



DISCIPLINARY LITERACY AND COLLABORATIVE PROFESSIONAL LEARNING A PARTNERSHIP THAT WORKS

Professional learning that has shown an impact on student achievement is focused on the content that teachers teach.

Darling-Hammond, Hyler, Gardener, and Espinoza (2017)

The term “disciplinary literacy” may still be unfamiliar to many teachers and administrators. In fact, several educators have told us that when they first heard the words, they thought they had something to do with classroom management—and laughingly said they wished there *were* a literacy for behavioral issues. Others told us that they thought the phrase might be more accurate if “literacy” were replaced with “learning,”



The heart of disciplinary literacy is an understanding of the ways in which knowledge is constructed in each content area and how literacy (reading, writing, viewing, reasoning, and communicating) supports that knowledge in discipline-specific ways.

especially in math and science. The 2018 South Carolina Teachers of English Conference theme contained the word “transdisciplinary,” and in Alberta, Canada, “interdisciplinary literacy” is an umbrella term for disciplinary literacy because teachers want to emphasize the importance of literacy within disciplines as well as across them. Whatever words we prefer, the time has come to give this approach serious consideration.

The heart of disciplinary literacy is an understanding of the ways in which knowledge is constructed in each content area and how literacy (reading, writing, viewing, reasoning, and communicating) supports that knowledge in discipline-specific ways. An historian, for example, is deeply involved in investigation as he or she seeks to understand events, perspectives, contexts, and language. A scientist, on the other hand, looks at evidence, explanations, hypotheses, new understandings, and data. Mathematicians deal in symbols and abstract ideas, looking for patterns and solutions.

Despite this seemingly forthright explanation, Elizabeth Moje (2008), disciplinary literacy scholar, reminds us that there is no one body of knowledge that can be transferred from teacher to student, the primary mode of instruction in the 20th century: “To learn deeply in a subject area, then, young people need to have access to the ways that conventions of disciplinary knowledge production and communication can be routinely or more explicitly challenged and reshaped” (p. 103). She suggests that we must find “new ways of knowing and practicing” in the content areas, not simply new ways of having students learn “new ideas or bits of information or new texts” (2008, p. 103). We would add that “practicing” in the content areas, what we refer to as *doing*, is virtually impossible when students are sitting silently looking at the backs of one another’s heads or copying notes from PowerPoint presentations or lectures.

In short, when content area teachers use literacy as it was intended—as a *discipline-specific* tool to support reading, writing, speaking, and doing—their students become increasingly flexible and independent as they navigate challenging texts and tasks unique to each subject area. Additionally, students learn how to see texts as more than merely conduits for knowledge; texts become windows into how and why knowledge is constructed.

While such a shift does not happen suddenly, especially with an entire faculty, disciplinary literacy instruction offers considerable potential for real change. To realize that change, we must implement this approach differently than we have implemented literacy initiatives in the past, foregoing prepackaged programs, train-the-trainer professional development, or one-size-fits-all approaches. Professional learning about content *and* literacy infused with dialogue, reflection, and collaborative inquiry are the only currencies with which we can purchase the benefits of disciplinary literacy. Going down the same path we have gone in the past with professional development initiatives that aren't embedded or based on continuous learning will cause us to stumble and, inevitably, take us away from our most important destination—increased student learning.

Literacy Initiatives and PLCs: What Went Wrong?

Many teachers, schools, and districts were caught in a movement that was billed as an elixir for comprehension of text: content literacy, a strategy-based approach that emphasized discrete, across-the-board skills such as previewing, activating prior knowledge, annotating, or summarizing, for example. These generic strategies, however, failed to recognize the vast differences among disciplines, their texts, and instructional practices. Worse, they did not emphasize the participation in the disciplines that is necessary for deep content comprehension. (See page 42 in Chapter 2 for an example of how a generic strategy was adapted specifically for math and social studies.)

We now know that despite all the work that went into the reading and content strategies initiative, adolescents' literacy skills did not show significant improvement over a period of years, despite their moderate effect on comprehension (Jacobs, 2008). The National Assessment of Educational Progress (n.d.), for example, reported that in 2015, 12th-grade students had an average score of 287 on the reading scale of 0 to 500. This was not significantly different from the average score in 2013, but it was lower in comparison to the 1992 assessment. The



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latest Program for International Student Assessment (PISA) scores also reflect the United States' stagnant performance in reading, ranking behind more than twenty countries, including the top-ranked Singapore, Hong Kong, Canada, and Finland (National Center for Education Statistics, n.d.).

