Coherence in the Face of Complexity:

Secondary Leaders' Sensemaking in Building Disciplinary Literacy Programs

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A Capstone Project

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Executive Summary

Dr. David Eddy Spicer, chair

National and international measures of literacy suggest that reading and writing remain significant areas of concern for American students at the secondary level (Fleischman et al., 2010; NAEP, n.d.-c; NAEP, n.d.-a). Studies of literacy as a broad concept suggest that an intentional focus on literacy can positively impact a wide range of students (Frey et al., 2017; Faggella-Luby et al., 2012; Cummins, 2011). Despite this, generalized literacy programs often struggle to take hold at the secondary level, leading to an absence of literacy instruction after elementary school. Literature suggests several possible reasons for this, whether it be teachers who are unclear on the role that literacy might play within their content area (Cantrell et al., 2008; Siebert & Draper, 2008) or uncertain of how to implement literacy within their classrooms (Mac Mahon, 2014).

In response to content area literacy approaches, which argue that generic literacy skills can be used across all disciplines, several studies (Shanahan & Shanahan, 2008; Moje, 2015) propose a disciplinary literacy framework, which operates on the idea that different academic disciplines require different forms of literacy, ones that students learn from direct instruction from a content expert. Other studies have worked to identify the presences of these literacies within different disciplines (Spires et al., 2018) and the impact of discipline-specific literacy instruction on students (Reisman, 2012; De La Paz et al., 2017).

Despite promising findings within the classroom, leadership studies on literacy argue that the integration of literacy in secondary schools is a complicated endeavor, because of the complexity of literacy as a program (Ippolito & Fisher, 2019), the demands on leaders (Bean et al., 2015; Lochmiller & Acker-Hocevar, 2016; Wilder, 2014), and the multifaceted nature of secondary schools (O'Brien et al., 1995). As such, complexity represents another dimension of

the problem of practice of integrating literacy in large middle and high schools at the secondary level.

Because of this, this study attempted to understand what steps leaders might take to help build a program around disciplinary literacy in a way that is comprehensible to others within a school. To do so, the study proposed a conceptual framework that integrated concepts from instructional coherence – an area of study that attempts to understand how leaders build cohesive programs (Newmann et al., 2001) – and sensemaking, a body of theory and research that looks at how leaders make sense of ambiguous change and design their organizations to help manage that complexity (Weick, 1995). In support of this, the study focused on research questions around leaders' experiences with and understanding of disciplinary literacy, steps they took to implement disciplinary literacy within their building, factors that enabled or constrained this work, and the role that sensemaking played in this process. The design of the study extended from these questions and this conceptual framework, implementing a case study at a large, comprehensive high school based upon semi-structured interviews with school leaders, as well as documents created over a five-year period focused on disciplinary literacy as a major instructional element. Analysis utilized this conceptual framework to develop findings in the areas of disciplinary literacy, coherence, and sensemaking.

Major themes from the study suggest that school leaders benefit from developing nuanced understandings of disciplinary literacy and the practices that support it, including the recognition that differentiated processes help build teacher buy-in. Despite this differentiation, the study suggests that leaders also need to develop common schoolwide understanding (such as a common vision) and integrate literacy into existing structures (such as professional development and school improvement plans). Finally, the study suggests that leaders must use

sensemaking to navigate this process, including the introduction of new initiatives that might hold the potential to slow the momentum of literacy.

Based on these themes, this study proposes the following seven recommendations for school leaders:

- form a representative cross-disciplinary literacy team
- build common understanding of disciplinary literacy within the team
- set common schoolwide vision and expectations
- work strategically to integrate literacy into school structures
- use existing structures and relationships as accelerants
- create resources that balance commonality and difference
- connect literacy to past, current, and future initiatives

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APPROVAL OF THE CAPSTONE PROJECT

This capstone project, "Coherence in the Face of Complexity: Secondary Leaders' Sensemaking in Building Disciplinary Literacy Programs," has been approved by the Graduate Faculty of the Curry School of Education in partial fulfillment of the requirements for the degree of Doctor of Education.

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David Eddy Spicer, Ed.D., Capstone Chair

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Sara Dexter, Ed.D., Committee Member

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Sandra Mitchell, Ed.D., Committee Member

November 2, 2020
Date of Defense

Dedication

To Grace, for your encouragement on starting this journey and for your support in finishing it.

To Micah and Lyra, for your patience and understanding and for always providing a good reason to take a break from writing.

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Finally, to my wife and children, thank you for your constant love and encouragement. I'm not sure if any of us knew what we were getting into with this, but your understanding and patience have made it fly by. I appreciate your support in reaching this accomplishment, and I'm looking forward to supporting each of you in all that you will achieve.

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Chapter I - Introduction

Problem of Practice

Within the instructional core of American schooling, literacy development holds a position of primacy for its potential impact on students, their education, and their eventual success in life. On an individual level, the development of literacy skills holds a key place in supporting general education students (Frey et al., 2017), special education students (Faggella-Luby et al., 2012), and English learners (Cummins, 2011). Literacy functions as a gateway to higher level transfer of skills as students encounter, process, and communicate new information (Frey et al., 2017; Fisher et al., 2016). On a school and district level, literacy instruction is often the spine of school improvement efforts (Duke, 2006; Salmonowicz, 2009). Nationally, literacy skills are embedded within wider educational movements, such as the Common Core State Standards (LaDuke et al., 2016; Spires et al., 2018) and the Next Generation Science Standards (Drew & Thomas, 2018).

As a potentially potent element of an instructional program, literacy instruction represents an important focus; however, for school leaders at the secondary level, leadership around literacy presents its own challenges because of shifts toward increasingly complex skills that diverge across different departments. As compared to elementary literacy programs, where literacy efforts typically focus on fairly universal skill sets of phonics, decoding, and comprehension of fictional and nonfictional text, recent literature on secondary literacy suggests the need to understand distinct sets of skills and mindsets for different disciplines (Shanahan & Shanahan, 2008; Shanahan et al., 2011; Spires et al., 2018). For leaders immersed

in this work, this added complexity creates barriers as they attempt to implement and spread literacy instruction. This study attempts to increase understanding around how leaders make sense of disciplinary literacy's specific challenges of complexity and distinct skill sets, to better understand these challenges, and to examine leadership strategies that help mitigate these challenges across a school.

Literacy as a National Problem

Nationally, current data suggest that literacy development is still an area of concern for American students. The National Assessment of Educational Progress (NAEP) has been used since 1992 to gather information on the reading abilities of the nation's students. Despite incremental growth on this measure since its inception, only 37% of 4th grade students scored at or above proficient in 2017 (NAEP, n.d.-b); similarly, only 36% of 8th graders scored at this level in 2017 (NAEP, n.d.-c), and 37% of 12th graders achieved this benchmark in 2015 (NAEP, n.d.-a). Administered by the Organisation for Economic Co-operation and Development (OECD), testing through the Program for International Student Assessment (PISA) reveals similar results. In 2009 (the most recent year that PISA tested reading as its primary domain), only 30% of U.S. students scored at Level 4 or above (Fleischman et al., 2010), which is the level at which PISA determines that students are capable of "difficult reading tasks" (OECD, 2010, p. 51). Another 18% of U.S. students scored below Level 2 (Fleischman et al., 2010, p. iii), which PISA defines as a baseline level that students need "to enable them to participate effectively and productively in life" (OECD, 2010, p. 52). As that definition suggests, a focus on literacy is not just an educational issue. Historically, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) has framed literacy as a human rights issue, noting in 1965 that "the attainment of literacy … is of fundamental importance for full social and economic development, and that without it there can be no complete and active participation of the peoples in national or

international civic life" (UNESCO, 1965, p. 5). Fifty years later, literacy still holds a key place with the group's "2030 Agenda for Sustainable Development" (UNESCO, n.d.). Faced with data such as these, educators in the United States hold not just an educational responsibility, but also a moral responsibility, to develop the literacy skills of their students.

Literacy in Practice

Part of the challenge of literacy instruction stems from how it has been historically framed within educational research and reform. Traditionally, the integration of literacy has often been presented as primarily a feature of elementary instructional programs. Shanahan and Barr (1995) analogize this view to that of a vaccination, with the belief that early literacy instruction and intervention will prevent "all future learning problems, no matter what their source or severity" (p. 982). Because of beliefs such as these, then, a focus on literacy at the secondary level was and is often viewed as an intervention as opposed to a core instructional need (Biancarosa, 2012). Further, at the secondary level, when literacy instruction was discussed, it was often viewed through a lens that Shanahan and Shanahan (2008) term a "generalist notion of literacy learning" (p. 41). They describe this mindset as "the idea that if we just provide adequate basic skills, from that point forward kids with adequate background knowledge will be able to read anything successfully." For much of the 20th century, this type of literacy focus – often termed "content area literacy" or reading and writing across the curriculum – was a common discourse in both literacy scholarship and practice. Reinforcing this generalist notion, content area literacy focuses on the utilization of broad literacy structures, such as generic comprehension or vocabulary strategies, across various disciplines. Proponents of content area literacy argue that "general reading and writing strategies can find expression in a variety of content classrooms" and can thus apply across disciplinary lines (Brozo et al., 2013, p. 354). Others cite research that suggests that content area strategies hold potential for specific

populations of students, such as struggling readers. While many of these individual practices may hold the potential to increase student learning, other research suggests that the overall approach often fails to engage teachers in the literacy demands of their discipline (Cantrell et al., 2008; Siebert & Draper, 2008) or fails to engage secondary students in the key tasks and mindsets of each discipline (Moje, 2015).

Among a group of seminal studies and articles that emerged in the late 2000s (see also Heller & Greenleaf, 2007; Moje et al., 2008), Shanahan and Shanahan (2008) argue for a tripartite progression of literacy instruction that begins in elementary school and continues through secondary and post-secondary settings. At the foundation of this model is that of basic literacy, which includes skills such as decoding and fluency that form the underpinning of future literacy tasks. Instruction around these concepts occurs for most (but not all) students at the elementary level. Building off of basic literacy skills are intermediate literacy skills, which focus on strategies that are generalizable to many common literacy situations. This includes the ability to apply comprehension strategies to texts or to recognize patterns that an author embeds within a text. Instruction in these skills begins in elementary school and should continue into middle and high school, though the intentional building of intermediate literacy skills is not always an explicit area of focus. Finally, at the top of this progression is what Shanahan and Shanahan term disciplinary literacy, which constitutes highly specific disciplinary skills vital to understanding the complex demands of a content area. Examples of these might include the ability to analyze a primary historical document, accurately read a scientific graph, or write a realistic fitness plan within a health and physical education classroom. This increasingly complex skill set and the instruction requisite to develop these skills parallel the increased textual demands found in secondary and post-secondary classrooms. More recent literature (Moje, 2015; Siebert et al., 2016) frames disciplinary literacy as not just a set of disciplinary skills but as

a stance to participate and engage in the discourse and practice of the discipline. Emergent research (Reisman, 2012; De La Paz et al., 2017) within this area suggests that a focus on disciplinary literacy in the classroom can greatly impact students' reading and writing abilities.

