



Tracing the History of Disciplinary Literacies

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For the last 15 years, the United States has experienced a resurgence of interest in domain-specific literacy practices (e.g., Jacobs, 2008; Lee & Spratley, 2010; Moje, 2008, 2010; Shanahan & Shanahan, 2008). This resurgence arose in response to what was framed as an adolescent literacy “crisis” (Goldman et al., 2016; Jacobs, 2008). In the United States, the 1990s and aughts saw improvements in standardized reading scores in the primary grades, yet scores were flatlining for students in the third and fourth grade and beyond. Thus, stakeholders assumed that students were presumably not receiving support in “learn[ing] how to learn” from discipline-specific texts (Jacobs, 2008, p. 14), and disciplinary literacy was born—or, depending on one’s perspective, reborn.

Yet, as we will detail in the rest of this chapter, exactly what disciplinary literacy is and how it differs from what many consider to be its forerunner, content-area literacy, is still very much in development. In this chapter, we provide a historical account of shifts in content reading instruction, disciplinary literacy, disciplinary literacies, and multidisciplinary literacies. Importantly, manifestations of what reading and literacy instruction looks like within or beyond subject areas have shifted over time and, as such, research connected to these overlapping eras should be viewed through these lenses if it is to be more fully understood (Spires et al., 2018). We

do all of this in an effort to situate the work of the multiple, diverse voices represented in the current volume within the broader history in which reading and literacy research have attempted to understand the complex but undoubted relationships between literacy and content-area learning. In our final section, we describe how chapters in this volume are both unique and connected, each raising significant questions that, we hope, will support the field to better support teachers and students.

HISTORICAL OVERVIEW

Researchers and scholars have understood for over 100 years that literacy development and learning in the content areas are interwoven. In 1908, Edmund Huey, a psychologist, noted that students would need to learn to read widely in the “central subjects” if they were to read well (Anders & Guzzetti, 1996, p. 342). Like Huey, Thorndike (1917) highlighted that it might be the “study of geography, history, and the like” that supports children as they learn to read (Anders & Guzzetti, 1996, p. 282). Indeed, in these examples, both Huey and Thorndike presaged the now robust finding that greater knowledge of the wider world—learned not only in core academic subjects like social studies, science, and mathematics, but also in domains outside the so-called core, including music and physical education, and, indeed, outside of school—is a key support for reading comprehension (e.g., Wright & Cervetti, 2017; Hiebert, 2020; Kaefer, 2020).

Despite this recognition that reading and content-area learning are interrelated, no real effort to integrate reading into the content areas was pursued until the late 1940s, when basal readers began to incorporate stories using social studies and science content with suggestions on how reading could be integrated into these subject areas (Smith, 1965). Interest continued to build through the 1950s and into the early 1960s. In 1961, one of the most influential leaders in the area of reading, William S. Gray, stated the need for teaching reading in the content as being urgent and critical to ensure competent readers in the future (Gray, 1961). During the latter half of the 1960s, and to the present day, the emphasis on integrating reading into the content areas exploded exponentially, giving rise—first—to what has become known as content-area literacy.

Writing in what was arguably the heyday of the content-area literacy movement, McKenna and Robinson (1990) defined *content literacy* as the “ability to use reading and writing for the acquisition of new content in a given discipline” (p. 184). The idea was—and, importantly, continues to be—that, if educators across the content areas work to better support a set of content-neutral reading comprehension skills, such as making

predictions or monitoring comprehension, students would be able to perform better and learn more in specific areas of study (e.g., Cheek & Cheek, 1983; McKenna & Robinson, 1990; Dobbs et al., 2017). For example, content-area literacy research lays out several reading comprehension strategies that typically fall into “one of seven categories of cognitive routines that good readers presumably use fluidly and automatically: making connections, generating questions, visualizing, making inferences, determining importance, synthesizing, and monitoring or fixing up comprehension” (Dobbs et al., 2017, p. 16). In short, content-area literacy is about supporting students’ general reading comprehension and vocabulary needs by using domain-neutral strategies that may or may not be modified for use in various subject areas. This stance became especially predominant in the 1980s and 1990s: By 1986, 36 states had required all teachers—even those teaching subjects such as art and physical education and “other fields tending to involve little use of prose materials”—to take coursework in content-area reading (McKenna & Robinson, 1990, p. 185).

