind globally inspired discourses of competition (“race to the top”) as an antidote to the pending “crisis.” Competition discourses worldwide revolve around what are variously referred to as “market-based education reforms” that purport to make the work of educating children more competitive, thus allowing the market (i.e., parents, and in some cases, youth) to decide on education practices by choosing the best options for their children or themselves (Plank & Sykes, 2003). The notion of choice is meant to give people options on a variety of dimensions, from quality of offerings and pedagogy; to the perspectives or values espoused in a given school setting; to the size, location, safety, schedule, and other dimensions of school operation. The fact that opportunities to choose are mediated by social, economic, and political realities of people’s lives (Hanushek, Kain, Rivkin, & Branch, 2007) is often overlooked in the discourses of choice and competition, creating game-changing conditions in a range of school contexts (Bifulco & Ladd, 2006; Saporito, 2014). These market-based reforms are often associated with public charters, voucher movements, and alternative routes to teacher certification.

In addition to thinking about these demands, we approached this handbook focused on the ways in which a new global economy produces material effects on education practice, policy, and research. A dominant theme throughout the handbook, therefore, is the question of how reading researchers need to account for these effects in their work. What some might think of as distal influences on reading, learning to read, teaching reading, and conducting reading research, we actually posit as game changers—ones that demand reading researchers do a better job of closing gaps. In what follows, we describe several of these game changers, noting that some chapters in this volume take these game changers on in very specific ways. For those game changers not addressed in the handbook as independent chapters, we draw attention to the conditions they produce and the questions these changes should raise for reading researchers.

A Changing Ethnic, Racial, and Socioeconomic Landscape

Increasing migration across national and local boundaries has dramatically shaped the composition of not only U.S. classrooms, but also classrooms around the world. As Proctor and Chang-Bacon (this volume, Chapter 2) describe, the U.S. student population is increasingly diverse, even in locations outside major cities. What has not changed radically, however, is the teaching workforce, which remains largely homogeneous. The contrast between the racial, cultural, and linguistic backgrounds of predominantly monolingual, white, female teachers and their plurilingual, racialized, religiously and culturally diverse student populations is a game changer, especially when considering that reading instruction and research can be skewed toward assumptions of universal childhoods (Bloch, Kennedy, Lightfoot, & Weyenberg 2006; Dumas & Nelson, 2016) and equitably resourced learning environments (Cook-Harvey, Darling-Hammond, Lam, Mercer, & Roc, 2016).

In their chapter, Proctor and Chang-Bacon explicitly address the demands and implications of forging research and educational change within the context of widening demographic and

economic differences in school and community contexts. Recognizing demographic changes as well as long histories of racialization, Lee (this volume, Chapter 3) and other authors outline precisely how researchers and educators might realize new relations of trust and engagement with youth who desire and deserve more robust learning environments. The gap among theory, research, and teaching, however, remains and demands cross-system investment in a vision of equity and change.

Workforce and Changes in the U.S. and Global Economy

A global economy has changed the way people in any country think about educating children, youth, and adults for the world of work and for active community participation. Although often cast as the effects of a more technological, information-based economy, the reality is that the diminished U.S. manufacturing and labor portfolio has simply reduced options for our students. It is worth noting that service jobs actually still exist in large numbers in our society, but that wages for those jobs have not kept pace with inflation (Bailey & Belfield, 2019; Krugman, 1997, 2017), suggesting that the demand for “knowledge workers” might be overstated.

Despite these economic analyses that call attention to wage rather than knowledge disparities, it remains the case that attention to literacy—and reading in particular—is a crucial need in a society whose “game” has changed in these ways. Given that the U.S. economy is no longer based on manufacturing, learning to read is a necessary ingredient of full participation in a society that depends on and demands literacy. “Learning to read” signifies more than the ability to call out words or to answer multiple choice questions on a test. It involves reading widely and deeply for meaning, and using what one reads to do real work in the real world, and sifting through the welter of information that comes to individuals in an information economy. It also refers to developing the skills and competencies that allow a reader to question and challenge received knowledge in a given text, or taken-for-granted assumptions about how the world works, that shape disciplines and other domains of practice. In sum, 8th or 10th grade basic literacy skills are insufficient for life; it is more difficult than ever before to be successful in a society in which the great majority of high-paying jobs require at least a college education and, typically, advanced degrees, which has implications for reading research and educational practice.