Literacy Leadership

Conceptualized as a differentiated approach to acknowledging each content area's unique literacy demands, disciplinary literacy represents a promising component of a secondary school's instructional program (Reisman, 2012; De La Paz et al., 2017). Disciplinary literacy holds the potential to build students' skill sets as they participate in authentic literacy practices; it also potentially increases students' overall engagement with the various disciplines present in middle and high school while valuing teachers as experts of their own discipline's literacies.

For school leaders, though, disciplinary literacy represents a complex instructional program. From a school leadership perspective, literacy programming requires a potential investment in and alignment of numerous school components (Ippolito & Fisher, 2019; O'Brien et al., 1995). This includes potential school-level actions around visioning, professional development (including induction), scheduling and staffing, observation, instructional coaching, evaluation, and teacher feedback. It also includes team- and teacher-level actions around curriculum unpacking, lesson planning, resource development, assessment, data analysis, and intervention. Viewed from a content area literacy lens, this represents significant forms of instructional leadership and management. By introducing a disciplinary lens, it also creates a diffusion of literacy expertise among teachers and teams, as well as a potential challenge in creating uniform structures that meet the needs of all teachers. Leaders cannot simply rely on a uniform set of literacy strategies. Instead, they may need to rely on more individualized strategies unique to each discipline.

Lack of Coherence

For secondary school leaders, the introduction of disciplinary literacy takes place within the complicated structure of a secondary school, which represents a complex context with a lattice of diverse actors, processes, practices, and structures. There is no guarantee that all of these parts automatically work together toward a greater goal. In specifically discussing literacy leadership (in this case, content area literacy), O'Brien et al. (1995) argue that secondary schools present as a nuanced intersection of curriculum, pedagogy, and prevailing school cultures. The successful implementation of disciplinary literacy within a secondary school, then, represents both a complex program and a complex setting; building a program that makes sense to the actors within a school is thus doubly challenging for school leaders.

In organizational literature, one proposed framework for attempting to achieve a sense of common vision and more consistent instructional practice is referred to as program coherence; Newmann et al. (2001) define this coherence as "a set of interrelated programs for students and staff that are guided by a common framework for curriculum, instruction, assessment, and learning climate and that are pursued over a sustained period of time" (p. 305). Though different models of program coherence exist and will be detailed below, what they hold in common is an attempt to align different elements within a school to increase the cogency of a program to leaders and teachers. A lack of coherence promotes confusion, inaction, or misapplication, undercutting the potential benefits of disciplinary literacy.

Purpose of the Study

The purpose of this study, then, is to understand how secondary school leaders make sense of literacy instruction and attempt to create coherent instructional programs centered on disciplinary literacy. In part, this study attempts to add to the understanding of how any school leader works to align different elements within a school to coalesce around a common vision of instruction and implement that instruction within classrooms. Building on to this, disciplinary

literacy introduces an additional set of complexities, interweaving concrete structures such as curricula, instructional practice, and assessment, as well as more abstract ideas such as teacher and student beliefs, school culture, and conceptions of disciplinary mindsets and discourses. This study seeks to better understand the specific challenges that disciplinary literacy introduces for the school leader in an attempt to build a more coherent instructional program. Because of its conceptualization, disciplinary literacy holds the potential to relocate the knowledge base within a school, relying not just on a strong understanding of general literacy practices but also on a strong understanding of specific literacy practices within each of the disciplines that live within a middle or high school. How then do leaders balance the need for coherence across a school while implementing an instructional program that might require differentiated implementation between departments? This study seeks to understand how this challenge plays out within a building and to increase understanding of strategies that leaders use to help mitigate these challenges.

Background of Site

This study looks intensively at one high school within a large suburban district in the eastern United States. This district has had a systemwide focus on disciplinary literacy for the past four years. A sustained district-wide professional development program has brought together literacy teams from each of its secondary schools to build background knowledge around disciplinary literacy and to support teams as they attempt to lead the work in their buildings. The makeup of teams has included administrators, instructional coaches, reading teachers, technology specialists, librarians, and teacher leaders from a diverse set of departments. A centrally developed literacy framework has helped guide this work, with a focus on student engagement, disciplinary reading, and disciplinary writing. Members of literacy teams from each school have been tasked with several items, including attempting new

practices within their classrooms, conducting professional development, and helping lead literacy conversations within their departments and teams.

The district is large, both in terms of the number of schools that it contains and the general size of each school. Middle schools within the district average around 1,200 students for two grades and high schools within the district average around 2,000 students per high school. The district serves a wide range of students, including a large number of general education, gifted and talented students, students with disabilities, and English learners. The selected school, Redmond High School, matches these district averages, serving a diverse population of more than 2000 students. Redmond is ethnically diverse, with roughly equal populations of white, black, and Hispanic students, with each group constituting between 20-30% of the school. About a third of the students at Redmond qualify for free or reduced lunch through federal assistance programs.

Unit of Analysis

While there are many different vantage points from which a study on disciplinary literacy could be framed (e.g., teacher, team, department, school, district, state), this study is focused on the school level as its primary unit of analysis. Much of the current research on disciplinary literacy focuses understandably on the classroom level, seeking to better understand the role of literacy practices in the classroom (e.g., Graham et al., 2017; De La Paz et al., 2017; Reisman, 2012). Leadership studies around disciplinary literacy are often focused on a single element, such as the work of Professional Learning Communities (Charner-Laird et al., 2016) or instructional coaching (Wilder, 2014). In addition to building on this bank of literature, this study takes a school-level approach for several reasons. First, as noted above, it attempts to understand how whole-school decisions support or fail to support program coherence, specifically around secondary literacy. Second, it seeks to understand how disciplinary literacy

might be integrated within several layers of a school and not just at a single level, such as at the level of the administrative team. As such, the unit of analysis focuses on several elements simultaneously: individuals, groups, and artifacts. By taking this approach, the study attempts to understand the impact of the implementation of disciplinary literacy on the greater structure of the school.

Because of this, the focus of the study is on a single school site. This is a product of the desire to better understand and describe the complexity described above. Disciplinary literacy involves numerous members of a single school, expanding the focus beyond just a principal or a single teacher. Program coherence integrates numerous elements of school leadership. In order to adequately capture this complexity, a single site is preferable.

Research Questions

To gain a deeper understanding of these elements, I conducted a qualitative study that generated interview and documentary data on the actions and perceptions of key leaders within the school. These data centered on several questions of coherence, disciplinary literacy, and school leadership. My research questions are:

Primary research question: How do school leaders attempt to build coherent instructional programs around disciplinary literacy?

> *Subquestion 1*: How do school leaders make sense of disciplinary literacy?
>
> *Subquestion 2*: What practices, processes, and structures do leaders use to attempt to develop instructional programs around disciplinary literacy?
>
> *Subquestion 3*: What environmental conditions enable or constrain school leaders as they attempt to build instructional programs around disciplinary literacy?
>
> *Subquestion 4*: How do leaders' sensemaking processes impede or facilitate enactment of coherent instructional programming around disciplinary literacy?

For these questions, one term needs to be further operationalized. The term "school leader" is used broadly to mean any member of a school staff who may engage in the action of leading

work around disciplinary literacy. This is consistent with distributed leadership perspectives, which argue that "leaders" encompass both formal and informal actors who enact tasks "stretched over" multiple leaders' practices, creating "interdependencies" between different leaders within a building (Spillane et al., 2004, p. 16). As the concept of disciplinary literacy and the makeup of literacy teams within the studied district may suggest, this has the potential to be a number of actors across a wide variety of roles and disciplines.

Taken together, these questions allow for the examination of both leaders' thoughts and actions around disciplinary literacy, in an attempt to understand how they conceive of literacy and how this conception influences their actions (and inversely how these actions reshape their thoughts). Additionally, these questions aim to provide insight into leaders' attempts to build meaningful and coherent instructional programs, specifically in the area of disciplinary literacy. To the extent that disciplinary literacy might introduce tension toward the goal of coherence, these questions attempt to understand how leaders understand and negotiate that tension. Finally, the questions allow for the examination of key challenges, opportunities, or actions that surround the integration of disciplinary literacy skills.

Delimitations and Limitations

Delimitations

As designed, the study has several delimitations. The first and most significant occurs by bounding the majority of the literature on literacy at 2008. As noted above, a shift occurs at around this time period with the publication of several studies explicitly articulating the concept of disciplinary literacy (Heller & Greenleaf, 2007; Moje et al., 2008; Shanahan & Shanahan, 2008). Other studies, such as Siebert and Draper (2008), articulate issues with literacy practice at that time without necessarily identifying disciplinary literacy as a potential solution. While the study does look at some literature that predates this 2008 demarcation, this is done only

occasionally and for one of two purposes: 1) to provide historical comparison between earlier literacy research and current literacy research and 2) to include research that shares certain philosophical similarities with current research. For instance, despite being written more than a decade prior to this delimitation, O'Brien et al. (1995) note similar leadership challenges in leading secondary literacy as those identified by researchers of disciplinary literacy. A second delimitation is that this study does not examine in great detail trends in strategy or implementation for content area literacy, which is the primary focus of secondary literacy research prior to disciplinary literacy. While there is some overlap between the two concepts (for instance, content area literacy could be considered fairly synonymous with Shanahan and Shanahan's (2008) second level of literacy – intermediate literacy), this distinction is important for understanding leadership implications for school-based leaders working on disciplinary literacy.

A third delimitation occurs in the choice to focus specifically on secondary schools. A robust research base exists in both instructional practice and leadership of literacy within the elementary arena. Certainly, there are relevant lessons to be learned by secondary teachers and by secondary school leaders by looking at the choices made by their elementary counterparts. However, there are also key differences in the ways that elementary and secondary schools are structured and the ways in which instruction is conceived of and delivered between the two levels. As such, within this study, the choice was made to focus primarily on secondary schools in order to more precisely unpack understandings of literacy instruction and leadership within the secondary arena.

Limitations

This design of this study acknowledges several limitations. First, as a descriptive study, this examination seeks to understand leadership choices and practices at a school level. While

the study interviews teachers, it does not observe classroom practice as that is beyond the scope of this study. Further, it does not attempt to understand the impact of instructional choices in the classroom on students, including on their achievement. Similarly, it does not extend beyond the school to understand in great detail the impact of district- or state-level decisions and how those impact the choices impact the school context.

Second, as a case study focused on one school, this study makes limited claims around generalizability. While the study seeks to describe and articulate findings about challenges of disciplinary literacy and its leadership, these findings cannot be automatically applied across school sites and contexts. For instance, the site of this study exists in an accountability setting where state standardized assessments do not necessarily prioritize literacy skills. A factor such as this might change the choices that school-based leaders make in conceiving the implementation of literacy at their school site. As such, while the findings of this study can inform the practice of other school leaders, they should not be assumed to transfer automatically to other school populations. Instead, the goal of the study is to uncover "analytic generalizations" so as to "expand and generalize theories" (Yin, 2018, p. 21).