Yet, as was mentioned at the outset of this chapter, the turn of the most recent century led literacy researchers to “call for change,” as is evident in the subtitle of Moje’s (2008) seminal piece on the need to more intentionally “foreground the disciplines” in secondary literacy instruction. Specifically, researchers like Moje (2007, 2008, 2010), Shanahan and Shanahan (2008), and others began to attend more carefully to literacy as a set of domain-specific practices, a subfield that is now known as disciplinary literacy (Gabriel & Wenz, 2017). Disciplinary literacy rests on the idea that literacy, broadly defined, differs markedly across academic disciplines and other types of domains, and thus students must be taught discipline-specific ways of reading, writing, listening, speaking, and thinking if they are to participate in disciplinary work (Gabriel & Wenz, 2017; Moje, 2015; Shanahan & Shanahan, 2014). Importantly, students’ participation in discipline-specific inquiry practices is central to an understanding of disciplinary literacy (Spires et al., 2020), as is the idea that to be literate in a discipline, students must understand how knowledge is constructed in that domain (Goldman et al., 2016; Moje, 2010). As Moje (2010) highlights, “Disciplinary literacy is about providing learners with the opportunity to engage in the kinds of knowledge production and representation, on a limited scale, of course, that members of the various disciplines enact on a regular basis” (p. 275).

Thus, disciplinary literacy, as a construct, rests on the assumption that its supposed precursor, content-area literacy, is invested in content-neutral literacy strategies. Yet, not all literacy researchers are willing to grant that assertion: Dunkerly-Bean and Bean (2016) argue that “the ‘new’ strategies of disciplinary literacy have their foundations in content-area literacy, and in fact utilize many similar approaches” (pp. 11–12). In their view,

disciplinary literacy owes an historical debt to content-area literacy, since content-area reading approaches often did attend to discipline-specific ways of supporting adolescents' literacy. Thus, they argue persuasively that disciplinary literacy is, in fact, an outgrowth of content-area literacy. As they put it, "by positioning content reading approaches as 'passe' and removed from the needs of 21st century learners, proponents of disciplinary literacy somewhat conveniently dismiss the integrated approach to discipline and strategies that is a hallmark of content-area literacy instruction" (Dunkerly-Bean & Bean, 2016, p. 11).

The quote above highlights the ways in which the debate between proponents of content-area literacy and of disciplinary literacy have ranged from polite and collegial (e.g., Heller, 2010; Moje, 2010) to direct and dismissive, with some advocates of disciplinary literacy declaring that content-area literacy is "dead" (Shanahan, 2012a, 2012b). Yet, cooler heads have prevailed, and both conceptual and theoretical work continue to point to students' need for both content-neutral and domain-specific approaches to literacy. Brozo and his colleagues (2013), while arguing a case for the "radical center," worry that heated debates between content-area and disciplinary literacy advocates risk creating an "artificial *literacy-content dualism* . . . which hinders healthy discussion about how to effectively teach students in the content classroom" (p. 353; emphasis in original). They are supported by empirical work, which finds that students and teachers rely on a blend of domain-specific and content-neutral literacy strategies to support students' subject-specific inquiry (e.g., Dobbs et al., 2016), as well as by statements put out by the International Literacy Association (ILA, 2017), which contends that "literacy—including the interpretation and production of texts and representations—is vital to participation and learning in different academic disciplines. Content area literacy and disciplinary literacy are umbrella terms that describe two approaches to literacy instruction embedded within different subject areas or disciplines" (p. 2).

Others agree that debates between content-area and disciplinary literacy present a false dichotomy between the two, describing that both approaches to literacy are very much alive and well in intellectually rigorous and equitable classrooms. For example, Spires et al. (2020) note the need for both approaches, differentiating between the two elegantly: "Whereas content literacy is literacy *in* a domain, disciplinary literacy is considered the literacy *of* the domain" (p. 11). Even Dunkerly-Bean and Bean (2016), whose critiques of disciplinary literacy are—as mentioned above—at times fiery, finally conclude that if the field is to move forward, we must allow that content-area literacy approaches "underplay differences across content-areas," whereas disciplinary literacy has not attended well to differences between "disciplines," which present very differently in secondary

schools than they do in university curricula (p. 19). They suggest, instead, that scholars turn their attention to interdisciplinary work. Thus, if anything has characterized work in content-area and disciplinary literacy, it has been ongoing controversy and critique. In the following sections, we outline some of the most pressing, describing how chapters in this volume contribute to ongoing questions in the field.

CONTROVERSIES

Epistemological Questions

What Is a Discipline?