As for professional learning communities (PLCs), vehicles put in place to drive the literacy movement, something was amiss there as well, despite strong evidence of their potential effectiveness (DuFour & Reeves, 2015). The formulaic standardization of PLCs left little room for authentic, recursive professional literacy learning, and often teachers weren't given opportunities to wrestle with and find solutions to the teaching and learning challenges they faced in their own classrooms and schools. As PLCs often devolved into points-based professional development reliant on check-off lists, mandated tasks, and an overriding focus on "interpreting the data," both the enthusiasm for and the effectiveness of PLCs waned. Now, even the mention of PLCs will elicit groans from many of the teachers with

whom we work. Learning, for teachers as well as for students, should be joyful, infused with passion and energy, sustained through the "flow" of motivation that results when people are engaged in meaningful, though often challenging work.

As we mentioned in the introduction, we are not claiming to have found the panacea for literacy learning. What we are arguing, however, is that a reasonable approach to professional learning exists if teachers collaborate within

autonomous communities focused on the literacies of their disciplines. To set the stage, consider how you might respond to the questions in Figure 1.1, keeping in mind that simple answers to complex questions often abort deep thinking.



Looking at student work samples together is one way math teachers make decisions about the pace of their lessons.

Figure 1.1

Questions That Spur Collaborative Disciplinary Literacy Thinking

- What counts as knowledge in a specific discipline?
- What count as texts in a specific discipline?
- How can we shift our view of literacy teaching and learning so that it is situated as a tool within the disciplines instead of as an add-on to the disciplines?
- To what extent do we trust and value teachers' expertise in their own content? If teacher knowledge is not where it should be, how can we help increase it?
- Are we willing to actively work toward collective efficacy (the collective perception on the part of teachers that they can make an educational difference to their students), the *number one* indicator that affects student learning, according to John Hattie's (2016) research?
- Are we willing and do we have the resources to invest in the time-consuming work of genuine literacy professional learning?
- Do we have the courage to reduce reliance on programs, packaged curricula, and inflexible pacing guides that demand standardization and fidelity instead of differentiation and supported risk taking?

Collaborative Disciplinary Literacy Learning: A Story of Success

We have been extremely fortunate to have been able to grapple with the questions in Figure 1.1 in our work together, specifically in one school district, but also through ReLeah's experiences in schools and districts internationally. When Marsha, a literacy coach in Barrington, Illinois, a suburb outside of Chicago, met with administrators to discuss what they might do to help their population of struggling learners, she argued persuasively for an approach based on collaborative learning, planning, implementation and reflection—a model supported by numerous studies (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009). She

believed that when teachers were provided autonomy along with strong disciplinary literacy learning, the result would show positive change in the school culture as well as in student learning. Her insistence on a model that went beyond a menu of literacy strategies, something that had been tried with limited success in the past, along with a belief in the value of teachers' content area expertise, led her to find ReLeah, a consultant and author of several books and articles on literacy and leadership.

The partnership created a literacy initiative that exceeded everyone's expectations. With the full support of school and district administrators, we began with a cohort of twenty high school teachers from various disciplines. The plan was to have four full-day workshops throughout the year with ReLeah bringing new research and practices customized to address teachers' challenges and inquiries, all embedded in a disciplinary literacy approach. Marsha provided individualized coaching and support in between ReLeah's visits. The first full day was a bit rocky, with several teachers openly opposed to "one more thing" and a few resistant to the idea of anything at all having to do with literacy, concerns rather common among secondary educators. They had been *trained* on literacy strategies, they insisted; furthermore, they needed to get back to covering their curriculum.

By the end of that first workshop, we had convinced teachers to try something new, a mantra that drove our work for many years thereafter. Marsha, the consummate note taker, kept a list of any



Teachers in our first cohort from the world language department share ideas about disciplinary literacy techniques they can adapt in their classes.

practices, activities, or suggestions modeled by ReLeah and practiced by teachers as well as any ideas they brought to the table. She created a sort of newsletter (see pages 167–169) that reminded teachers of the new learning that occurred in the workshops and encouraged them to refer back to it when working in their classrooms. All teachers were asked to try at least one "something new" and bring to the next workshop student work samples, observational notes, and any experiences related to a new practice, either negative or positive, that they wanted to share with

the group. After each of ReLeah’s workshops, Marsha met with teachers either in small groups or individually, offering support, resources, and suggestions. She shared teachers’ comments or struggles with ReLeah so that, together, they could create a workshop that was customized to teachers’ needs.