Conceptual Framework

This study utilizes a conceptual framework that combines elements of different models of instructional program coherence (e.g., Newmann et al. 2001; Hopkins & Spillane, 2015; Mehta & Fine, 2015), focusing on the way that concrete structural elements can combine and interrelate with more abstract notions such as school culture or instructional vision. As noted previously, it looks at these content-neutral structures through the lens of disciplinary literacy, which holds the potential to introduce pedagogical tension by promoting less unified conceptions of instruction between different disciplines within a school. Additionally, the conceptual framework of the study layers on elements of sensemaking theory as a way of

understanding instructional programming *as it unfolds*. Sensemaking provides a framework for organizations attempting to comprehend actions within a contextual environment. As "a way station on the road to a consensually constructed, coordinated system of action," sensemaking provides leaders with a method for understanding complex change by analyzing their own actions as a response to that change (Taylor & Van Every, 2000, "An afterword on Weick's evolution," para. 3); within the context of instructional programming, sensemaking holds the potential to impact educational leaders' actions as schools attempt to craft programming that is coherent to the members of the organization.

Summary

This study examines school leadership around disciplinary literacy, including the overall process of attempting to create coherence around instructional programs. Additionally, the study examines the complexities and obstacles that disciplinary literacy introduces for the school-based leader. The study gathers data in this area by interviewing key school leaders (defined broadly) and analyzing leadership artifacts at one high school.

In the next chapter, I will review literature around disciplinary literacy as an emerging concept within the overall study of literacy, the role of disciplinary literacy in classroom and school practice, implications that disciplinary literacy has on school-based leadership, the potential importance of instructional program coherence, and sensemaking as a process to understand ambiguity. In Chapter III, I will review the conceptual framework of this study in greater detail, including how it is shaped by disciplinary literacy, instructional program coherence, and sensemaking theory. I will then discuss the research methodology for the study extending from the conceptual framework. In Chapters IV and V, I will review key findings of the study and the implications of these findings for school leaders as they attempt to build coherence around disciplinary literacy.

Chapter II - Literature Review

This study seeks to examine leadership around disciplinary literacy at multiple levels within a school (e.g., administration, department, team, classroom) to understand how leaders conceive of, make sense of, and build instructional programs, and align structures and practices to contribute to an overall sense of program coherence. As such, this review attempts to understand more about how different stakeholders might perceive concepts of disciplinary literacy, including the implementation of disciplinary literacy. To further this understanding, bodies of literature were reviewed in the following areas: disciplinary literacy as an emerging concept, disciplinary literacy within the classroom, leadership of disciplinary literacy, sensemaking, and instructional program coherence.

Search Methodology

Several different search strategies were used to survey literature around disciplinary literacy, sensemaking, and program coherence. In the area of disciplinary literacy, searches were generally bound near the year 2008, coinciding with the publication of several seminal works around disciplinary literacy (e.g., Shanahan & Shanahan, 2008; Moje, 2008; Moje et al., 2008; Heller & Greenleaf, 2007). Several published literature reviews on disciplinary literacy (e.g., Hillman, 2014; Faggella-Luby et al., 2012) were mined for relevant articles within the field. Because elements of the review are focused on conceptual framing, messaging, and perceptions of disciplinary literacy, searches were not limited only to empirical studies, though they form the bulk of the review. Efforts are made throughout the review to not only note when non-empirical literature is used but to explain a general rationale for its inclusion. Author searches were

conducted on prominent researchers (e.g., Shanahan & Shanahan; Moje; Siebert, etc.) in order to track key empirical studies and commentary around disciplinary literacy. Searches were conducted on several education-focused databases, such as ERIC and Education Full Text, as well as on Google Scholar. "Disciplinary literacy" served as a key search term, and more narrow searches were conducted by combining "disciplinary literacy" with other search terms. These other search terms include delimiting searches, such as "secondary" or "science." In the area of leadership, broad searches were conducted for "disciplinary literacy" and "leadership," as well as more specific searches around certain elements of leadership (e.g., "instructional coaching," "professional learning communities," "principal leadership"). Finally, a broad survey was done of literature post-2008 focused on content area literacy. The rationale for this is to capture studies that operationalize the term "content area literacy" to include disciplinary literacy concepts (e.g., Siebert et al., 2016).

Additional searches were conducted in the areas of sensemaking and program coherence. Seminal conceptual texts in the area of sensemaking (e.g., Weick, 1995) were reviewed, and two high-level, widely cited literature reviews (Maitlis & Christianson, 2014; Sandberg & Tsoukas, 2014) were mined for potential sources on sensemaking. Studies that focused on educational settings were prioritized, especially those centered in secondary schools; additionally, any connections to literacy and/or specific secondary features were also prioritized. The search term "sensemaking" was combined with other more focused terms, such as "instructional programming," "instructional change," and "educational policy." Similar searches were conducted for program coherence. In addition to studies containing explicit mention of program coherence, searches utilizing potential synonyms were conducted; an example of this is "program alignment," which captured studies with similar focuses. Additional

research was conducted around instructional program design, which yielded other studies around elements that contribute to consistency in instructional change.

Disciplinary Literacy as an Emerging Concept

As the concept has emerged, authors studying and articulating disciplinary literacy have undergone a recursive process of definition and articulation, demarcation, justification, and debate. Early literature in the field, as might be expected, focused on conceptual framing and calls for (and occasionally against) major tenets of disciplinary literacy. With a primary focus on the setting of conceptual context, fewer early studies focused on empirical research design within school settings, though more recent studies have begun to fill out this area of the field (several of which will be discussed in other sections of this review). Early commentary and fundamental studies in the field were examined as a first step within this review for two reasons. First, as a study focused on school leadership, early debate over the key concepts of disciplinary literacy anticipate later nuanced choices that school leaders face in terms of implementation of disciplinary literacy. Second, as a study interested in coherence and sensemaking, an understanding of the idea context within which disciplinary literacy exists holds the potential to impact overall program design, as well as the ways in which stakeholders within the school understand it.

Early calls for change propose disciplinary literacy as a response to both disadvantages perceived with a content area literacy approach and to advantages gained from a disciplinary approach. As Dunkerly-Bean and Bean (2016) note, a focus on content area literacy has been prevalent within American educational research and policy for more than a century. Moje (2008), in advocating for a disciplinary approach, argues that resistance to a content area approach stems from numerous “constraints,” including abstract factors such as teacher and student beliefs about the role of literacy within content area classrooms and concrete factors

such as the ways in which secondary schools structure time, space, and disciplines (p. 97). Other studies broaden this ineffectiveness of consistent reform to the nature of content area approaches. Siebert and Draper (2008), for instance, looked at how literacy was conceptualized and communicated with mathematics teachers, arguing that these messages "do not speak" to secondary teachers because they represent ideas deemed unimportant to mathematics instruction (p. 229). In reviewing materials that detailed policy, advocacy, or pedagogy around content area literacy, the authors found that these messages either "neglected," "deemphasized," or "misrepresented" the specialized disciplinary elements unique to mathematics (p. 235). As a response to this, the authors later pin this on problematic operationalization of terms such as "text" or even "literacy" itself (Siebert & Draper, 2008). They advocate for broader definitions of text, for instance, as any "object that people intentionally imbue with meaning, in the way they either create or attend to the object, to achieve a particular purpose" (p. 28). This includes more traditional resources such as written text but extends to graphical elements such as charts and graphs and even more fluid items such as performances or athletic actions. For literacy, the authors broaden the idea to mean not just the act of reading and writing within the discipline but the greater knowledge and conceptual base that makes up a field of study.

This approach of broadening definitions of literacy mirrors other early conceptions that cast disciplinary literacy as more than just a set of strategies but as a way of engaging with the prominent ideas, processes, and skills within a discipline; as such, these authors promote a wider set of advantages gained from a school's focus on disciplinary literacy. Seminal early work by Shanahan and Shanahan (2008), in addition to providing a conceptual framework that has guided many studies around disciplinary literacy, utilized a multifaceted, qualitative design to examine whether expert readers of disciplines exhibit differentiated processes for engaging with

text. Using interviews and transcriptions of read-alouds, the authors established that expert readers in mathematics, science, and social studies utilized different types of strategies to construct meaning from disciplinary texts; interestingly, these different processes were not randomly adopted, but were "consonant with the norms and expectations of their particular disciplines" (p. 51). For instance, readers in social studies focused heavily on author and source, examining potential biases from the text. This casts disciplinary literacy processes as not just about building a general sense of literacy but as promoting purposeful strategies within a field. While this study examined a small number of readers and focused on experts (as opposed to students in classrooms), it provides early articulation of different methods of engaging with disciplinary processes.

Building off of this idea in a second study with a similar methodology, Shanahan et al. (2011) further articulated a set of categories focused on different potential reading skills. These categories included more abstract elements such as the perspective that readers bring to reading the text (e.g., to what degree do they consider when the text was written), as well as more concrete elements such as how the reader interacts with different textual elements within the text (e.g., how much does the reader prioritize the graphic features in the text as opposed to the written features). Within each category, the authors were able to code the frequency with which they observed readers utilizing these types of reading. For instance, historians focused more heavily on written text but treated graphic elements as sources of critique when necessary. Mathematicians weighed text and graphic elements as equally important and utilized texts that interweaved the two; scientists read text similarly but moved recursively between the two types of texts, using one to inform the other.

Findings such as these were reinforced quantitatively by Spires et al. (2018), who surveyed more than 850 teachers in the four core disciplines and asked them how often they

asked students to engage in specific reading tasks. The survey was developed by core groups of disciplinary experts (including teachers) using a robust process of creation and refinement to develop items that tracked high-level reading behaviors (similar in some ways to the categories developed by Shanahan et al., 2011). The authors grouped these behaviors around three different types of literacy: source literacy (a focus on the author and their credibility), analytic literacy (a focus on technical analysis of quantitative and graphical elements), and expressive literacy (a focus on literary and stylistic elements). By doing so, they were able to examine not only individual behaviors but also whether disciplinary readers utilized different macro-literacies within their disciplines. The authors noted that the results indicated a specific literacy beyond the traditional English/Language Arts classroom. Further, they found that, "[w]hen teachers were grouped by subject area taught, patterns emerged suggesting that these disciplinary-specific teachers were more likely to engage in certain literacies" (Spires et al., 2018, p. 1424). Source literacy was practiced most regularly by history teachers, at almost the same frequency by English and science teachers, and least regularly by mathematics teachers. Analytic literacy was practiced frequently by mathematics and science teachers, and less frequently by history and English teachers. Finally, expressive literacy was practiced regularly by English teachers and less regularly by all other subjects. Taken together, these studies suggest that a focus on disciplinary literacy may be less about a need to focus on generic practices or to build generic skill sets but as a concentration on the building blocks of each discipline and its discourse.

Other authors have expanded this idea further, suggesting that disciplinary literacy represents the fundamental core of each discipline. Moje (2008), for instance, argues that disciplinary literacy is both a key component of building knowledge within a discipline and a process in understanding the "norms for everyday practice, conventions for communicating and representing knowledge and ideas, and ways of interacting, defending ideas, and challenging the

deeply held ideas of others in the discipline" (p. 100). Brozo et al. (2013) term this an "outside-in approach" (p. 354) and argue that it can help address the "artificial literacy-content dualism" (p. 353) that exists within some early commentary on different literacy strategies. Moje (2015) argues that disciplinary literacy, then, is about more than just skills but is instead about culture:

> The practices involved in reading and writing within a given culture imbue the skilled individual with membership in the discourse community that perpetuates the culture. The practices are markers of one's membership and identity and thus carry with them power and emotional investment. (p. 258)

For Moje, the implications of such an idea move beyond the curricula and knowledge of school toward helping students "travers[e] multiple cultures in a given day." Viewed this way, literacy instruction becomes a form of apprenticeship, and for Moje, "an act of social justice." Taken collectively, these studies provide a different impetus for a focus on disciplinary literacy within a school.