As disciplinary literacy began to arise as an area of research interest, so, too, did the critique that disciplinary literacy, as a construct, lacked validity (e.g., Dunkerly-Bean & Bean, 2016; National Council of Teachers of English [NCTE], 2011; Heller, 2010). According to the NCTE position paper “Literacies of the Disciplines” (2011):

Discipline is likewise a complicated term. One complication arises from *the fact that disciplines, as they are conceived in higher education, do not exist in secondary schools. Content areas or school subjects in secondary schools are organized differently—social studies, for example, does not exist as a discipline although it is a high school subject—and school subjects often operate to constrain or control how knowledge is presented, while disciplines emphasize the creation of knowledge.* (italics added for emphasis)

Critics noted that the subject areas in K–12 schools are not necessarily disciplines. Even so-called core subject areas, such as social studies, science, and the English language arts, are an amalgamation of multiple disciplinary traditions. Social studies, for example, draws on the very different fields of the social sciences (i.e., psychology, sociology, and political science); the liberal arts, including subjects like history, religion, and philosophy; and economics. In the same way, English language arts—as it is typically taught in middle and high schools in the United States—draws from multiple disciplines, including literary criticism, literary theory, linguistics, language arts, creative writing, composition, rhetoric, journalism, and communications” (Spires et al., 2020, p. 29). Middle and high school science classes, too, are typically informed by multiple disciplines, drawing predominantly from the natural sciences, especially the life and physical sciences, earth and space science, and sometimes engineering (Spires et al., 2020). Thus, the charge has been that disciplinary literacy ultimately lacks cogency because the disciplines, as taught in secondary schools, are not disciplinary at all.

If the charge that disciplinary literacy is not based in discipline-specific work shakes the foundations of this new subfield, then it seems that the whole thing would crumble and fall in the face of content taught outside of so-called core content areas. We must not forget that so-called core subject matter is not the only content taught in schools. Indeed, work on disciplinary literacy in the visual arts, the performing arts, world languages, and physical education is less well developed in the literature than is work on disciplinary literacy in core subject areas. Recent scholarship is working to rectify this, as scholars have been pushed to consider what it means for teachers of art, drama, music, or physical education to teach disciplinary literacy (see Chapters 6, 7, and 8, this volume). Many of the scholars now pushing those boundaries are represented in this book.

What Is a Text?

With the evolution of texts from traditional books to e-books to multimodal and interactive formats, what constitutes a text today can be multifarious. Some argue that the literacy landscape has morphed from one centered on passive consumption of information to one ripe for active engagement (Dalton, 2014). While the degree to which this manifests in K–12 classrooms varies widely, these formats offer new pedagogical possibilities that include narration, multiple representations, e-text features, online communities, and even technical assistance to support student learning. Along with these enhancements come challenges to their integration and productive usage in disciplinary literacy teaching and learning (Duhaylongsod et al., 2015). Frameworks like Universal Design for Learning (UDL) offer support for the development of word learning and reading comprehension across the disciplines (Coyne et al., 2012; Dalton et al., 2002, 2011; Dalton & Palincsar, 2013). Positioning students to read for meaning and read like writers enables them to construct more sophisticated disciplinary understandings (Gravel, 2018).

The specific role of a text in disciplinary literacy work has been discussed for more than 20 years (Moje et al., 2000), yet debates remain about its purpose(s). Simply put, if students are to read, there needs to be text available in all subject domains across a number of modalities for offline and online viewing (Kervin et al., 2017). Access to high-quality texts is a prerequisite to expanding on and integrating disciplinary literacies in the content areas (Berson & Berson, 2013). Hiebert (2017) reports that even from the early years (1) texts need to be meaningful, (2) reread, and (3) substantial enough to stretch reading capacities. Shifts in textual diets based on learner demands (e.g., using a digital resource to support vocabulary growth in complex texts) can support disciplinary learning and language development (Trainin et al., 2016). These opportunities are further

explored in Chapter 13 (this volume), on transcending disciplinary literacy in a digital world.

Whether traditional texts or alternative forms, the role of text in disciplinary literacy (Colwell, 2018) serves as a springboard to dive deep or extend the reach of a lesson, the primary drawback of which is time constraints. Effective disciplinary literacy instruction requires balancing the coverage of content with hands-on investigations and making ongoing adjustments through progress monitoring (Howell et al., 2021).

For Whom Is Disciplinary Literacy Intended?

As Shanahan and Shanahan (2014) ask, “Does disciplinary literacy have a place in elementary school?” With the rise of Common Core State Standards (CCSS; National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010), informational texts were deemed to be equally important to literature in the elementary grades. Differences between content-area reading in social studies and science, for instance, begin to emerge well before middle and high school. Schools are beginning to foster disciplinary literacy skills in an effort to bolster comprehension development in the elementary years (Shanahan, 2021). While wide reading of multiple texts related to a topic has been a mainstay in many elementary classrooms, the associated approaches to interrogate texts and deepen disciplinary knowledge in these grade levels remain underresearched. The CCSS paved an avenue for the preparation of disciplinary literacies, prioritizing it as a primary focus of K–12 literacy development (Litman et al., 2017).