Soon a more organic agenda began to supplement the one we had originally created for the workshops. At the beginning of each session, for example, we allowed plenty of time for cohort members to discuss what they had tried since the last meeting, leaving time for exploring what worked and what didn’t, always keeping in the forefront the idea that generic strategies simply weren’t enough to support students with the challenging texts and complex tasks they were now expected to tackle. As teachers began to adapt these new suggestions to their own content, they gained confidence in experimenting with and utilizing literacy as tools to reach their students. Their sharing became one of the most valuable parts of the workshop because it tapped into those intangible components that are so often neglected when following a preset model of professional learning: relationship building, collective efficacy, and shared understandings of content literacy. Soon teachers began helping each other find commonalities and differences in their disciplines, a shift that would eventually transfer to classrooms and support students in becoming more flexible learners.



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Listening In

Listening in to Katherine Keeler, a veteran social studies (and National Board Certified) teacher, who joined a cohort the second year:

“You would think after 22 years I would feel confident about my practice. It has been said that a great teacher never feels like they’ve quite gotten it right—the best teachers reflect and adjust and innovate. So maybe I’m in good company. It used to be simple to assign students a chapter reading in their textbook. We no longer use textbooks. Now with the influx of online materials available in

many forms (news, blogs, editorials, podcasts, e-books, websites), it is difficult to cull through what is true, necessary, or effective for my students. As an 'old dog' I've done my best to keep up with the tech innovations at my disposal. Technology is a 'foreign language' for many veteran teachers like me. My younger colleagues have grown up learning through technology as part of their 'native tongue.'

"Values and priorities have also changed in the last few decades since I started teaching social studies. The topics we covered 22 years ago and our approaches were very different.

"Students learn differently now. I learned to teach in the 1990s. I can't teach with the same old bag of tricks that I used when teaching their parents' generation. Not only have the methods changed but so has the product. Now, much more is left to a student's interpretation. Students are not given facts to memorize. We ask them to inquire and to reason to find the answer. How can I possibly teach the same old way? Lecture-style teaching has gone the way of chalk and the blackboard. Collaborative grouping and flipped classrooms are more the norm.

"I have always been game for attending workshops and gaining new ideas for my 'toolbox.' At these meetings, I have felt invigorated and inspired working alongside my younger colleagues, but their ready use of blogging, tweeting, posting, and other forms of teaching writing and reading was intimidating and daunting. No veteran teacher wants to feel like she has gone back to her first day of undergrad teacher college. In addition to the number of resources at my fingertips, there were an overwhelming number of strategies, methods, and outlets in which to disburse that information. Where does one begin? And now I was starting to hear about this new framework called disciplinary literacy. Once again I felt like a freshman and my younger colleagues were in the graduate program.

"Nevertheless, I joined a disciplinary literacy cohort in which teachers learned how to use literacy in ways that supported their content. We shared ideas in a collaborative way: A music teacher in the group helped me to rework a lesson on the Civil War. A teaching strategy shared by a world language teacher fit in beautifully with my unit on the Old West. We discussed ideas that incorporated different

media types—cartoons, infographics, videos, blogs. I was able to see value and practical uses for a variety of mediums. That successful collaboration between traditional teaching methods and modern innovative techniques requires taking risks, having faith in your peers, and keeping an open mind.

“Slowly and surely they talked me away from the cliff’s edge by showing me ways to incorporate these technological innovations. I found myself sharing my tried and true old-school methods and discovered that many of them still have merit. Eventually we morphed the two together into truly effective teaching and learning.”



Katherine Keeler works with one of her students as he looks for articles about the economic forces of American life.



We were also excited to discover that many teachers were leaders in hiding who came out of the shadows when opportunities arose to show others in their departments how their teaching had changed through their participation in the cohort. Within a year, individuals and partners in this group began presenting at conferences, writing journal articles, and creating impressive programs such as schoolwide summer reading initiatives. Traditional, whole-class, lecture-style teaching, so common in high school classrooms, diminished in cohort teachers’ classes when their students began to participate in the content as experts in the field might, often through discussions, seminars, and inquiry projects. What’s more, discipline-specific reading and writing were increasing in all classes, not only in those of cohort members.

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The following year, another cohort was added, this time with the inclusion of the library information teachers and technology coaches, all of whom turned out to be invaluable as the groups worked purposefully toward creating a culture of literacy throughout the school. Principal Steve McWilliams’s overt support and encouragement lent credibility to the notion that literacy was essential in all subjects, saying that he wanted to “build a sheltered area for literacy and invest in it so it would grow roots.” The cohorts did,

indeed, become a shelter, not only for literacy growth but also for teachers to engage in collaboration, exploration, reflection, and new learning. For more information on how to form cohorts such as these, see Chapter 6.