New Forms of Text and New Communication Practices

In this knowledge economy, for better and for worse, youth and adults communicate identity, knowledge, and aspiration across digital platforms offering boundless exposure to and interaction with texts, images, and sounds. Although communication is the primary driver for digital connectivity, youth and teachers are also reading and interpreting a continuously changing flow of new textual forms. This scenario produces both generative change in the conceptualization of text and challenging gaps in identifying when, what, and how reading is happening.

Bråten, Braasch, and Salmerón (this volume, Chapter 5), Mackey, (this volume, Chapter 6), and Baron (this volume, Chapter 7), all frame and address the question of “what is a text” in terms of the container. Does it matter if the text is read online or in hard copy? As a fundamental focus for basic reading research this question of text form is a game changer: Where, when and how does reading happen if the text is not sourced and vetted? What happens when readers are searching for information and constructing meaning across platforms with multiple online and offline texts? What is happening to readers, by readers, and with readers as they read and create texts for new purposes?

Some of the greatest implementation gaps between research and schools appear to lie in teachers' and school leaders' assumptions about what new text forms do and do not do, and in how to use different media to enhance learning, rather than to distract from it. Many researchers are creating, evaluating, and/or implementing digital platforms to support comprehension (c.f. Allen & McNamara, this volume, Chapter 14), community reading with youth (Noguéron-Liu and Lammers, this volume, Chapter 21) and disciplinary literacy in science education (Greenleaf and Hinchman, this volume, Chapter 20). Importantly, many researchers address the problem of "the text" across different domains of reading and literacy education. As their research suggests, reading researchers will continue to need rigorous, open-minded, and systematic cross-domain research on texts and the power of texts in all their forms in a new decade.

Testing

Within education systems, and throughout society, testing exerts both obvious and nuanced influence on reading theory, practice, and research. Tests have an impact on how students, teachers, parents, administrators, legislators, and the general public conceptualize growth in literacy, the appropriateness of curriculum and instruction, suitable assessment, and learning outcomes. It is difficult to overstate the influence of testing on how reading curriculum, instruction, and student learning occur in the everyday. In some respects, 21st-century schooling has been marked by an ever-escalating race to teach and learn at an ever faster, development-defying pace, so that youth will eventually be competitive in a fast-paced global economy. Testing mediates the discourse between reading research and reading practice, and therefore is responsible for connections and gaps in how the two communicate. For decades, testing has been—and likely will continue to be—a game changer.

Reading assessment, as part of the overall testing context, has been addressed in multiple chapters as a game changer for researchers who have developed innovative approaches to contextualizing and illuminating students' knowledge, language skills, and motivations to read (see Fox, Chapter 10; Khan and Justice, Chapter 11; Mancilla-Martinez and McClain, Chapter 12; Cervetti and Wright, Chapter 13). Although there is promise in the reading assessment space, the larger testing movement has, in many cases and contexts, simultaneously reframed children's reading development timelines and teachers' focus on the relationship between learning to read and measurable outcomes. This kind of thinking is part of the market-based reform ethic, which produces strategies that promote competition, such as pay for performance or value-added models applied to assessment. These models examine what the teacher has done to make a difference in child learning, but do not account for all the challenging conditions that the child might experience in life or in school classrooms.

This story is not new. As early as 1987, Alexander, James, and Glaser described the phenomenon of habitual testing constraining the broad conceptualization and appreciation of academic subjects and student development when conducting a review of results of the National Assessment of Educational Progress (NAEP):

unfortunately, we are apt to measure what we can, and eventually come to value what is measured over what is left unmeasured. The shift is subtle and occurs gradually.