Despite an early core of high-profile calls for change, several early studies also raised both conceptual and practical concerns about a shift toward disciplinary literacy. Heller (2009), for instance, argued against a focus on high-level disciplinary concepts, arguing that this doesn't represent the goal of secondary schools and is instead more appropriate for a college setting. Faggella-Luby et al. (2012) protest the initial framing of disciplinary literacy, arguing that a focus on intermediate skills is necessary to help support struggling readers. They argue that "students must be able to use general comprehension strategies effectively to comprehend and compose grade-level text before advancing those strategies within discipline-specific approaches and texts" (p. 71). In making this case, the authors argue that the research base for content area literacy has shown consistent impact for struggling students. They also suggest via their review of the literature that "the reasoning for a disciplinary literacy framework as presented in the literature ... precedes the necessary evidence base" (p. 76). Spires et al. (2018) make a similar case about the early stages of disciplinary literacy, noting that "disciplinary literacy has been

theorized at the K-12 level … more than it has been researched" (p. 1404), though they position their study as a more quantitative approach to "offer support for adolescent literacy instruction occurring through an apprenticeship in the discipline through novice-expert relationships" (p. 1426). As such, these studies argue, the conceptual literature base requires further articulation by more immediate studies set within schools.

Disciplinary Literacy Within the Secondary Classroom

Over the past decade, researchers have begun to make the movement from conceptual definition to practical integration of disciplinary literacy within secondary classrooms. Several studies have examined teachers' perception of literacy as a classroom practice. Mac Mahon (2014) studied teachers' understanding of what constitutes literacy within a national disciplinary literacy focus in Ireland. Teachers interviewed generally focused on a narrow definition of literacy, primarily discussing reading of traditional text; a smaller number of teachers discussed writing. Additionally, "[l]iteracy was overwhelmingly viewed as a neutral and transportable basic skill that could be applied to all subject contexts rather than constructed in specific social practices for particular purposes" (p. 26). A majority of teachers also conceived of literacy as an intervention as opposed to a core academic process. This narrow understanding of literacy translated to an equally narrow set of implemented literacy strategies. The study identified the three most consistently cited practices by teachers as oral presentation of content, vocabulary study, and repetition. Classroom observations confirmed that more than 50% of time was spent by teachers in what the authors term a "pedagogy of telling," with only 2% of time engaged in reading activities and less than 6% of time spent on disciplinary literacy activities.

Similarly, Cantrell et al. (2008) interviewed teachers who had undergone recent, specific professional development around literacy. This professional learning played a role in building collective responsibility around literacy, with 79% of teachers agreeing that content area

teachers should focus on literacy with their students. (Interestingly, the 21% of teachers who disagreed were all mathematics teachers, and they cited similar dissatisfaction as that articulated by Siebert and Draper, 2008). Like Mac Mahon (2014), teachers identified reading comprehension and vocabulary development as primary factors in literacy, with 43% of teachers citing each of these factors. Teachers also identified literacy as a set of generalizable strategies (which was somewhat consistent with the type of literacy training they had received); as a result, the authors note that "emphases on these strategies reflected their perceptions that their role as literacy teachers was to enhance students' content knowledge rather than to teach reading as an integral component of content area learning" (p. 83-4). Finally, Graham et al. (2017) used cross-case analysis to determine common themes within the perceptions of teachers who, like Cantrell et al. (2008), had undergone training on disciplinary literacy. In analyzing teacher interviews and observing classroom instruction, the study found out that not only did teachers view disciplinary literacy as a set of common practices across disciplines, but also that teachers "were not always aware of the distinct nature of the literacy demands of their disciplines or that they were using disciplinary literacy strategies" (p. 78). Together, these studies suggest a disconnect between the ways in which literacy strategies interact with disciplinary dispositions and processes.

Recent studies have examined the interplay between generalizable skills (which Shanahan and Shanahan, 2008, term "intermediate" skills) and more disciplinary skills within the classroom. Drew and Thomas (2018) surveyed science teachers' integration of literacy elements taken from the Common Core State Standards and the Next Generation Science Standards. The authors categorized these elements as either disciplinary or intermediate literacy skills and found that teachers asked their students to implement disciplinary skills much more frequently than intermediate skills. The authors note that "[t]he focus of the discipline-specific literacy

practices directly connects to building students' knowledge in science, and will likely result in students who have a strong sense of derived science literacy" (p. 285). However, the authors also speculate that "students who are successful with discipline-specific literacy practices most likely have built from a strong sense of fundamental literacy" (p. 285). As such, they still recommend an approach that foregrounds disciplinary discourse but also allows for the simultaneous embedding of foundational literacy development.

Learned (2018) also examines the overlap between intermediate and disciplinary skill development but focuses more on the impact on students. Focusing in on a single school using prolonged engagement with a small group of at-risk students, the study examines how disciplinary literacy practices impacted students within secondary social studies. Within the classrooms that focused primarily on disciplinary paradigms, the study observed an increase in student agency, especially as students critiqued complex texts, examined competing perspectives, and looked at history through a culturally diverse lens. Conversely, students in classes with more intermediate, skill-based focuses were more likely to be viewed as "low skilled and unmotivated" (p. 207). While the scope of the study limits generalizability across contexts, it does suggest that disciplinary literacy has the potential to serve a role beyond discrete skill development.

Other classroom level studies have attempted to capture the academic impact of disciplinary literacy on different student outcomes. Greenleaf et al. (2011) studied the impact of a "reading apprenticeship program," in which teachers implemented a wide variety of literacy strategies including modeling of scientific reading and annotation and expanded use of disciplinary text sets. Using a robust set of measures, researchers were able to track the impact of this type of instruction on state standardized tests, as well as students' self-perceptions of engagement and scientific ability. When comparing this group of students with a more

traditionally taught control group, the authors were able to identify an increase in achievement on not only biology standardized tests but also similar increases on English standardized tests and general reading comprehension testing. The authors estimated the effect of this program to represent approximately a year's worth of extra growth on each of these measures compared to the control group. Additionally, student measures indicated several positive changes, including "increased confidence in approaching science reading, and in the case of students whose home language is not English, a more robust student identity than students in the control group" (p. 704). This suggests the ability of disciplinary literacy to not only impact a students' performance within a single discipline but also build literacy skills across the curriculum.

Because of early work by scholars such as Wineberg (1991) and the development of disciplinary literacy-focused frameworks within social studies (e.g., historical thinking skills), research on disciplinary literacy in social studies classrooms is prevalent within the field. Studies around disciplinary literacy in social studies classrooms show similar impact to Greenleaf et al. (2011) in terms of student growth. Reisman (2012), for instance, focused on a document-based curriculum which highlighted the development of historical thinking for high school students. The program studied by Reisman focused on three elements: 1) driving questions focused on critical thinking around history, 2) teacher modeling and direct instruction of disciplinary skills, and 3) intensive time for student practice. Like Greenleaf et al. (2011), the study attempted to track progress on a number of measures, including a factual history test, a multiple choice "historical thinking" test (which attempted to track students' ability to apply historical reading strategies), and a general reading comprehension test. The study found that students in the literacy-focused group outperformed students in the control on all three measures. This held true regardless of other demographic factors such as school, race, English language proficiency or base reading ability. In fact, the study determined that "struggling readers in the treatment

condition scored significantly higher on historical thinking and factual knowledge, and comparably higher on reading comprehension" (p. 102).

Similar impacts were seen in historical disciplinary writing studies. Like Reisman (2012), De La Paz et al. (2017) studied a model centered on disciplinary literacy apprenticeship and focused on analyzing primary sources and constructing written arguments about historical questions. While focused on writing instead of reading, the instructional core of the program focused on a similar process to Reisman (2012), utilizing the cognitive modeling of historical thinking, reading, and writing practices, followed by guided practice and extensive opportunities for student practice. Progress was measured using two rubrics – one focused on tracking student's analytical argumentation and another on overall essay quality – and by tracking overall essay length (which the authors argue is "an indicator of automaticity or general ease in writing") (p. 42). The study found positive impacts on all three measures, and, like Greenleaf et al. (2011) and Reisman (2012), this impact extended beyond the individual discipline to impact overall student skill sets. As the authors note, "[t]his suggests that students can learn discipline-specific and general forms of writing in tandem, regardless of their incoming skills. In other words, students may not need to learn general argument writing before they learn to write historical arguments" (p. 48-9). Collectively, these studies suggest that disciplinary programming may be able to raise the overall performance of students, not just in an individual discipline.

Leadership Around Disciplinary Literacy

Like the greater literature base surrounding disciplinary literacy, research around leadership in the area of disciplinary literacy is in a nascent stage. In assessing the state of the field, Ippolito and Fisher (2019) recognize burgeoning literature on disciplinary literacy at the classroom level, but acknowledge that "we are only just beginning to understand the professional learning needed to support teachers as they shift toward teaching and learning

focused on disciplinary literacy" (p. 51). They continue: "Even less is known about how middle and high school principals might best support this work, especially given the variability in leaders' backgrounds." Despite this, Ippolito and Fisher – two of the prominent leaders of research in the field – express optimism around the role that leaders might play in this process.

Just as "doctrinal" or definitional literature initially outpaced empirical literature early in the field of disciplinary literature, so too have authors speculated as to the challenges faced in leading disciplinary literacy. Ippolito and Fisher (2019) propose three challenges: 1) variation between leaders' background and expertise in a given subject and the needed expertise to address literacy across numerous disciplines; 2) the complex structures of secondary schools, as they are subdivided into departments, grade levels, and teams; and 3) "[c]ompeting role expectations" faced by secondary leaders in complex secondary settings (p. 52). Some of these leadership challenges antedate disciplinary literacy. In examining leadership around content area literacy (which is in some ways simpler to administer), O'Brien et al. (1995) argue that secondary curriculum, pedagogy, and culture pose specific challenges to school leaders seeking to spread literacy practices. For instance, secondary instruction has often favored "pedagogies of control and telling" that are often antithetical to student-centered literacy strategies (p. 451); this is likely as true an obstacle for content area literacies several decades ago as it is for disciplinary literacy today. As an example of this, in the midst of a national focus on disciplinary literacy in Ireland, Mac Mahon (2014) found that nearly 50% of observed class time was still spent on either oral presentation or review of material. Similarly, in studying teachers' understanding of literacy-focused instructional change in the face of new accountability standards, Anagnostopoulos and Rutledge (2007) found that teachers' subject matter knowledge and academic department structure served as mediating structures in how they understood and implemented that change in their classrooms. Mathematics teachers, for

instance, implemented the initiative but did so mostly for compliance reasons. (Of note is that this is the response that disciplinary literacy mostly seeks to avoid.) This study suggests that undifferentiated instructional initiatives may fail to adequately account for the complex social and structural arrangements of secondary schools.

As literacy research has transitioned to more disciplinary focuses, similar findings around the challenges of disciplinary literacy leadership have emerged from a small number of studies. For example, Ippolito and Fisher's (2019) argument around the challenges leaders face given their varied background knowledge mirrors several disciplinary literacy studies. In examining principal feedback (K-8) on the implementation of the Next Generation Science Standards (which are heavily focused on literacy), McNeill et al. (2018) found that principals focused on general pedagogical practices and that when they focused on literacy, the feedback was often "vague or appeared to be connected more to English language arts" (p. 465). Presumably, this finding could become even more pronounced at higher levels of science instruction (e.g., the high school level).