“The hierarchical progression of disciplinary literacy may be problematic” (Spires et al., 2020, p. 12). Habits of mind are possessed and developed at an early age (Moje, 2008); these can be fostered and therefore enable students to negotiate the textual demands of sophisticated terminology, newly introduced text features, and varied writing styles. The need to connect literacy and content learning throughout K–12 classrooms is widely agreed upon; the ways to accomplish this in a traditional classroom context are debated. As Hargreaves and O’Connor (2018) discuss, more research is needed on how teachers can effectively collaborate within disciplinary literacy, especially in the elementary grades.

Not only are younger students expected to develop disciplinary literacy skills, but what constitutes equitable disciplinary literacy instruction also warrants further attention (Wrenn & Gallagher, 2021). Critical disciplinary literacy practices offer opportunities for teachers to highlight topics related to social justice through inquiry (Gabriel & Wenz, 2017). Williams and Martinez (Chapter 10, this volume) assert that intentions and beliefs don’t always manifest in classroom practices. They describe how to provide “students [with] access to the specialized literacy practices of respective

disciplines while simultaneously working toward making disciplinary scholars and practitioners accountable to the repertoires of practice, and communication of communities of color who have been ignored, erased and deemed deficient within many calls for disciplinary literacy instruction” (p. 194). Providing culturally relevant content connections and resources promotes authentic identity formation and language practices, as explored by Shriener in Chapter 5 (this volume), on creating spaces for integrative and responsive disciplinary literacy instruction.

PATHWAYS FORWARD: MULTILITERACIES, DIGITAL LITERACIES, AND CULTURALLY RESPONSIVE SUSTAINING PEDAGOGIES

In our work with teachers, we note that they often report familiarity with the term *content-area literacy*, but describe less recognition of the term *disciplinary literacy* (Kane et al., 2021). Yet, in surveys of their self-efficacy related to knowledge and practices that are related to disciplinary literacy, teachers report confidence in enacting many of these instructional practices (Kane et al., in press). This may be because many of the precepts that undergird disciplinary literacy similarly undergird other major theories related to effective literacy instruction (Kane & Savitz, 2022). By making these intersections more explicit, work in disciplinary literacy can be both expanded and enriched. Thus, in thinking about the future of disciplinary literacy, we draw parallels, especially, between what scholarship in multiliteracies and in culturally responsive sustaining pedagogies might mean for the future of disciplinary literacy.

More than 25 years ago, the New London Group (1996) published the seminal piece “A Pedagogy of Multiliteracies,” in which they coined the term *multiliteracies*. In the intervening years, the idea of multiliteracies has often been glossed as the need to expand our understanding of texts—and indeed of literacy itself. Specifically, the New London Group (1996) argued that students need opportunities to make meaning not only of traditional text-based forms, which rely primarily on linguistic representations, but also of other semiotic systems, including the visual, spatial, gestural, auditory, and multimodal. Because of its focus on multimodal semiotic systems, the theory of multiliteracies has been deeply influential in the study of digital literacies: As Leander and Boldt (2013) have described, “More than any other text, ‘A Pedagogy of Multiliteracies’ streams powerfully through doctoral programs, edited volumes, books, journal reviews, and calls for conference papers, as the central manifesto of the new literacies movement” (p. 23).

Although the theory of multiliteracies has been a major contribution to literacy studies more generally, it has not necessarily been central to

the development of disciplinary literacy as a subfield. Yet, a deeper look at the underpinnings of multiliteracies—and its attendant pedagogical approaches—resonates with work in disciplinary literacy and certainly stands to strengthen it. Specifically, the theory of multiliteracies' focus on multiple modalities has important implications for disciplinary literacy—or, perhaps better stated, disciplinary literacies. As we have noted, disciplinary literacy is an outgrowth of content-area literacy strategies, and research on both content-area and disciplinary literacy has been roundly critiqued for narrow interpretations of both literacy and text. In their review of how content-area literacy textbooks treated literacy in mathematics, Siebett and Draper (2008) pointed out that these textbooks often implicitly (and sometimes explicitly) defined literacy only in terms of reading print text, and often included pedagogical advice that undervalued, ignored, or violated epistemological assumptions embedded in mathematics as a discipline. More recently, Hinchman and O'Brien (2019) warned that, like content-area literacy before it, disciplinary literacy runs the risk of paying too little attention to the epistemological assumptions that underpin disciplinary work. In light of these critiques, work on multiliteracies becomes even more poignant. If disciplinary literacy is, as a field, to attend more carefully to disciplinary epistemologies and processes of knowledge production, then it must also take seriously what the theory of multiliteracies posits: that "text" must be understood as constituted by a variety of often overlapping and multimodal semiotic systems, including the linguistic, spatial, auditory, gestural, and visual.