Soon a middle school cohort was formed with teachers eager to hone their literacy skills through lessons based on disciplinary literacy practices. One social studies/ELA (English language arts) teacher who joined the middle school cohort, for example, discovered that his colleagues respected his love of reading so much that they began asking him for books their students might like. He is now a favorite presenter at reading conferences, has a serious blog following, and conducts interviews with famous young adult authors. The research on teacher efficacy was exemplified through him and others like him who stepped forward to utilize their talents in a variety of ways.

At the end of four years, we were working with eight cohorts of cross-curricular teachers who made significant changes throughout their schools by sharing and modeling disciplinary literacy practices, especially in having students *do* the work of the discipline rather than merely reading about it.

Eventually, a few teachers from different disciplines began to informally create a literacy leadership team in the high school, something we had advocated from the beginning, but which had not been put in place by the administration. (Read more about how to form a literacy leadership team in Chapter 9, pages 258–259.) You will hear the voices of these teachers throughout this book; they are now an important part of our own learning community, one that enriches our work as well as the work of their colleagues through their insights, classroom experiences, and honest feedback.

Meet Our Disciplinary Literacy Learning Community

Nick Yeager, an English teacher and counselor, was one of the first to “try something new,” when he incorporated inquiry and autonomy into his unit on *Romeo and Juliet*, one that he had previously taught in a rather traditional manner. ReLeah asked him to write about this lesson, and it appears in *Common Core CPR: What About Adolescents Who Struggle . . . or Just Don't Care* (Lent & Gilmore, 2013, pp. 156–157). The year following the creation of

the first cohort, Nick was approached to create a credit make-up class for students in danger of failing or dropping out, and it ended up being a mecca of reading. Students quickly completed their credits so they could devote themselves to reading the many books that populate Nick's room. His students' successes are truly remarkable and have led to almost all students graduating and some even going on to college.

Kathleen Duffy, a first-year social studies teacher, was also recommended by her principal to join the first cohort. Initially, she appeared reluctant to contribute, but at the end of four years Kathleen was one of its strongest members, advocating for students' active participation in learning and infusing a strong component of project-based learning and critical literacy in all her courses as a way of engaging students in social justice. Her most recent disciplinary endeavor is the creation of a gender studies class where students learn as apprentices in the field, with Kathleen as their coach and mentor.

Janet Anderson, a library information teacher, became an enthusiastic member of each of the high school cohorts, offering suggestions as teachers built multi-modal text sets or asked her for just the right book to engage their most reluctant reader. She began spending more time in classrooms partnering with teachers and became especially valuable in terms of technology as teachers moved from single "textbooks" to a variety of digital resources. Janet created and maintained a Google Community where cohort teachers could share documents and ideas during and in between workshops. Perhaps most important, she helped teachers as well as students find or return to the joy of reading.



Nick asks open-ended questions to encourage this student to express his thinking and explore alternative methods. Finding a balance between supportive scaffolding while also encouraging risk taking is something Nick consciously works toward every day.



Kathleen works one-on-one with a student who is researching a topic for a project.



Janet offers suggestions to a student who hopes to find that perfect book for his next read.

Caroline Milne, science teacher and ardent supporter of active learning, was fortunate to be a member of a department that valued the *doing* that is a hallmark of disciplinary literacy. She began presenting at science conferences and encouraged others to join her. Quickly recognizing the connection between disciplinary literacy and the Next Generation Science Standards, she was instrumental in melding the two together in practical ways, acting as a peer coach for her colleagues. Her department head supported her endeavors and also provided the autonomy for teachers to engage in risk

taking as they incorporated scientific literacy into lessons. Not surprisingly, this department's cohesion led to a type of collaboration that increased collective efficacy and, thus, student learning.



Caroline uses a device that replicates a smoker's lung so a student can experience the breathing challenges felt by individuals with limited lung capacity.

This leadership team has taken on the work of disciplinary literacy within the school, as you will see in later chapters. For now, however, we simply want you to be aware of the members of the team so you will recognize them as they drift in and out of the pages that follow.

Benefits of Collaborative Disciplinary Literacy Professional Learning

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A move toward professional learning based on disciplinary literacy offers immediate as well as long-term benefits to students, teachers, and the school overall. Because the approach isn't standardized or prescriptive, teachers are responsible for adapting literacy learning to their content in ways that best serve their teaching goals, curriculum, and students. This authentic accountability engenders efficacy, intrinsic motivation, creativity, and increased content knowledge with a natural emphasis on civic responsibility—all of which ultimately benefits students.