(p. 23)

As a result, particular aspects of students' reading development—those most frequently measured by consequential tests—become the markers of progress as well as the foci of reading research design and rationale. Testing figures in how society regards schools, teachers, and students and how it conceptualizes achievement, accountability, and quality. As test scores receive most

attention, an expected result is that positive influences on students' reading test scores will receive attention, and many other influences will be ignored. Testing and test scores are interwoven into the microsystems of daily classroom life, and into economic and political macrosystems of our society. Thus, testing has changed the game for teachers, leaders, and reading researchers by exerting a profound influence on both reading research and reading instruction practice at all grades (but especially at the primary grades).

Increasing Demands for Student Learning

Prompted by less-than-desirable results produced in the No Child Left Behind—and corresponding testing regime—of the 1990s, together with the warnings about the turn to a knowledge economy during the same era, the Council of Chief State School Officers (CCSSO) and the National Governors Association (NGA) worked to produce more robust learning opportunities for students, on the assumption that the poor test performance was a result of inadequate curriculum and/or instruction. The approach was to try to unify U.S. education through the establishment of common learning standards, resulting in the Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects (as well as Common Core State Standards for Mathematics, rendered in a separate document). As described by the framers in the final document,

the Standards are meant to be, (1) research and evidence based, (2) aligned with college and work expectations, (3) rigorous, and (4) internationally benchmarked. A particular standard was included in the document only when the best available evidence indicated that its mastery was essential for college and career readiness in a 21st-century, globally competitive society.

(CCSSO & NGACBP, 2010, p. 3)

The document is also intended to be “a living work, as new and better evidence emerges, the Standards will be revised accordingly” (2010, p. 3), although to our knowledge, no revision of the Standards has been offered in the past nine years since their launch, despite significant advancements in literacy research and notable critiques of gaps in the standards (many of which are presented in this volume).

More noteworthy, the standards were just that: end goals, standards for learning, rather than curricula or professional practice guides. Teachers and school leaders were expected to achieve these standards without corresponding attention to professional development, the creation or curating of viable text resources, or the development of curricular materials. To be sure, numerous groups—including reading researchers and commercial publishers—have crafted materials, professional development opportunities, and text resources purported to be aligned with the CCSS, but no official documents or strategies were developed to accompany the standards. As the launch date makes clear, the standards have been in place for nine years, but the results of national testing regimes such as the National Assessment of Education Progress (NAEP, 2019) show a [non-significant] *decrease* in scores since 2009 (with a modest increase in scores at both 4th and 8th grade from 1992, well before the new standards were launched). Only one state, Mississippi, made statistically significant gains in reading, although their gains bring them only equal to the average score of 4th-grade students in the United States, which remains well below proficient according to NAEP metrics.

In this volume, with a lens towards forward progress and momentum, researchers look to pedagogies that support and extend students' knowledge and language development (Cervetti and Wright, Chapter 13) and toward assessments and related activities that address unique

configurations of students' knowledge and language capacity relative to narrative forms and complexities (Allen and McNamara, Chapter 14). They also view students' and teachers' knowledge in a dynamic, flexible relationship with their linguistic repertoires and the academic discipline they are studying (Townsend, Chapter 18 and Uccelli, Chapter 9). Reading researchers are addressing the demand for increased student learning, for a highly diverse population, including and especially multilingual learners. Going forward, the challenge will be translating and implementing research findings across larger landscapes of classrooms and communities. Although standards will be with us for some time, the core of reading education will have to continue to focus on the interrelated practices of language in use, knowledge production, and conceptual understanding across varied narrative forms and within specific disciplinary domains.