That is, research in disciplinary literacies must seek to understand—and devise ways to teach—students how to make meaning across the multiple, often multimodal, and increasingly digital text types that constitute disciplinary work. In this vein, research by Ivar Bråten and his colleagues (2020) is promising: It supports the field to better understand students' sense making about multiple and multimodal texts, broadly defined. This work dovetails with work in disciplinary literacy in important ways and highlights an important role for disciplinary literacy instruction. Specifically, Bråten and colleagues (2020) review an expanding research base that has found that, if students are to make sense of multiple, multimodal texts, they require epistemic stances on knowledge that assume knowledge is open-ended, constructed, and available for interpretation and reinterpretation. As we have described, one of the central goals of disciplinary literacy teaching is to support students to better understand processes of knowledge production. We note, then, that when students participate in disciplinary forms of inquiry and learn about discipline-specific processes of knowledge production, students may have opportunities to see firsthand that knowledge building is an uncertain social process of construction and reinterpretation.

This focus on knowledge production and critique also aligns with another important direction for future research in disciplinary literacies: how disciplinary literacy can become a catalyst for social justice and educational equity in the ways its advocates have described (e.g., Moje, 2007; Colwell, 2018; Kane & Savitz, 2022). The New London Group (1996) wrote their seminal work on multiliteracies at a time when the “old, mono-cultural, nationalistic sense of ‘civic’” was in decline (p. 69). They argue, as have others (Gutierrez et al., 2009; Milner, 2020; Alim & Paris, 2017), that the role of schooling in our capitalistic society has been to require, perpetuate, and police “one cultural and linguistic standard” (p. 69). Research continues to point out how detrimental this goal is for those outside the linguistic and cultural mainstream—not only does it strongly limit students’ access to social goods, such as economic opportunity and career advancement (Bucholz et al., 2017; Gee, 2009; Kinloch, 2017; New London Group, 1996), it also has potentially severe affective and cognitive effects on students’ learning opportunities (e.g., Nasir et al., 2021).

However, if disciplinary literacy is not careful, it has the potential to become yet another instantiation of the mainstream, exclusive cultural and linguistic standards that many of its advocates seek to broaden. It is true that major advocates of disciplinary literacy have seen disciplinary literacy instruction as a potential means through which students might learn how knowledge is produced so that they might also learn how to critique those means of knowledge production that serve to marginalize and disempower (e.g., Moje, 2007; see also Colwell et al., 2018; Kane & Savitz, 2022). As Moje (2007) has noted:

Disciplinary literacy theory and research—regardless of particular perspective—suggests possibilities for the development of rigorous subject-matter knowledge. This subject-matter knowledge is developed as a function of the development of ability to produce and represent knowledge in multiple forms, the ability to analyze how others have represented knowledge and therefore to assess truth claims, and with that analytic power in hand, the ability to challenge long-standing—even mainstream—claims to knowledge and, ultimately, to produce new knowledge that will benefit society. (p. 33)

Importantly, this is also a central tenet of culturally responsive and sustaining pedagogies: that educators should use language to connect with learners and to provoke engagement, critical thought, and participation in content associated with lived worlds. In Chapter 12 (this volume), Wilder and Manderino explain how disciplinary literacy might be taught in ways that avoid reinstating the status quo and equip students with the linguistic and literacy practices they need. The goal, as they highlight, is to support students to understand how knowledge is constructed in the disciplines and

to critique those processes of knowledge production in pursuit of the goal of greater social equity and improved life chances for people who have been historically marginalized.

Another important area for disciplinary literacies to broach in the coming years is interdisciplinarity. As Dunkerley-Bean and Bean (2016) have pointed out, “an effective 21st century curriculum emphasizes connections, connections among the subjects taught and connections between school subjects and real life” (p. 20). A noticeable omission in content-area literacy and disciplinary literacy discussions is the increasing need for curricula that cross over disciplinary boundaries (Damico & Baildon, 2011) to address societal issues and problems that require an interdisciplinary perspective (Dunkerley-Bean & Bean, 2016). As Ian O’Byrne (Chapter 13, this volume) points out, serious attention to multiliteracies is one essential step in this direction.