Quoteworthy

“Several studies, which have been conducted across multiple content areas, have demonstrated that content area literacy instruction can lead to positive outcomes for diverse students on measurements of content knowledge and literacy achievement” (International Literacy Association, 2017).

INCREASED INDIVIDUAL AND COLLECTIVE EFFICACY

Perhaps the most compelling reason to introduce collaborative disciplinary literacy learning is because of its potential to increase collective teacher efficacy, the *number one factor that affects student learning* (Hattie, 2016). We understand collective efficacy well because we have been privy to its power through cohorts of teachers working together to create and sustain disciplinary literacy practices. We refer to this concept throughout the book, so let's make sure we have a working definition: “Collective teacher efficacy refers to the collective perception that teachers in a given school make an educational difference to their students” (Tschannen-Moran & Barr, 2004).

We found Jenni Donohoo's book *Collective Efficacy: How Educators' Beliefs Impact Student Learning* (2017) to be a comprehensive and practical guide for understanding this phenomenon. Donohoo makes clear its importance on the first page of her book when she writes,

When teachers share that belief [that they can make an educational difference to their students beyond the impact of their homes and communities], it outranks *every other factor* in regard to impacting student achievement including socioeconomic status, prior achievement, home environment, and parental involvement. (p. 1, emphasis in original)

Because disciplinary literacy honors the expertise of teachers and asks for their participation instead of their compliance, it infuses self-efficacy into the mix, frequently “unleashing” the willingness of teachers to try new practices and set higher goals for students, with some making remarkable contributions to the field. We were surprised to find how many teachers



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in our cohorts demonstrated these characteristics soon after joining. Some teachers discovered a new area of expertise in the classroom, and in other cases teachers developed the confidence to act on a leadership skill that had been previously untapped.



Quoteworthy

“Ashton and Webb (1986) found that when collective efficacy is high, teachers are less critical of students who make mistakes and work longer with students who have difficulty” (Donohoo, 2007, p. 15).

As we noted earlier, many PLCs have not managed to make significant transformations in student learning. There are various reasons for this lack of success, but what we have found is that the efficacy piece is often missing. In fact, PLCs can actually diminish collective efficacy when members of a PLC have little autonomy or teachers perceive that their tasks are a waste of time. Conversely, teams engaged in disciplinary literacy learning tend to gain both individual and collective efficacy, especially when they meet for extended periods of time to reflect on lessons, share ideas, and discuss the challenges and progress they have made with students. Teachers who gain such efficacy are more flexible regarding change and more willing to try new instructional approaches in their classes, a form of encouraged risk taking.



Listening In

Listening in to Scott Sheib, high school health teacher:

“I had been teaching health for seventeen years and felt satisfied that I had developed a curriculum that did a good job of teaching kids the important content of the health curriculum, at least as much as I could accomplish in a one-semester class. There was little time for reading and writing, however, because I felt pressured to cover a great deal of content in a short amount of time. After spending a year with

my disciplinary literacy cohort, my entire philosophy changed. I began to incorporate reading and writing activities related to health as a way for students to learn more deeply.

Probably the biggest change was when I brought in young adult novels related to health issues such as *Out of My Mind* [a fictional story of a girl who has cerebral palsy and is unable to speak] by Sharon Draper (2010). I never would have made this shift had it not been for the encouragement from my cohort. I was completely outside my comfort zone, but everyone was experimenting with new approaches or modifying old strategies, and it was contagious. With their support, I had the confidence to try something I had never tried before. It really paid off.”

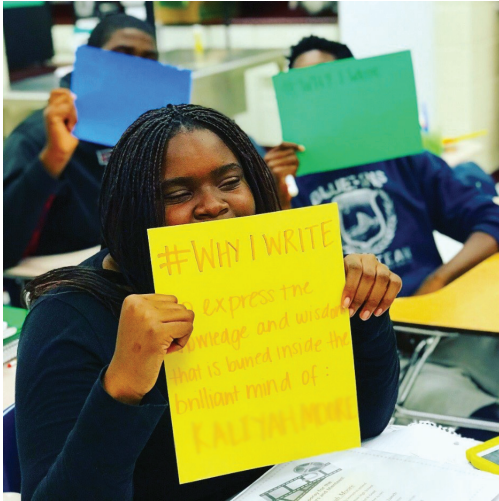
For the Curious

HOW MUCH DOES EFFICACY REALLY MATTER?