This focus on disciplinary knowledge and background has also informed studies around instructional coaching, another key form of leadership in disciplinary literacy. Wilder (2014) presents a case study of a former English teacher providing coaching for a high school mathematics teacher. The study described the need for coaches to be highly intentional about the ways that their status as a potential "disciplinary outsider" (p. 169) influences the coaching moves that they make. Wilder notes that this intersection of disciplines can create tension and limits the use of certain coaching stances, especially those that are more directive or prescriptive. However, the author also noted certain advantages created by this outsider status, finding that "Instructional coaches can negate their disciplinary outsider status and capitalize on the disciplinary knowledge of partnering teachers through a transparent inquiry stance" (p.

174). By acknowledging a lack of knowledge and leaning on the expertise of the teacher, the studied coach was able to co-construct new learning around students and pedagogy. Despite this, the author notes that the coach "repeatedly bumped into disciplinary walls" and recommended the expansion of coaching resources to include a wide variety of sources from across the disciplines (p. 175). These findings paralleled those by Di Domenico et al. (2018) where a literacy coach was able to find success in different disciplines by acknowledging her status as outside of the discipline.

As these two cases might suggest, the role of leaders engaging in reform around disciplinary literacy has become increasingly complex, and this complexity of role represents another challenge as argued by Ippolito and Fisher (2019). A large-scale survey of elementary and secondary leaders by Bean et al. (2015) uncovered similar patterns of complex job enactment. The survey canvased more than 2,500 literacy professionals and updated a previous survey from almost two decades earlier. The results showed a wide variety of job roles, including working directly with students, supporting teachers, and facilitating professional learning communities. Nearly 90% of respondents identified working with teachers as a primary responsibility of their job. This represented a significant shift from the earlier administered survey. Alongside this, the authors found that "respondents overall identified the need for more learning experiences related to working with adults and leadership" (p. 95). At the secondary level, respondents also identified a shifting need to work with content area teachers as a result of an increased focus on disciplinary literacy. The authors conclude that "although most respondents felt they were prepared to handle instructional and assessment tasks, they did not feel prepared to serve as leaders or to work with adults" (p. 100) and that overall the new demands of literacy leadership had opened up the possibility that literacy professionals "may not be prepared to meet the demands of their jobs" (p. 99).

Indeed, surveyed literature suggests that this support of adults represents both a key challenge and potential boon for secondary literacy leaders, as they rely on the teachers within the building and their understanding of both their disciplinary content and its contained literacies. In some cases, this reliance on staff members can be a further obstacle. Mac Mahon (2014) found that a lack of teacher education led to a narrow conceptualization of literacy (a finding reinforced by Conley, 2012). While all surveyed teachers identified reading as a component of literacy, only half similarly identified writing as an important part of literacy. A majority of teachers surveyed said that literacy was an intervention strategy rather than a core pedagogical element. The result of this understanding was a very narrow set of implemented literacy strategies. As previously noted, the author predominantly observed “a pedagogy of telling” often common to secondary classrooms, and teachers identified vocabulary study and repetition as the most common literacy strategies they implemented (though observations showed that less than 2% of class time was spent on vocabulary development). These findings were despite a national focus on disciplinary literacy and were mirrored by other studies with similar findings (Cantrell et al., 2008; Graham et al., 2017). However, other studies show the need to rely on teachers’ knowledge as an element of disciplinary leadership. In examining the placement of disciplinary literacy at the center of work in professional learning communities, Charner-Laird et al. (2016) noted the prominent role of teacher leaders in this process, finding that “they kept the focus on inquiry into disciplinary literacy practices and provided the needed structures and supports to move the work forward" (p. 985). Taken together, these studies suggest the need for leaders to negotiate a delicate balance, relying on the disciplinary knowledge of teachers while also recognizing that teachers may not have developed this knowledge in their prior experiences.

Collectively, the three leadership challenges as identified by Ippolito and Fisher (2019) – mismatches between leaders' expertise and their leadership of specific disciplines, complexity of secondary schools, and complicated balances between competing roles – are mirrored by other, more empirical studies that explore leadership as it pertains to disciplinary literacy. For leaders attempting to build coherent programs, these challenges represent significant tensions with that coherence. Compared to other instructional programming, which may contain more easily transferable knowledge and expertise for leaders, disciplinary literacy requires a more diffuse knowledge base that requires the input of more actors within a school. As such, it operates in tension with program coherence. To better understand these models of program coherence, relevant literature was surveyed and synthesized below.

Elements of Coherent Instructional Programming

Given the complexity of instructional programs such as disciplinary literacy, leaders must consider how to construct a program that makes sense to the stakeholders within a school. Studies around instructional programming and coherence identify a mix of practices and structures that can ultimately contribute to internal consistency and even increased student outcomes. Multiple models (Newmann et al., 2001; Hopkins & Spillane, 2015; Mehta & Fine, 2015) frame these elements as a mixture of concrete and abstract aspects that combine to increase coherence. All three models have at their core an articulated and codified vision that serves as the spine for instruction within a school. For Newmann et al. (2001) and Hopkins and Spillane (2015), this means an instructional framework that connects curriculum, planning, teaching, and assessment. Mehta and Fine (2015) term this "granularity of instructional vision" (p. 484). Building off of this spine, each framework creates a supportive tangible infrastructure within the school, including elements such as professional development, coaching, evaluation, and even the allocation of staffing, time, and other financial resources (Newmann et al., 2001).

Mehta and Fine (2015) call these structural elements “thick mechanisms” and stress their importance in building and spreading understanding of a school’s instructional program (p. 484). Mehta and Fine also identify several unique elements, such as symmetry between the type of learning that students and adults undergo within a school, as well as an explicit focus on organizational design that supports coherent program construction.

In each case, tangible contributors to coherence are supplemented by an equally aligned set of intangible elements. Newmann et al. (2001) offers the most concrete vision, but also includes a focus on “working conditions,” to include common norms and expectations among staff, as well as the integration of these values into practices such as recruitment and selection. Hopkins and Spillane (2015) broaden their focus on concrete elements by integrating them with the neo-institutional pillars of regulative, normative, and cultural-cognitive forces (Scott, 2013). These include elements such as stated policies (regulative), common beliefs and expectations (normative), and pedagogical beliefs and practices that guide action within the school (cultural-cognitive). Finally, Mehta and Fine (2015) focus on two abstract elements: 1) transparency of practice, as school leaders work to socialize practice within a school in a visible way, and 2) collective identity around a common instructional purpose.

Different research designs for each of these studies created equally different findings for each. As a descriptive study, Mehta and Fine (2015) identified the elements listed above (granularity, thickness, transparency, symmetry, collective identity, and organizational design) as common qualities among two studied schools that had built highly consistent instructional programs. These two schools had very different instructional visions but were similar in the fact that the authors were able to identify (through extensive observations and document analysis) a high degree of consistency from classroom to classroom. This finding suggests, to some degree, a certain neutrality surrounding coherence, as alignment in structure and action can potentially

carry forward diverse instructional visions. Hopkins and Spillane (2015) also looked comparatively at two different schools as they attempted to enact similar instructional visions. Unlike Mehta and Fine (2015) who looked at how certain common elements contribute to coherent but diverse programs, Hopkins and Spillane (2015) looked at how concrete structures were inadequate by themselves in explaining the spread (or lack thereof) of common instructional practice. Instead, at the two different sites, the more abstract choices enacted by school leaders either enhanced or constrained the spread of common practice. For example, at one school, practices that built collegiality resulted in increased spread of common practice; at another school, the lack of vocalized support for programming led to a decrease in the spread of that practice. Finally, as the most robust study (looking at 11 schools), Newmann et al. (2001) utilized teachers' perceptions of coherence with student achievement on state standardized testing. The study found a strong positive relationship between coherence within the school and its subsequent achievement data. This correlational relationship extended over several years of the study, and the authors were able to track change in this area. As schools increased their coherence, their test scores also increased. Conversely, as schools decreased in coherence, there was a parallel decrease in scores. As Newmann et al. (2000) note in a different study, "When schools pursue programs that are uncoordinated with one another … or that are terminated after a short period of time in order to adopt newer approaches considered to be more up-to-date, organizational fragmentation weakens student and staff learning" (p. 263). As such, while a strong coherence can positively impact student learning, a lack of coherence can have a dire impact on all stakeholders within a building.

Research suggests that leaders, especially principals, play an important role in crafting coherence within a building. In studying schools that were able to build coherence through coordinated professional development, Newmann et al. (2000) identified five qualities that

helped create these conditions: principal leadership, initial level of capacity, funding, external technical assistance, and policy support. Of these five, principal leadership was the strongest, as leaders built "norms of trust and collaboration" and managed outside expectations in order to maintain focus on preferred instructional programming (p. 283). Similarly, Stosich et al. (2018) found that leaders' intentional focus on developing organizational systems along with a parallel focus on instructional growth was key in assuring coherence of programming. Faced with complex instructional challenges, the authors noted that schools "had to redefine coherence as a working system of organizational structures, practices, and processes, aligned to support the enactment of an instructional improvement strategy" (p. 871). This suggests that leaders play a primary role in not only selecting impactful instructional focuses but also in ensuring that these ideas are implemented through coherent systems and structures.

Sensemaking

As the above literature suggests, disciplinary literacy presents a complex set of challenges for both teachers and leaders. Within the field of organizational theory, sensemaking has emerged over the past five decades as an object of study of "the process through which people work to understand issues or events that are novel, ambiguous, confusing, or in some other way violate expectations" (Maitlis & Christianson, 2014, p. 57). Sensemaking's roots and applications are broad, focused on diverse areas such as organizational crises (e.g., accidents), moments of organizational change or disruption, re-formations of organizational identity, or incidents that promote organizational identity formation or learning (Sandberg & Tsoukas, 2014). These broad categories span studies of business, government organizations, medicine, and popular culture. Over the past two decades, sensemaking studies centered in educational settings have burgeoned as researchers have examined how actors make sense of the complex organizational settings that schools present. As Weick (1982) argues, schools represent a

challenging organizational setting, one that is "more elusive, less tangible, harder to grasp, and harder to administer" (p.675). As such, they are potentially fertile ground for the ambiguity that sensemaking attempts to engage with (Weick, 2015).

Models of Sensemaking

Educational studies around sensemaking are generally influenced by two theoretical models of sensemaking. The first, which is not explicitly centered in educational settings, comes from Karl Weick. Weick's seminal model proposes a sensemaking process that "involves the ongoing retrospective development of plausible images that rationalize what people are doing" (Weick et al., 2005, p. 409); more specifically, Weick identifies central characteristics of sensemaking: that it is "grounded in identity construction," "retrospective," "enactive of sensible environments," "social," "ongoing," "focused on and by extracted cues," and "driven by plausibility rather than accuracy" (Weick, 1995, p. 17). This process, defined by these central characteristics, plays out in response to ecological change, and in categories of organizational action that Weick et al. (2005) term enactment, selection, and retention. Within enactment, actors begin to notice and give attention to certain aspects of the environment (which Weick terms "bracketing"). These initial steps change the environment itself, as actors "act into" an environment, co-creating a new context through their actions (Eddy Spicer, 2019). Within selection, actors make sense of these choices through individual and collective reflection and dialogue, though this sense at this point is "tentative and provisional" (Weick et al., 2005, p. 414). Finally, through retention, actors further codify what they've done and ascribe plausibility to the choices they've made. As a result, as Weick et al. note, actors' sense of what happened "tends to become more substantial because it is related to past experience, connected to significant identities, and used as a source of guidance for further action and interpretation."