Yet, if disciplinary literacy is to reach these admittedly lofty goals, it must make its way out of the academy and into PreK–12 schools. We believe that the following chapters provide a wealth of information for PreK–12 educators and higher education professionals alike with a comprehensive account of disciplinary literacy in core content-area classrooms, disciplinary literacy in other areas, opportunities and challenges in disciplinary literacy, and updated research methodologies and information on teaching teachers.

REFERENCES

- Alim, H. S., & Paris, D. (2017). What is culturally sustaining pedagogy and why does it matter? In D. Paris & H. S. Alim (Eds.), *Culturally sustaining pedagogies: Teaching and learning for justice in a changing world* (pp. 1–25). Teachers College Press.
- Anders, P. L., & Guzzetti, B. J. (1996). *Literacy instruction in the content areas*. Harcourt Brace.
- Berson, I., & Berson, M. (2013). Getting to the core: Using digital resources to enhance content-based literacy in the social studies. *Social Education*, 2(5), 102–106.
- Bråten, I., Braasch, J. L. G., & Salmeron, L. (2020). Reading multiple and non-traditional texts: New opportunities and new challenges. In E. B. Moje, P. P. Afflerbach, P. Enciso, & N. K., Lesaux (Eds.), *Handbook of reading research* (Vol. 5., pp. 79–98). Routledge.
- Brozo, W. G., Moorman, G., Meyer, C., & Stewart, T. (2013). Content area reading and disciplinary literacy: A case for the radical center. *Journal of Adolescent and Adult Literacy*, 56, 353–357.
- Bucholz, M., Casillas, D. I., & Lee, J. S. (2017). Language and culture as sustenance. In D. Paris & H. S. Alim (Eds.), *Culturally sustaining pedagogies: Teaching and learning for justice in a changing world* (pp. 43–60). Teachers College Press.

- Cheek, E. H., Jr., & Cheek, M. C. (1983). *Reading instruction through content reading*. Merrill.
- Colwell, J. (2018). Selecting texts for disciplinary literacy instruction. *The Reading Teacher*, 72(5), 631–637.
- Coyne, P., Pisha B., Dalton, B., Zeph, L., & Cook Smith, N. (2012). Literacy by design: A universal design for learning approach for students with significant intellectual disabilities. *Remedial and Special Education*, 33(3), 162–172.
- Dalton, B. (2014). E-text and e-books are changing the literacy landscape. *Phi Delta Kappan*, 96(3), 38–43.
- Dalton, B., & Palincsar, A. (2013). Investigating text-reader interactions in the context of supported e-text. In R. Azevedo & V. Alevan (Eds.), *International handbook of metacognition and learning technologies* (pp. 533–544). Springer.
- Dalton, B., Pisha, B., Eagleton, M., Coyne, P., & Deysner, S. (2002). *Engaging the text: Reciprocal teaching and questioning strategies in a scaffolded learning environment* (Final report to the U.S. Department of Education, Office of Special Education Programs). CAST.
- Dalton, B., Proctor, C. P., Uccelli, P., Mo, E., & Snow, C. E. (2011). Designing for diversity: The role of reading strategies and interactive vocabulary in a digital reading environment for 5th-grade monolingual English and bilingual students. *Journal of Literacy Research*, 43(1), 68–100.
- Damico, J. S., & Baildon, M. (2011). Content literacy for the 21st century: Excavation, elevation, and relational cosmopolitanism in the classroom. *Journal of Adolescent and Adult Literacy*, 55, 232–243.
- Dobbs, C. L., Ippolito, J., & Charner-Laird, M. (2016). Layering intermediate and disciplinary literacy work: Lessons learned from a secondary social studies teacher team. *Journal of Adolescent and Adult Literacy*, 60(2), 131–139.
- Dobbs, C. L., Ippolito, J., & Charner-Laird, M. (2017). *Investigating disciplinary literacy: A framework for collaborative professional learning*. Harvard Education Press.
- Duhaylongsod, L., Snow, C. E., Selman, R. L., & Donovan, M. S. (2015). Toward disciplinary literacy: Dilemmas and challenges in designing history curriculum to support middle school students. *Harvard Educational Review*, 85(4), 587–608.
- Dunkerly-Bean, J., & Bean, T. W. (2016). Missing the savoir for the conaissance: Disciplinary and content area literacy as regimes of truth. *Journal of Literacy Research*, 48(4), 448–475.
- Gabriel, R., & Wenz, C. (2017). Three directions for disciplinary literacy. *Educational Leadership*, 74(5), 1–8. Retrieved from www.ascd.org/ell/articles/three-directions-for-disciplinary-literacy.
- Gee, J. P. (2009). *Social linguistics and literacies: Ideology in discourses* (3rd ed.). Routledge.
- Goldman, S. R., Britt, M. A., Brown, W., Cribb, G., George, M., Greenleaf, C., . . . Project READI. (2016). Disciplinary literacies and learning to read for understanding: A conceptual framework for disciplinary literacy. *Educational Psychologist*, 51(2), 219–246.
- Gravel, J. W. (2018). Going deep: Leveraging universal design for learning to