Research cited by Donohoo in *Collective Efficacy: How Educators' Beliefs Impact Student Learning* (2017, p. 15) show students of teachers with high efficacy

- enjoy higher achievement,
- are better able to build a strong sense of academic efficacy,
- set more challenging goals, and
- have stronger commitments to accomplish and maintain goals.

A disciplinary literacy method is a natural lightning rod for teachers to coalesce around, one that doesn't set up coerced communities for “professional development” purposes. What's more, once teachers begin collectively solving problems within their discipline, they become enthusiastic about employing these methods because they see increased student engagement. Teams of teachers who have the autonomy to pursue learning relevant to their content have a common purpose and interest,



McNair High School in DeKalb County, Georgia, created a strong literacy learning community with a focus on literacy within the content areas. The team's collective efficacy spilled over onto their students. Here, students demonstrate how their own sense of confidence in literacy has increased due to the creation of a pervasive culture of reading and writing at the school.

which we have found to be a steadfast and enduring foundation for collective efficacy.

INCREASED TEACHER CONTENT KNOWLEDGE

In an article on ways to respond to the disciplinary literacy needs of students, Wilder and Herro (2016) write,

As coaches and teachers interact around pressing questions of practice, they inevitably construct expertise and uncertainty, collectively problem solve and develop situation identities unique to the collaborative context. In the study, collaboration was viewed as a process of co-constructing knowledge about disciplinary practices related to disciplinary literacy, teaching and students. (p. 541)

Our experience supports the results of this study. Not only did teachers in our cohorts increase their knowledge by digging more deeply into their content as they looked at ways to use literacy, but they also discussed in more depth teaching practices and how they might differentiate content for the varied needs of their students.

The increase in teacher knowledge is especially apparent when teachers work in content-area groups on a specific challenge or area of improvement. ReLeah is currently working with a high school English department as they implement reading and writing workshops. While the teachers are all competent, experienced teachers, she found that their knowledge of reading and writing skills increased dramatically as they began to explore how to facilitate student conferences, provide feedback, create book clubs, utilize engaging practices for mini-lessons, and implement differentiated writing instruction. Their collaborative

learning not only led to collective efficacy but also significantly increased their content knowledge.

INCREASED MOTIVATION AND ENGAGEMENT

Draper and Seibert's (2010) explanation of disciplinary literacy taps into the active *doing* that is often characteristic of disciplinary literacy instruction,

the ability to negotiate (e.g., read, view, listen, taste, smell, critique) and create (e.g., write, produce, sing, act, speak) texts in discipline-appropriate ways or in ways that other members of the discipline (e.g., mathematicians, historians, artists) would recognize as "correct" or "viable." (p. 30, as cited in Brozo, Moorman, Meyer, & Stewart, 2013)



Teachers in disciplinary groups read a subject-area article in preparation for engaging in a collaborative activity that they can adapt for classroom use.

Listening In

Listening in on middle school teachers who increased content knowledge while engaging in disciplinary literacy:

- A group of ELA teachers felt strongly about having time for independent reading during the school day. They researched the benefits of free choice reading and best practices for implementation and then created a bulletin with research, activities, and a structure for administrators and teachers. Their plans led to the development of a "Literacy Café" for schoolwide independent reading once a week.
- Content teachers became excited about using picture books to build subject background knowledge and vocabulary. They developed a spreadsheet of picture books complete with lesson ideas, concepts to highlight, and notes from teachers. Others contributed to this resource throughout the year.
- Several math teachers wanted to explore ways of helping students learn from their mistakes. They worked with the technology coach to

set up a poster walk. Students prepared a correct and incorrect version of solving a problem with QR codes that students could access for the correct answer.

- Teachers organized professional book study groups to build their content knowledge regarding inquiry projects, digital texts, and blended learning. Mary Stec, technology coach, commented, “Although each of the book studies has been structured a bit differently, overall, all teachers have achieved the goal of reflecting on their practice, gaining additional support for implementation of new strategies from colleagues, and instilling a culture of learning within the content-areas.” (See Chapter 9, Figure 9.5 for a sample of a professional Book Study Guide.)

As we visited the classrooms of teachers in our cohorts, we saw lessons where students were motivated to read challenging texts in a seminar, utilize technology to interact with a class in another state, solve “real-world” problems such as how to eliminate the Zika virus,



The physical environment of this world language classroom mirrors students' engagement in the content. After students reviewed definitions of words in their groups, their teacher led them in a vocabulary activity to reinforce the correct pronunciation of targeted words.

interview a panel of characters (their classmates) from a novel, debate the cultural influences on a piece of blues music, and work in partners to give each other feedback about their written analysis of a football game. Not only was the engagement in these classes palpable, but students were eager to talk about their learning when we asked them.