Through this process, actors encounter initial ambiguity but reconfigure action and thought into a more plausible sense of what has happened in response to change.

A second influential model of sensemaking is advanced by Spillane et al. (2002); envisioned in a way that is specific to schools (and widely cited within later educational studies), this second model foregrounds cognitive processes to understand how individuals within a school are influenced by both their prior beliefs and experiences and the surrounding social and organizational contexts. Originating from a policy implementation context and responding to more rational models of organizational theory, Spillane et al.'s model allows for nuanced examination of constraining and enabling influences as actors respond to change (often from the introduction of new laws and policies). As such, it is less a reconfiguration of Weick's original model as it is a re-examination of existing models of implementation theory. Taken together, the theories share several similarities, such as a focus on social processes and a recognition of the influence created by the context in which these changes occur. Both also consider the ways in which personal and collective identity is intertwined with more concrete elements of change. Despite these similarities, there are also key differences. By suggesting a more cognitively focused framework, Spillane et al.'s model foregrounds thought processes in advance of action, as opposed to Weick's model, which places action as the first response to change. As a result, the models differ along a common point of discussion within sensemaking literature, the question of what Maitlis and Christenson (2014) term "the temporal orientation of sensemaking" (p. 96). Whereas Weick's model forwards a retrospective stance – one in which actors make sense of their work after they have begun the sensemaking process – Spillane et al.'s model allows for a more prospective approach, in which actors take a more future-oriented stance. Eddy Spicer (2019) articulates this difference by noting that "[i]n Weick's terms, the cognitivist version conflates enactment with selection and retention, prioritizing processes of

interpretation" (p. 14). Educational studies have widely cited both models, often combining the two without much explicit discussion of their differences and the implications of these divergences. Occasional studies (such as Krumm & Holmstrom, 2011) take an explicitly Weick-ian stance in examining educators' sensemaking processes. While recognizing this feature of the literature around sensemaking within educational settings, surveyed literature shows several findings around individual sensemaking, collective sensemaking, and the roles of leaders within sensemaking processes.

Individual Sensemaking

Educational studies consistently show that actors' individual sensemaking is impacted by a variety of experiences and beliefs predating and surrounding the influx of educational change. Many of these influences are internal to individuals and include diverse examples such as prior experiences with an initiative or instructional concept (Redding & Viano, 2018), more general beliefs about pedagogy (Marco-Bujosa et al., 2017; Carlson & Patterson, 2019), feelings toward change (Louis et al., 2005), alignment with their school's purpose (Drake, 2017; Carlson & Patterson, 2019), or their individual sense of the school's current situation (Evans, 2007; Gawlik, 2015). In a variety of contexts facing different forms of ecological change, studied educators' actions and understanding of these actions were impacted by these various preexisting factors. Coburn (2001), for instance, found that previous experiences with an instructional concept or initiative impacted how leaders and teachers processed these changes. Instructional messages that aligned with previous experiences were prioritized and accepted whereas messages that conflicted with previous experiences were less likely to be favored. Extending this further, Coburn (2004) found that teachers' previous experiences with reading instruction shaped what tangible changes they made in the classroom as they navigated the implementation of new programming. Interestingly, the author also found that this led to variant responses to similar

school messaging. Some teachers responded to institutional pressure by re-examining their current practice; others responded by becoming more resolute in maintaining their current practice. So, across studies, while actors were impacted by internal beliefs and past experiences, this impact wasn't necessarily uniform.

In addition to the influence of internal factors, studies also consistently found that individual sensemaking was impacted by external aspects of instructional change and of the school context. These external influences also span a wide number of considerations, including the district role in mediating or explaining the policy (Louis et al., 2005; Rigby, 2015), the clarity of the policy or change itself (Russell & Bray, 2013), external pressures accompanying the change (Carraway & Young, 2015), or wider social forces surrounding the change (Drake, 2017; Evans, 2007). Rigby (2015), for instance, found that external factors and support shaped principals' sensemaking around a new evaluation system, but also found that "enactment of instructional leadership is more complex than a district policy, an artifact to enact the policy (the evaluation forms), or even extensive instruction in principal preparation programs" (p. 387). The author concluded that even concrete artifacts such as a new evaluation form left room for wide-ranging implementation. On a wider scale, Russell and Bray (2013) found that policy, when clear and consistent, led to more consistent sensemaking and thus implementation, as opposed to more ambiguous policies, which led to higher degrees of variation and divergence from the intent of the policy. Finally, external factors that extend outside of even the educational sphere can impact individual sensemaking. Evans (2007), for instance, found that leaders' sensemaking around demographic change was impacted by culturally ingrained attitudes toward race, as leaders sought plausible explanations of their actions that were in line with societal norms. Drake (2017) found that teachers of refugee students chose to enact and interpret new policies around graduation requirements through the lens of their specific students' needs and

experiences. Collectively, actors within a school make individual sense of change as understood through a diverse set of internal and external lenses.

Collective Sensemaking

Sensemaking, as articulated by both models described above, does not occur just within an individual but is instead negotiated in social spaces. Weick et al. (2005) argue that sensemaking is "an issue of language, talk, and communication" (p. 409). Building off of this, Spillane et al. (2002) argue that:

> Interacting with each other, local actors can explicate tacit beliefs as individuals are prompted to summarize and articulate their interpretations in struggling to communicate their point of view. Once articulated, these frequently tacit opinions become visible to the individual and the group – open to discussion, debate, and negotiation, supporting group sense-making to find inconsistencies and flaws and to resolve them. (p. 406)

These conceptual ideas forwarded by both models are reinforced by empirical studies that show the key role that informal networks and formalized organizational structures play in collective sensemaking.

Formal structures, such as team meetings (Coburn, 2001; Donaldson et al., 2016; Louis et al., 2005), professional learning communities (Louis et al., 2009) and disciplinary departments (Louis et al., 2005; Anagnostopoulos & Rutledge, 2007), have all been shown to affect collective sensemaking. Coburn (2001) and Louis et al. (2009) both found that these collective structures could lead to instructional change among a group of teachers, though Coburn found in other situations this group work could codify existing practices. Louis et al. found that this change was not universal; professional learning communities in one studied school were the source of desired changes in instructional practices, whereas in another studied school they led to no real change in practice. At the secondary level, multiple studies found that departments served as mediating structures for making sense of and enacting change. For example, Louis et al. (2005) found that different departments experienced varying levels of accountability pressure

depending on their content area. On a more instructional level, Anagnostopoulos and Rutledge (2007) found that different teachers internalized messaging around a district content area literacy initiative differently depending on which department they worked within. Teachers in mathematics and English departments each resisted the initiative, but for different reasons and in different ways. These studies suggest that formal structures can and do serve as the site for collective sensemaking but that these structures do not automatically lead to desired changes or even the same changes.

Informally, educators move beyond formal structures by seeking out others to aid in their sensemaking around instructional change. Siciliano et al. (2017), for instance, found that teachers implementing the Common Core State Standards sought out colleagues who appeared to see value in the change and were viewed as effective in implementing it in their classrooms. The authors found that teachers sought out both teachers who held similar opinions and teachers who held different opinions. Coburn (2001) also noted the prevalence of teachers' informal networks but found that teachers "tended to self-select into informal networks with similar worldviews and approaches," (p. 156) leading to "relative homogeneity in informal settings" (p. 157). In the studied school, this led to pockets of varying belief and sensemaking despite more formal attempts to shape sensemaking by school leaders. As these findings around formal structures and informal networks suggest, leaders must attend to these elements as part of intentional processes around sensemaking.

Leaders' Impact on Sensemaking

Reviewed studies also track the influence of leaders on sensemaking. Like teachers, leaders' responses to ecological change is heavily influenced by their past experiences and changes how they frame the situation, as well as their concrete actions (Sleegers et al., 2009; Coburn, 2005; Matsumara & Wang, 2014). Sleegers et al. (2009) showed that leaders responded

to the same problem of dropping enrollment numbers in very different ways depending on their past problem-solving experiences. Matsumara and Wang (2014) found that the proactive implementation of a coaching program was heavily influenced by leaders' past experiences with coaching. Coburn (2005) found that this sensemaking extended beyond the individual leader and impacted others within a school. This included what access teachers were given to the ideas of an initiative, the ways in which they were allowed to learn more about the initiative, and even the "the overarching interpretative frame" (p. 494) through which teachers understood the initiative. This influence impacted teachers even when the leader wasn't physically present, as teachers adopted interpretations and justifications of the change as forwarded by their principal. At the secondary level, these prior experiences also extended to disciplinary expertise. Lochmiller and Acker-Hocevar (2016) found that school leaders were often forced to change their leadership choices based on a lack of experience with a given discipline. For instance, leaders relied more on outside experts and their accompanying expertise when shaping instructional messages in disciplinary ways.

Beyond this more abstract impact, leaders also can intentionally attend to individual and collective sensemaking by setting the conditions for formal networking within pre-set structures (Coburn, 2005; Coburn, 2001; Louis et al., 2009), focusing on explicit strategies, such as the use of modeling or metaphors, to impact messaging (Gawlik, 2015), or by shaping justifications within the selection and retention sensemaking categories (Krumm & Holmstrom, 2011). As numerous studies show, though, leaders must be cautious as their actions can lead to the introduction of additional ambiguity and tension. Allen and Penuel (2015), for instance, found that "certain tools and routines intended to bring about coherence at the system level can actually undermine it" (p. 147). Similarly, Krumm and Holmstrom (2011) noted that sensemaking itself can create difficulties to individuals attempting to make sense of change. While

enactment, selection, and retention activities can help schools create meaningful instructional change, they can also be used to justify ineffective or even harmful practices. As such, leaders must be aware of both their own sensemaking and the ways in which that sensemaking extends outward to affect others both abstractly and concretely.

Synthesis and Implications

Disciplinary literacy represents a potentially powerful instructional element within a school, with the ability to raise students' engagement with disciplinary discourses (Learned, 2018) while also building important skill sets within the disciplines and with their overall literacy abilities (Greenleaf et al., 2011; Reisman, 2012). As a response to teachers' dissatisfaction with earlier literacy initiatives (see Siebert & Draper, 2008), disciplinary literacy has the potential to engage teachers with a sense of collective responsibility around literacy instruction (Cantrell et al., 2008; Graham et al., 2017). For leaders of disciplinary literacy programs, harnessing the power of teacher leadership represents a key potential lever for spreading disciplinary literacy (Charner-Laird et al., 2016) but may also require significant professional development around what represents literacy in each discipline (Mac Mahon, 2014; Conley, 2012). Further, initial research suggests that for some leaders in the building, disciplinary literacy may require different stances in order to account for the nuanced nature of leading literacy within distinct disciplines (Wilder, 2014; Di Domenico et al., 2018). Sensemaking studies identify spheres of influence as leaders and teachers attempt to understand complex, ambiguous change. Prior experiences and formed beliefs impact how both groups interpret ecological change, and formal structures and informal networks serve as sites for negotiation of sense and implementation of change. Leaders play a primary role in setting the sensemaking context, and their influence impacts the collective sensemaking of others. Finally, studies of program coherence provide

some guidance as to how to best align abstract and concrete practices in support of greater understanding around disciplinary literacy.