- engage all learners in rich disciplinary thinking in ELA. *Teachers College Record: The Voice of Scholarship in Education*, 120(3), 1–40.
- Gray, W. S. (1961, February). Looking ahead in reading. *Educational Digest*, 26, 26–28.
- Gutierrez, K. D., Morales, P. Z., & Martinez, D. (2009). Re-mediating literacy: Culture, difference, and learning for students from nondominant communities. *Review of Research in Education*, 33, 212–245.
- Hargreaves, A., & O'Connor, M. T. (2018). *Collaborative professionalism: When teaching together means learning for all*. Corwin.
- Heller, R. (2010). In praise of amateurism: A friendly critique of Moje's "Call for Change" in secondary literacy. *Journal of Adolescent and Adult Literacy*, 54, 265–273.
- Hiebert, E. H. (2017). The texts of literacy instruction: Obstacles to or opportunities for educational equity? *Literacy Research: Theory, Method, and Practice*, 66(1), 117–134.
- Hiebert, E. H. (2020). *Teaching words and how they work: Small changes for big vocabulary results*. Teachers College Press and Scholastic.
- Hinchman, K. A., & O'Brien, D. G. (2019). Disciplinary literacy: From infusion to hybridity. *Journal of Literacy Research*, 51(4), 525–536.
- Howell, E., Barlow, W., & Dyches, J. (2021). Disciplinary literacy: Successes and challenges of professional development. *Journal of Language and Literacy Education*, 17(1), 1–26.
- International Literacy Association. (2017). *Literacy leadership brief: Content area and disciplinary literacy: Strategies and frameworks*. Author. Retrieved from www.literacyworldwide.org/docs/default-source/where-we-stand/ila-content-area-disciplinary-literacy-strategies-frameworks.pdf?sfvrsn=e180a58e_6.
- Jacobs, V. A. (2008). Adolescent literacy: Putting the crisis in context. *Harvard Educational Review*, 78, 7–39.
- Kaefler, T. (2020). When did you learn it?: How background knowledge impacts attention and comprehension in read-aloud activities. *Reading Research Quarterly*, 55(S1), S173–S183.
- Kane, B. D., Morrison, J. D., Aldrich, C., Savitz, R., Ming, K., O'Byrne, W. I., & Lily, T. (2021). Disentangling content-area and disciplinary literacy: A metacognitive approach to professional development. *Literacy Matters*, 21, 77–84.
- Kane, B. D., & Savitz, R. (2022). Disciplinary literacy and culturally sustaining pedagogies: Potential and tension. In S. Cantrell, D. Walker-Dalhouse, & A. Lazar (Eds.), *Culturally sustaining pedagogy: Developing socially just literacy teaching practices* (pp. 53–74). Teachers College Press.
- Kane, B. D., Savitz, R., Brown, C., Morrison, J. D., & O'Byrne, W. I. (in press). Teachers' self-efficacy in content-area and disciplinary literacy. *Journal of Literacy Research*.
- Kervin, L., Mantei, J., & Leu, D. J. (2017). Repositioning online reading to a central location in the language arts. In D. Lapp & D. Fisher (Eds.), *Handbook of research on teaching the English language arts* (pp. 327–358). Taylor & Francis.
- Kinloch, V. (2017). "You ain't making me write": Culturally sustaining pedagogies