The participation in the disciplines, this *doing*, moves teachers from front and center and shines the light on students as they become immersed in the content work. That doesn't always

mean that students are up and physically active, of course. They may be deeply involved in figuring out how a mathematical principle can be applied in architecture or how a new finding in science—such as the *Science News* article that shows dogs having more brain neurons than cats—can be tested through behaviors.



Listening In

Listening in on Ginger Montgomery's ecology class as students become fully engaged in scientific learning:

“During the first week of the semester, I gave my students a copy of the Tennessee Ecology Standards and asked them to go online and choose several activities they would like to complete that meet state standards. I also gave them a stack of ideas that I had already pulled, including one about a raptor adoption. They wrote out their activities and topics on paper, and we then placed all the papers on two tables in the room. Students went from idea to idea, voting with a check or a minus to indicate their interest in a topic. Based on their ideas, I developed a semester-long pacing guide that incorporated their topics. It is hard to be unengaged in a class that you help construct.

“They chose to adopt a raptor from the local raptor center in Maryville, Tennessee. I went online and printed off a list of birds that they had available for sponsorship. Each team of three or four students had to research every bird option, if possible pulling up actual footage of the bird. It was amazing what all they were able to find online—not only about the species but also the individual bird. After two days of research, they had to choose a bird to promote.

“Each team made ‘vote for’ posters listing the qualities of their bird choice and presented to the class why their bird was the best for our class to adopt. It was a close race between a barn owl and a red eastern screech owl. In the end, the red eastern screech owl won. Edie was our bird!



Photo by Ginger Montgomery

An owl from The Smokey Mountain Raptor Center visits a high school ecology class.

“We sat down with the school calendar and made a list of possible dates for our bird visit. Once the date was set, we began discussing ways to fund our adoption. We opted for a ‘Hat Day’ to earn our money. A hat day works like this: Students pay two dollars for a sticker that allows them to wear a hat all day inside the school.

“Two days before our owl visit (Monday and Tuesday) we began looking at the food web of an eastern screech owl. Each student created a food web poster that represented what an eastern screech owl would eat in East Tennessee.

“The owl (Edie) that we chose ended up being unable to visit due to medical issues, so two other owls came to our class instead. The Smoky Mountain Raptor Center representative did a great hour-long presentation about raptors, focusing on owls. We also purchased owl pellets for class dissection the next day.

“On the day after the owl visit, I asked the kids to use the dry erase markers to make a list on the table of what they thought the owl pellets we had purchased from the raptor center would have in them, given their understanding of owl food webs. They were allowed to walk outside into the hall to look at the webs they had drawn at the beginning of the week.

“We then watched a sci.spot video clip about what owl pellets are and a YouTube clip of an owl hacking up a pellet (kids love that). We dissected the pellets and then checked off or circled the organisms we had on our tabletop list. Students were excited to see that they had chosen organisms that showed up in their pellets.

“Our Hat Day was a success! We raised enough money to cover Edie’s adoption, pay for our pellets, and send a little extra just because! If I had time I would have asked the students to each write down something from the presentation that they were interested in, such

as why red screech owls and grey screech owls seem to live in certain areas, or ways to prevent owl poisoning due to mouse poison. We would have then taken a few days to dive deeper into the topics they had chosen. I could have extended this activity into several different avenues, but my time was up. We had to move on to Triops and Dam Construction.

“This is an important point: This year we had NO budget for the science department. This activity was completed with basic classroom supplies and a small school fundraiser. We used old calendar backs for our posters and many of our markers and crayons are donated from my mom’s first-grade classroom leftovers. We do have a set of second generation iPads, but they have not been updated in over 200 weeks, and we have to share them with other classrooms. It is not about funding; it is about using what you have, where you are, and most of all, engaging the students in real scientific learning.”

INCREASED CIVIC UNDERSTANDING AND ACTION

One important aspect of disciplinary literacy is its tendency to motivate students toward becoming active participants as members of a democratic society because it encourages students to challenge and question texts, norms, and traditional understandings, just as experts do when engaged in their work. Jacobs (2008, citing Freire, 1998) writes about how, by capitalizing on literacy skills and processes, teachers are helping their students “become independent learners who are able to comprehend the ‘world’ as well as the ‘word’ of their disciplines.”

Kathleen, our social studies team member, put into practice this aspect of disciplinary literacy *doing* by helping her students become agents of change through projects that involve civic engagement. She describes how initial learning in social studies supported their “construction” of new knowledge that then led to action that made a real difference in their school and community:

I designed and taught a new class called gender studies. In my disciplinary literacy professional learning community we had



One important aspect of disciplinary literacy is its tendency to motivate students toward becoming active participants as members of a democratic society because it encourages students to challenge and question texts, norms, and traditional understandings.