In the next section of this study, I will outline the overall conceptual framework that ties together elements of disciplinary literacy, program coherence, and sensemaking. I will then explain how this framework will be used to shape the methodology and analysis of my study.

Chapter III - Conceptual Framework and Methodology

Disciplinary literacy instruction holds the potential to support secondary students as they grow within each content area and develop overall literacy skills in the areas of reading, writing, and discussion. However, emerging literature around leadership surrounding this kind of initiative suggests that it carries with it layers of complexity and ambiguity, and requires corresponding, nuanced leadership actions in order to build momentum toward systemwide instructional change. The purpose of this study is to investigate and describe the ways in which school leaders engage with ambiguity associated with the introduction of a move toward disciplinary literacy instruction, leaders' individual and collective sensemaking around this change, and the environmental conditions that leaders must navigate to build a more coherent instructional program. Surveyed literature around disciplinary literacy, sensemaking, and program coherence supports a conceptual framework (see Figure 1) that identifies the sensemaking process as a key element of leaders' efforts to build coherence in the face of complexity.

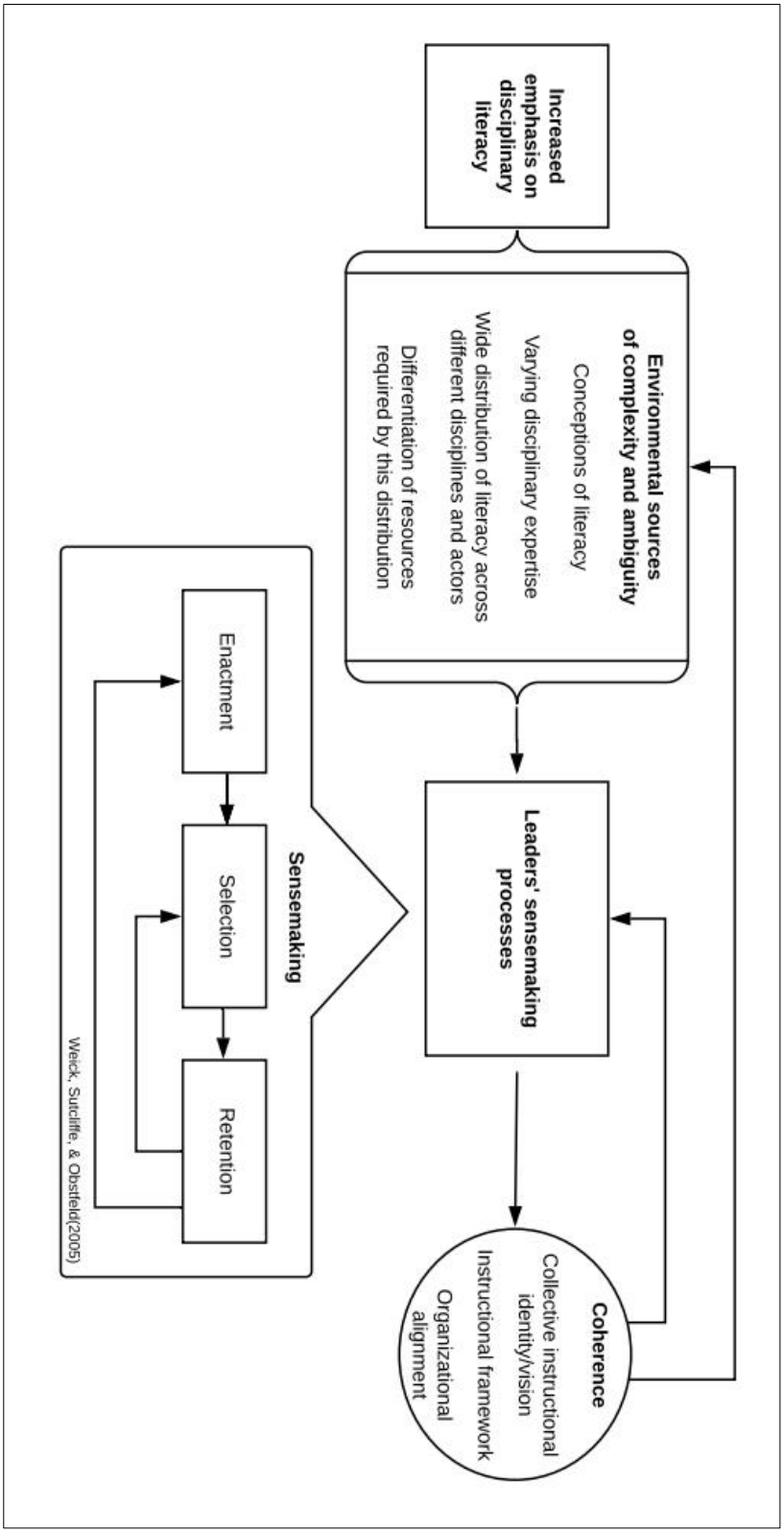


Figure 1. *Conceptual Framework Combining Disciplinary Literacy, Sensemaking, and Coherence*

Conceptual Framework

Disciplinary Literacy

The proposed conceptual framework centers on leadership of disciplinary literacy as an object of study. When considering the school environment that disciplinary literacy exists within, Weick provides helpful conceptual framing. In arguing that leaders enact within "sensible environments," Weick (1995) describes a complicated interplay between internal and external factors, asserting that "there is *not* some kind of monolithic, singular, fixed environment that exists detached from and external to those people" (p. 31). Instead, Weick argues, actors within an environment individually and collectively create many of the conditions "that become the constraints and opportunities they face." As such, an understanding of the environment that disciplinary literacy may be enacted within requires the recognition that influencing factors may be both internal and external to the individuals and groups acting within that environment. More precisely, Weick's argument suggests that leaders are dealing not just within the concrete changes simultaneous to the creation of a new instructional program but also with the abstract conceptions that exist within their own minds and the minds of others.

By its nature, a focus on disciplinary literacy instruction carries with it the introduction of several elements of complexity and ambiguity. First, different members within a school community bring different conceptions of what constitutes literacy. These conceptions could mirror more traditional conceptions of literacy (e.g., general strategies that are unchanged from discipline to discipline), such as a focus only on traditional written text (Graham et al., 2017; Cantrell et al., 2008). These traditional conceptions, which may have been formed by prior experiences with content area literacy initiatives, are less complicated for school leaders but are also often less engaging to teachers (Siebert & Draper, 2008). Other conceptions of literacy are in fact misconceptions, as teachers understand literacy to be something that it is not. For

example, Mac Mahon (2014) interviewed Irish teachers who were immersed in a national context focused on disciplinary literacy but consistently cited incorrect strategies as literacy strategies (e.g., repetition).

A second source of complexity and ambiguity surrounds the wide distribution of disciplinary literacy across disciplines. As an extension of the ambiguity introduced by different conceptions of literacy, several surveyed studies noted that conceptions of literacy often broke down along disciplinary lines (or at least, differed by discipline). Cantrell et al. (2008), for instance, found that roughly four out of five teachers studied felt that literacy was an important part of their discipline, but one of five teachers (all of which were mathematics teachers) disagreed. Within a content area literacy initiative, Anagnostopoulos and Rutledge (2007) found that teachers in different departments responded differently to the same policy messages. Mathematics teachers complied with the initiative but only in a superficial way; English teachers openly resisted the initiative, drawing a distinction between the explicit teaching of reading skills and English-specific skills such as literary analysis. Studies such as these reinforce an important point surrounding disciplinary literacy. The complexity introduced by disciplinary literacy is one of the challenges associated with leading work around it; however, this complexity and ambiguity is in fact also its greatest benefit for teachers and students. Moje (2015) argues for the need to ground conceptions of literacy specifically within the disciplines, which would allow teachers and students to understand how disciplinary literacy helps further serve the purposes of each discipline. While it might seem unexpected for English teachers to resist a literacy initiative, the teachers studied by Anagnostopoulos and Rutledge (2007) were essentially rejecting a content area literacy approach in favor of a disciplinary one, enacting “a schema of secondary English that the English teachers used to distinguish their work from the teaching of reading as defined by the principals’ initiatives” (p. 1283).

In addition to these potentially varied abstract conceptions of literacy across disciplines, disciplinary literacy also adds the potential for increased need for more differentiated concrete applications. While a content area literacy approach might favor a single strategy (such as the annotation of text) applied similarly across different disciplines, disciplinary literacy allows for the adaptation of this strategy uniquely in each discipline. It may also allow for the recognition that such a strategy may not even by applicable within certain disciplines. Beyond this discrete need for differentiation within a singular strategy, disciplinary literacy often extends outward to bigger instructional structures, as it requires differentiation in terms of aspects such as curricula or assessments. In the former, varied curricular choices may be needed to recognize the different needs for student skills in each discipline; in the latter, different assessments or rubrics may be needed to assess these differentiated student skills. As initial studies of disciplinary literacy (Charner-Laird et al., 2016) have suggested, teacher leadership is an important component in making these determinations.

All of these suggest a final overarching source of ambiguity and complexity, which is the need for school leaders to rely on a wide net of actors within a building, with each bringing to bear his or her own expertise. While this type of leadership may be ultimately beneficial for teachers and students, it is also potentially challenging for school leaders. More generally, Lochmiller and Acker-Hocevar (2016) found that a lack of disciplinary knowledge required administrators to lead differently, by relying on outside experts or by focusing feedback on more generic teaching moves. Within disciplinary literacy studies, several studies (Wilder, 2014; Di Domenico et al., 2018) have noted that coaches must take specific coaching stances – notably that as a “disciplinary outsider” – in order to lead teachers within this realm. Collectively, these sources of ambiguity and complexity suggest the need for leaders to engage with each type of ambiguity, not with the aim of wholly eliminating ambiguity but instead with the aim of

understanding where ambiguity is in service of students and teachers versus where it may need to be better managed or mitigated.

Sensemaking

The inclusion of sensemaking within this conceptual framework extends first from the recognition that leaders engaged with disciplinary literacy are interacting already with key elements of the sensemaking processes. As articulated above, sensemaking is "grounded in identity construction," "retrospective," "enactive of sensible environments," "social," "ongoing," "focused on and by extracted cues," and "driven by plausibility rather than accuracy" (Weick, 1995, p. 17). At its core, an authentic disciplinary literacy focus requires schools to undergo an ongoing social process as actors within the school examine their own disciplines to understand what is important about each discipline and its literacy skill sets. Moje (2015) would argue, disciplinary literacy is as much about engaging students in "inquiry within a community of practice and discourse central to the learning of the literacy practices of a discipline" (p. 255). As such, disciplinary literacy instruction can be as much about identity construction as it is about more concrete elements, such as curriculum guides or lesson plans.