- and Black youths' performances of resistance. In D. Paris & H. S. Alim (Eds.), *Culturally sustaining pedagogies: Teaching and learning for justice in a changing world* (pp. 25–42). Teachers College Press.
- Leander, K., & Boldt, G. (2013). Rereading “A pedagogy of multiliteracies”: Bodies, texts, and emergence. *Journal of Literacy Research, 45*(1), 22–46.
- Lee, C. D., & Spratley, A. (2010). *Reading in the disciplines: The challenges of adolescent literacy*. Carnegie Corporation of New York.
- Litman, C., Marple, S., Greenleaf, C., Charney-Sirott, I., Bolz, M. J., Richardson, L. K., . . . Goldman, S. R. (2017). Text-based argumentation with multiple sources: A descriptive study of opportunity to learn in secondary English language arts, history, and science. *Journal of the Learning Sciences, 26*, 79–130.
- McKenna, M. C., & Robinson, R. D. (1990). Content literacy: A definition and implications. *Journal of Reading, 34*(3), 184–186.
- Milner, H. R. (2020). *Start where you are, but don't stay there: Understanding diversity, opportunity gaps, and teaching in today's classrooms* (2nd ed.). Harvard Education Press.
- Moje, E. B. (2007). Developing socially just subject-matter instruction: A review of the literature on disciplinary literacy teaching. *Review of Research in Education, 31*(1), 1–44.
- Moje, E. B. (2008). Foregrounding the disciplines in secondary literacy teaching and learning: A call for change. *Journal of Adolescent and Adult Literacy, 52*(2), 96–107.
- Moje, E. B. (2010). Response: Heller's “in praise of Amateurism: A friendly critique of Moje's ‘call for change’ in secondary literacy.” *Journal of Adolescent and Adult Literacy, 54*, 275–278.
- Moje, E. B. (2015). Doing and teaching disciplinary literacy with adolescent learners: A social and cultural enterprise. *Harvard Educational Review, 85*(2), 254–278.
- Moje, E. B., Dillon, D. R., & O'Brien, D. (2000). Reexamining roles of learner, text, and context in secondary literacy. *Journal of Educational Research, 93*(3), 165–180.
- National Council of Teachers of English. (2011). *Literacies of disciplines: A policy research brief*. Author.
- National Governors Association Center for Best Practices & Council of Chief State School Officers. (2010). *Common Core State Standards for English language arts and literacy in history/social studies, science, and technical subjects*. Authors. Retrieved from www.corestandards.org/assets/CCSSI_ELA%20Standards.pdf.
- Nasir, S. N., Lee, C. D., Pea, R., & McKinney de Royston, M. (2021). Rethinking learning: What the interdisciplinary science tells us. *Educational Researcher, 55*(8), 1–9.
- New London Group. (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review, 66*(1), 60–92.
- Shanahan, C., & Shanahan, T. (2014). Does disciplinary literacy have a place in elementary school? *The Reading Teacher, 67*(8), 636–639.
- Shanahan, T. (2012a). The death of content area reading: Disciplinary literacy.

- Retrieved from https://search.ucf.edu/#?client=UCF_Main&proxystylesheet=UCF_Main&q=death%20of%20content%20reading.
- Shanahan, T. (2012b, January 12). Disciplinary literacy is not the new name for content area reading. Retrieved from www.shanahanonliteracy.com/2012/01/disciplinary-literacy-is-not-new-name.html.
- Shanahan, T. (2021, August 17). *Disciplinary literacy goes to elementary school*. Shanahan on Literacy, Reading Blog. Reading Rockets. Retrieved from <http://readingrockets.org/blogs/shanahan-literacy/disciplinary-literacy-goes-elementary-school>.
- Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content-area literacy. *Harvard Educational Review*, 78, 40–59.
- Siebert, D., & Draper, R. J. (2008). Why content-area literacy messages do not speak to mathematics teachers: A critical content analysis. *Literacy Research and Instruction*, 47(4), 229–245.
- Smith, N. B. (1965). *American reading instruction*. International Reading Association.
- Spires, H. A., Kerkhoff, S. N., Graham, A. C. K., Thompson, I., & Lee, J. K. (2018). Operationalizing and validating disciplinary literacy in secondary education. *Reading and Writing*, 31, 1401–1434.
- Spires, H. A., Kerkhoff, S. N., & Paul, C. M. (2020). *Read, write, inquire: Disciplinary literacy in grades 6–12*. Teachers College Press.
- Thorndike, E. L. (1917). Reading as reasoning: A study of mistakes in paragraph reading. *Journal of Educational Psychology*, 8, 323–332.
- Trainin, G., Hayden, H. E., Wilson, K., & Erickson, J. (2016). Examining the impact of QuickReads technology and print formats on fluency, comprehension, and vocabulary development of elementary students. *Journal of Research on Educational Effectiveness*, 9, 93–116.
- Wrenn, M., & Gallagher, J. L. (2021). Getting critical with disciplinary literacy: A read aloud strategy. *Social Studies Research and Practice*, 16(1), 1–15.
- Wright, T. S., & Cervetti, G. N. (2017). A systematic review of the research on vocabulary instruction that impacts text comprehension. *Reading Research Quarterly*, 52(2), 203–226.