Children Experiencing Stress(ors); Teachers Experiencing Burn-Out

One game changer that is not examined in its own chapter in this volume is the increasing level of student anxiety and trauma witnessed in the latter half of the decade between publication of HRR4 (2010) and this volume (2020). School districts around the United States are experiencing unprecedented levels of trauma, stress, and anxiety, especially in neighborhoods where youth are regularly policed, where drugs and guns are endangering lives, and where economic growth is a dire issue (Fine et al., 2003; Morsy & Rothstein, 2019). The trauma of experiencing hunger and housing insecurity, daily exposure to violence, and toxic living conditions is felt by students and teachers in many communities across all regions of the U.S. and world (Dutro, 2019; World Health Organization, 2017). Both youth living in under-resourced and well-resourced communities also experience stressors associated with bullying, high-stakes testing, toxic political discourses, and sexual harassment, often promulgated through social media (Nutt, 2018; Shalaby, 2017).

The increase in documented stress and anxiety is precipitous and unprecedented, as evidenced by the highest U.S. suicide rate in 28 years, at 13%, an increase of 24% between 1999 and 2014 (Curtin, Warner, & Hedegaard, 2016). In addition, teachers in challenging school environments name the trauma their students experience as the greatest job challenge they face, producing what is being labeled as “secondary trauma” (Walker, 2019). Even a cursory search in the popular press paints a frightening picture of this game changing condition of schooling, especially when one attends to the fact that schools and schooling-related processes themselves can cause trauma (Gaffney, 2019). As Lee (this volume, Chapter 3) points out, it is difficult to learn to read—or learn anything—when experiencing threat. Indeed, threats to any student's well-being, especially among indigenous youth, youth of color, and youth who identify as LGBTQ, means that the conditions of schooling that increasingly define human value in terms of test results and compliance are barely tolerable for youth or teachers.

In their review of research on protective factors in early childhood literacy and development, Hanno, Jones, and McCoy (this volume, Chapter 15) highlight the significance of “burnout cascade” and the ways both children and adults experience heightened stress and fractured relationships when teachers feel inadequate and unable to cope with children's needs. They argue, as do other researchers, that knowledge about and attention to one's own and others' cultural histories (Thomas, Bean-Folkes, and Coleman, this volume, Chapter 22), capacity to listen (Sabey and Leander, this volume, Chapter 23), and perception of students as competent and multifaceted (Lee, Chapter 3; Campano, Nichols, and Player, this volume, Chapter 8) can create more humanizing and expansive opportunities for learning. How, then, can these concerns become visible, prioritized features of research in reading education? If schooling and classroom conditions, interactions, and instruction are actually increasing stress, then what needs to change?

Declines in the Teacher Workforce and in Teacher Preparation

In relation to the stress experienced by teachers, a game changer not featured as its own topic in this volume is the decline in the number of well-prepared teachers in the U.S. That is, we have a teaching workforce and teacher preparation landscape that is shifting alongside many other conditions that relate to educating today's students to high levels of literacy. Specifically, the United States has witnessed increasing shortages in the overall teacher labor market since the 2008 recession when teacher salaries stagnated and many traditional teacher benefits (e.g., pension plans) were reduced or cut altogether. Furthermore, as noted in a 2019 Economic Policy Institute report, "The current national estimates of the teacher shortage likely understate the magnitude of the problem because the estimates consider the *new* qualified teachers needed to meet *new* demand" (Garcia & Weiss, 2019, p. 4). Exacerbating the numerical shortage is the lack of qualified teachers (Garcia & Weiss, 2019; Sutchter, Darling-Hammond, & Carver-Thomas, 2016). Specifically, according to the Center for American Progress (Partelow, 2019), enrollment in teacher preparation programs has declined by one-third since 2010, suggesting that there is a shortage of *prepared* teachers (Sutchter et al., 2016). The decline in teachers prepared in accredited programs is coupled with a small increase in individuals prepared in alternative certification programs; however, these programs are not required to report on outcomes (or any other data) under the Higher Education act, thus making it impossible to track completion numbers, quality of preparation, or years of service with any certainty (Partelow, 2019).