Initiatives that utilize the expertise of content teachers within learning communities where they are afforded autonomy and time to collaborate have the best chance of gaining the benefits intrinsic in disciplinary literacy instruction.

been experimenting with project and problem-based learning and I knew, with this approach, my students' learning would increase dramatically, going far beyond memorization for a test. At the beginning of each unit, I built students' background knowledge through lectures, readings of primary and secondary sources, guest speakers, excerpts from historical fiction and nonfiction, videos, and documentaries. This work is essential in laying the groundwork of content knowledge so students' curiosity and creativity can be ignited. Once they were exposed to the basics, students continued to learn in a hands-on manner through a variety of mediums of their own choosing. I am always amazed with the projects they pursue and how their understanding of the curriculum guides their actions.

Some of the projects Kathleen's students chose included

- Advocating for equality in girls' lacrosse by amending rules and altering the sexist uniform. The students petitioned online, in a lacrosse circle, and in phone meetings with state representatives of the athletics association. Due to this project, the high school girls' lacrosse team will be wearing shorts, not skirts, next season.
- Promoting safety and consent in teenage behavior by pushing the administration to install a camera in a known blind spot in the school. One student, who had witnessed an incident of sexual harassment at this spot spoke to the staff about the issue. Another engaged the student National Organization of Women Club to spread awareness and raise funds to buy a camera. Still another student involved the school board, which led to the school's purchase and installation of the security camera.
- Conducting a cross-generation interview and script with a mother and grandmother about being a girl and woman in various time periods.
- Organizing a 5K fun run/walk to raise money for WINGS, an organization that helps women and children who have been

assaulted. This was not even done for credit, but was completed during the summer before this student left for college.

One might think this advantage would more readily be seen in social studies than in other subjects, but every subject has the potential of propelling a student's ability to be prepared to lead a successful life in an innovative and changing world. We found students engaged in such critical thinking in science regarding new policies on climate change or protection of endangered species, in English as students evaluated opinion pieces and then wrote their own, and in subject areas such as health when considering governmental oversight of sugar in children's cereal, for example. In Chapter 8, we describe a project that resulted from English teachers' work with disciplinary literacy where students raised money to send to countries struggling with water issues after critically reading *A Long Walk to Water* (Park, 2011).

Perhaps these advantages point to why there is a call for literacy experts to assist content teachers in building disciplinary literacy programs rather than focusing professional learning on generic literacy practices and strategies (Moje, 2008). As we explore in later chapters, initiatives that utilize the expertise of content teachers within learning communities where they are afforded autonomy and time to collaborate have the best chance of gaining the benefits intrinsic in disciplinary literacy instruction.



Photo by Kathleen Duffy

Students from Kathleen's Gender Studies class, motivated by class readings and discussions, organize a 5K walk to raise money for women and children who have been victims of assault.

Fostering Disciplinary Literacy Dialogue

1. To what extent do the teachers in your team or school have difficulty moving from a model that transfers knowledge to a new paradigm that emphasizes students participating in the work of the discipline? How can you facilitate this move?
2. On pages 15–17, Katherine Keeler talks about feeling left behind because of the way technology is used by those considered “natives” to digital ways, yet she discovered that she has much to contribute. How can disciplinary literacy instruction unite technology “natives” and “immigrants” in ways that will benefit students?
3. Consider what a disciplinary literacy leadership team in your school might look like.
 - What role would it play?
 - Who might be on this team?
 - What challenges do you see in the implementation of such a team?
 - How might you address those challenges?

See pages 258–259 for information on how to create a disciplinary literacy leadership team.
4. In looking over the advantages of a disciplinary literacy approach, which do you consider most pressing in your school? Why?
 - increased individual and teacher collective efficacy
 - increased teacher content knowledge
 - increased motivation and engagement
 - increased civic action and understanding

Notes:

Resources for Continued Learning

ASCD. (2017, February). Educational leadership: Literacy in every classroom. *ASCD*, 74(5).

Donohoo, J. (2017). *Collective efficacy: How educators' beliefs impact student learning*. Thousand Oaks, CA: Corwin.

National Council of Teachers of English. (2007). "Adolescent literacy: A policy research brief." Washington, DC: Author.

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Shanahan, T., & Shanahan, C. (2015). Disciplinary comes to middle school. *Voices From the Middle*, 22(3), 10–13.