The declines tracked in teacher preparation programs vary significantly, with Oklahoma experiencing the highest decline at 80% and Massachusetts the lowest, at 15%. Michigan, which has seen a 67% decline in enrollment also had a largest decline in completers of U.S.-based teacher preparation programs, at 54%, although Oklahoma was not far behind. Coupling declining enrollments with drops in completion results in classrooms populated by teachers who are not accredited by teacher education programs. In Michigan, the shortage is so dire—especially in mathematics, sciences, world languages, and special education—that the substitute teacher pool has been depleted. Requirements for long-term (extended) substitute teachers—people who can teach an entire year in the same school—have been reduced to 60 credit hours in any subjects (i.e., not necessarily in a program of study). Some public charter schools in Detroit, Michigan, for example, employ extended substitute teachers as 100% of their teaching force (Wilkinson & French, 2019), which means that all day, every day, and all year long, children are being taught to be "college and career ready" by people who have not themselves graduated from college.

Research sheds light on the reasons for the declines; although providing details of the specific findings is beyond the scope of this chapter, the Economic Policy Institute report implicated working conditions—including many outlined above—together with lack of preparation (especially related to being asked to teach outside of one's expertise) and salaries as the most reported and/or observed explanations for teachers choosing not to enter, and choosing to leave, the profession (Garcia & Weiss, 2019).

Finally, whether a product of a diminishing workforce or a result of market-based reforms, changes in teacher certification and professional education standards are evident nationwide. According to data from the U.S. Department of Education's National Teacher and Principal Survey in 2015–2016, 8.8% of teachers do not have a standard state certificate or a professional certificate; 17.1% took a route to certification not associated with a higher education institution (USDOE, 2017).

These statistics, taken together with the fact that in the 2015–2016 academic year, 22.4% of teachers had been teaching for five or fewer years, and 9.4% had been teaching less than two years (USDOE, 2017), shed light on major issues in developing reading skills and competencies to a high degree among all students. Ultimately, it is clear that the nation's children, especially

those in the most economically challenged areas of the country, where teacher shortages are at higher levels (Garcia & Weiss, 2019), are not being taught by the most prepared teachers, especially when it comes to both primary grades reading instruction and disciplinary literacy instruction (see Greenleaf and Hinchman, Chapter 21, on the importance and challenge of sophisticated disciplinary literacy teaching).

Given the gap between what we know about how the act of reading occurs and what we know about how to teach the process of reading to large and diverse groups of children simultaneously, these statistics highlight a major game changer in reading instruction and reading research. Teaching reading is a complex practice that requires sophisticated knowledge of language and linguistics, of reading processes and practices, of child development, and of the specialized learning needs of children from all backgrounds. Layer those knowledge demands at the level of the teacher with the need to understand the cultural and linguistic practices among an increasingly diverse population of children, while also meeting new standards that will be routinely tested under ever-changing testing regimes, and it should be clear that the game has changed significantly for teachers, school leaders, and reading researchers. It is especially ironic—or tragic—that this game-changing shortage of well-prepared teachers, irrespective of their training pathway, comes at a time when classrooms are more diverse, texts are more fluid and people's reach through text and text media is more global, the economy has changed and with it what learners need, accountability demands are on the rise, and learners are experiencing higher rates of stress and trauma.

What Is Reading Research in These Game-Changing Times?

As we described, the world is changing; societies are changing. Correspondingly, the work of educating the population is changing. These changes result from the complex dynamics of local and distant politics, economics, and preferences for particular reading research and practice. Policymakers and parents demand higher standards for student learning, with outcomes measured on increasingly high-stakes tests. Meanwhile underpaid, and in many cases underprepared, teachers are navigating the challenges posed by student needs and profiles even as they are learning to use new and multiple text media and technological tools that change dramatically from day to day and that provide access to increasingly unfiltered and unedited information. Game changing, indeed.

These changes therefore have implications for reading research. Changing contexts and demands within the complex systems of reading education, reading teacher education, and research on literacy learning and teaching require that we take a hard, informed look at what reading research is, why we do it, and how we know what we know (i.e., What counts as evidence? What doesn't count?). Finally, reading researchers need to ascertain how knowledge and knowledge production matter for children and youth, their teachers, school leaders, and those who influence reading policies in schools and school systems. The focus here is on the new demands and whether our "old" purposes, assumptions, methods, and designs are up to the task of producing research that addresses the contexts and conditions of change. This motivation requires that we ask questions, such as:

- Who are the students we teach, and in what ways are they different or similar as students in relation to prior generations?
- Who comprises the teaching workforce in the U.S. and around the world?
- What are the implications of these differences in student and teaching populations for their teaching and learning—the everyday collaboration in the classroom? What do those implications mean for literacy teacher education and for literacy research?

- What do we know about individual student readers' development? How is development understood in contexts of migration, war and civil/or unrest, and economic inequality?
- What do we know about reading as a cultural and social practice, again in the contexts of migration, war and/or civil unrest, and economic inequality?
- What does the lack of high-quality teacher preparation mean for the implications of the two prior questions? How do teachers who may know little about individual development and about cultural and social practices engage with and support today's diverse groups of learners?
- What do we know about the changing nature of texts, how they influence reader behaviors individually and socially, and how they are used in varying contexts?
- What do we know about instruction that considers students' individual reading development, social and cultural practices, and the demands of new texts and new ways of communicating? How can we translate these ideas into practice in ways that help teachers and school leaders with the game changers they face?
- Finally, how do we know these things? What are the most sophisticated designs and methods for researching reading? What are the most appropriate avenues of inquiry? How can we work across fields, disciplines, and epistemologies, to bridge gaps in the knowledge of reading researchers and to design even more sophisticated research designs than we have had in the past?

Each of the “what do we know” questions begs a corresponding, “what do we do with what we know” question. This handbook is published in the midst of challenging times for society, both domestic and global, and there are no easy solutions for closing the gaps made salient by these game changers. The chapters that follow take up these questions and offer the beginnings of multiple research paths forward. We invite readers to take up these questions throughout the handbook and to consider how the next decade of researchers can respond.

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Part II

How Increasingly Diversified Populations Change the Game for Readers, Teachers, Leaders, and Reading Researchers



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Demographic Realities and Methodological Flexibility in Literacy Teaching and Research

C. Patrick Proctor and Chris K. Chang-Bacon

The ability to comprehend text and interrogate its credibility has become increasingly critical in an era of information saturation. As a result, literacy, now more than ever, is the foundation upon which content knowledge and informed civic participation 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 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 a 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% 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% 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 (2006) showed how such actions have clear implications for literacy outcomes. In a three-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, & Harring, 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 population 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 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; McNeill, 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

Good literacy instruction requires 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 (Gómez & 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 learners, and struggling readers were almost entirely based on the NRP report (Greenberg, Walsh, & McKee, 2015). By contrast, the International Literacy Association (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, 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., Raphael, 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, 2007a, 2007b), 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). Furthermore, 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).

In the 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% 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% in urban areas, two thirds of this PD consists of fewer than eight 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 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 five 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 the second recommendation, 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 (2019) 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 five 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 2.1 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 three of the 57 projects funded in 2016 by NCER fell under the category “English Learners,” and four additional projects were explicitly designed to focus on Spanish-speaking children or dual language programs. Together, these comprised just 12% of funded projects.

Table 2.1 Overview of empirical studies reviewed for reporting of ethnolinguistic diversity, by race (primarily White) and language (primarily monolingual)

	<i>Primarily White (PW)</i>	<i>Did not report race (DNRR)</i>	<i>Combined PW + DNRR</i>	<i>Primarily Mono-lingual (PM)</i>	<i>Did not report language (DNRL)</i>	<i>Combined PM + DNRL</i>
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%)

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 learner (EL) 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, EL 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 EL 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 (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 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.

The Institute of Education Sciences 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 et al. (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 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 ten teachers in five middle schools (890 total students, 98% Latinx, 562 ELs) participated. Each teacher had four 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 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 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 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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Notes

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

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