This kind of socialized identity construction around disciplinary literacy – especially as framed by Moje as a process of inquiry, practice, and discourse – supports the constructivist model of Weick. As Sandberg and Tsoukas (2014) note, "sensemaking develops by socially embedded actors enacting a world through language use, as they engage with a puzzling situation at hand" (p. S9). As leaders and teachers within a school engage with ideas of disciplinary literacy, they potentially navigate not only instructional and leadership practice but even what it means to be a student or teacher of that discipline and where literacy may fit within that. The teachers studied by Anagnostopoulos and Rutledge (2007), in seeing the need "to distinguish their work from the teaching of reading," were indeed making nuanced

arguments about who they were as teachers, what they valued, and what they wanted their students to do within an English classroom (p. 1283). The application of a sensemaking lens to the study of disciplinary literacy also allows for the examination of how past experiences and beliefs impact the change process. While much of the educational literature surveyed is influenced by a cognitive approach (led by studies influenced by Spillane et al., 2002) and as such many of the findings extend from that approach, constructivist models allow for similar discussions of the influence of preexisting beliefs and experiences. Sandberg and Tsoukas (2014) argue that actors bring past experiences and actions into the process and then adjust to initial actions based on how their initial attempts to articulate new experiences are negotiated through further discourse. As such, findings about the impacts of various factors – for example, past instructional experiences (Redding & Viano, 2018) or beliefs about pedagogy (Marco-Bujosa et al., 2017; Carlson & Patterson, 2019) – on individual sensemaking have the potential to apply to disciplinary literacy, which itself seems to elicit similar responses from leaders and teachers. Similarly, findings about the social nature of instructional change and the use of both formal structures (Coburn, 2001; Louis et al., 2009) and informal networks (Coburn, 2001) align interestingly with disciplinary literacy, which foregrounds work on the department, course, and team level. Finally, the place of the leader within the sensemaking process is key, as leaders can influence the sensemaking of others (Sleegers et al., 2009; Coburn, 2005) and even set the conditions for sensemaking. Leaders' influence in this way is often termed sensegiving, defined as "the process of attempting to influence the sensemaking and meaning construction of others toward a preferred redefinition of organizational reality" (Gioia & Chittipeddi, 1991, p. 442). Within the area of disciplinary literacy, this can be a potential complicating factor, as leaders' past experiences may not include specific disciplinary experience.

Coherence

Finally, coherence serves as a balancing point for the sensemaking process within the conceptual framework. Within this model, coherence is seen not as an outcome of sensemaking, but as an element that interacts with sensemaking as leaders negotiate sense collectively across a building. Coherence has several definitions across different studies, but a representative description is articulated by Elmore et al. (2014), who define it as, "a school's capacity to engage in deliberate improvements in instructional practice and student learning across classrooms over time, as evidenced by educator practices and organizational processes that connect and align work across the organization" (p. 3). In essence, it is a school's ability to create sustained instructional growth and student learning through a series of actions and processes.

Studied models of coherence (Newmann et al., 2001; Hopkins & Spillane, 2015; Mehta & Fine, 2015) diverge in many ways, as described within the above literature review, but also have some commonalities. The primary commonality is the combination of concrete instructional elements within a school (e.g., an articulated instructional framework) with more cultural, identity-driven elements (e.g., an instructional vision or collective identity around pedagogy) and organizational processes that attempt to align these elements. In some studies (Newmann et al., 2001), the result of coherence is increased test scores. In others (Mehta & Fine, 2015), the result is more consistent communal practice throughout the school. The inclusion of coherence provides a framework for navigating the complexities introduced by disciplinary literacy in conjunction with the reflective, retrospective process of sensemaking. As leaders go through the sensemaking process within a building, they enact actions and then select and retain the most plausible explanations of what's happening within this instructional change. In doing so, they impact coherence either positively or negatively. This change in coherence impacts not only continued sensemaking processes, but also the school's grasp of the sources of complexity and

ambiguity contained within disciplinary literacy. As Krumm and Holmstrom (2011) note, leaders can use the sensemaking process to codify less positive instructional practices within a school just as easily as more positive practices. As an impactful instructional program for students, disciplinary literacy helps serve as a counterpoint to this less positive form of justification. Similarly, Mehta and Fine (2015) describe how coherence can increase the frequency of implementation of very different instructional programs. Combined with sensemaking, coherence holds the potential to allow leaders to navigate the complexities introduced by disciplinary literacy in a manageable way for school actors.

Research Design

In pursuit of better describing and understanding how school leaders have made sense of and enacted a complex initiative such as disciplinary literacy, this study utilized a qualitative case study design focused on a single high school. In their general literature review on sensemaking, Maitlis and Christianson (2014) note that case studies are one of the most common forms of methodologies for sensemaking studies, and this observation holds true of the specific educational studies surveyed above. As researchers attempt to understand the nuanced microprocesses of educational change over time, a single case study holds potential as an effectual methodology. Coburn (2001), in describing her own sensemaking case study, argues that "[f]ocusing on a single case allowed for the depth of observation necessary to capture the subtle and iterative process by which teachers constructed and reconstructed messages from the environment through social interaction" (p. 147). Similarly, the use of a case study in this research design allowed for more direct examination of how a disciplinary literacy program plays out across multiple structural levels of a school (e.g., whole school, administrative team, department level), especially as negotiation may occur across these levels. Additionally, the sensemaking process plays out over time, and the studied school was entering its fourth year

focused on disciplinary literacy; a case study allowed for more sustained examination of this longer span of time.

Research questions

As noted above, the study gathered data in support of a primary research question centered on disciplinary literacy, sensemaking, and coherence, as well as four subquestions:

Primary research question: How do school leaders attempt to build coherent instructional programs around disciplinary literacy?

Subquestion 1: How do school leaders make sense of disciplinary literacy?

Subquestion 2: What practices, processes, and structures do leaders use to attempt to develop instructional programs around disciplinary literacy?

Subquestion 3: What environmental conditions enable or constrain school leaders as they attempt to build instructional programs around disciplinary literacy?

Subquestion 4: How do leaders' sensemaking processes impede or facilitate enactment of coherent instructional programming around disciplinary literacy?

Collectively, the questions help frame different aspects of the sensemaking process and coherence around disciplinary literacy. Research subquestion one allows for examination of individual sensemaking, the experiences that school leaders bring with them to their sensemaking of disciplinary literacy, and the forms of identity building that both sensemaking and disciplinary literacy foreground. Research subquestion two allows for examination of more collective sensemaking processes, as actors within a school work together to craft a disciplinary literacy program. This examination allows for specific questioning of the enactment, selection, and retention of certain actions and justifications, as well as how these decisions may have contributed to or detracted from a sense of coherence surrounding disciplinary literacy. Research subquestion three allows for understanding of the environment in which actors are "acting into" as they attempt to build a disciplinary literacy program. Examination of this question allows for better understanding of the conditions surrounding the sensemaking

process while also potentially building the knowledge base around leadership, specifically for disciplinary literacy. Finally, research subquestion four integrates the first three questions to understand how school leaders understand their past individual experiences, their collective understandings, concrete actions taken, and environmental conditions that either enable or constrain the construction of a disciplinary literacy program.

Data Collection

In order to gather data in support of these research questions, the study utilized two main methods of data collection: semi-structured interviews and document analysis. Interviews were conducted with 10 leaders within the school, with the term "leader" being operationalized to include any actor who has taken a leadership role in support of disciplinary literacy (Spillane et al., 2002; Spillane et al., 2004). Leaders included the principal, assistant principals, instructional coaches, department chairs, and teacher leaders, including those who spearheaded discipline- and course-specific professional learning communities (see Figure 2). Within the studied district, a sustained focused on disciplinary literacy has included a focus on teacher leadership and shared leadership. As part of this, the district required the establishment and support of secondary literacy teams, with the expressed goal of leading this work within the building. The make-up of each team included a diverse set of actors, and teams were encouraged to look beyond formal positions and spread leadership across the team. Given this consideration, this study grouped interviews less by role than by scope of literacy work and began by interviewing actors who had taken a whole school approach to literacy over the past three years. This included both members of the administration and members of the literacy team. Through a process similar to snowball sampling (Crouse & Lowe, 2018), this initial phase of interviews informed future selection of interviews and eventually moved to actors focused on a more department or PLC level. Separate (but similar) instruments were used in order to probe

these different levels of focus (See Appendices A and B). By starting at the widest-reaching level (the school) and narrowing down to more specific levels (departments and teams), this radial approach allowed for immersion in the central sensemaking that occurred at the school level prior to more specific forms of sensemaking within different disciplines.

Role	**Potential relevance**
Principal	Provide insight into whole school vision and messaging, identification of potential challenges (especially on a school level), integration of disciplinary literacy into professional development planning, and resource allocation.
Assistant principals	Provide insight into whole school vision and messaging, identification of potential challenges, integration of disciplinary literacy into professional learning communities, integration of disciplinary literacy into evaluation and feedback processes.
Instructional coaches	Provide insight into whole school vision and messaging, identification of potential challenges (including in the move from whole school level to department and classroom level), integration of disciplinary literacy into professional development planning and into professional learning communities, and coaching and leadership within disciplines from an outside perspective.
Department chairs and CT leaders	Identification of potential challenges (especially at the department and classroom level), integration of disciplinary literacy into professional development planning and into professional learning communities, and leadership within disciplines from an inside perspective.

Figure 2. *Interview Subjects and Potential Relevance*

Interviews with leaders at the school level sought to gather qualitative data in several areas as suggested by the study's research questions: 1) leaders' initial understandings of disciplinary literacy as a concept (as perhaps informed by their past experiences with literacy), 2) leaders' recounting of actions and discourse surrounding the attempted implementation of a disciplinary literacy program, 3) leaders' reflections on the environmental conditions that impacted leadership of work around literacy, and 4) leaders' analysis of what actions were selected and retained and their justifications of why those actions were selected and retained.

Collectively, questions were designed to elicit information about disciplinary literacy, sensemaking, and coherence. Interviews with leaders at the department or team level sought out similar information but were also tailored to probe more specific questions about how disciplinary literacy, sensemaking, and coherence play out in more discrete, content-specific settings within the school.

Prior to and concurrent with semi-structured interviews, more than 150 relevant school-created documents centered on disciplinary literacy were collected. Bowen (2009) notes that document analysis is a common methodology within case studies, providing two main benefits: 1) to help build "rich descriptions of a single phenomenon, event, organisation, or program," and 2) to help triangulate data, which he defines as the process of "seek[ing] convergence and corroboration through the use of different data sources and methods" (p. 28-9). Examples of documents gathered for this study included professional development materials and plans, materials that define or articulate different elements of disciplinary literacy, literacy team notes or plans, school improvement plans, teacher feedback provided to the literacy team, and high-level instructional materials (e.g., visible schoolwide/department-wide charts or processes). To the extent possible, documents were collected prior to conducting interviews in order to allow for interview participants to comment on the development of documents, including any recursive revision that may have occurred. In this way, the combination of the two methodologies allowed for reflection that informs understanding of the selection, retention, and justification processes. Concurrent document collection occurred by asking interviewees about key documents that informed their understanding of disciplinary literacy or impacted the coherence of the disciplinary literacy program (see Figure 3).

Research question	Method and rationale
Research question: How do school leaders attempt to build coherent instructional programs around disciplinary literacy?	Interviews and document analysis allowed for understanding of both internal and external, abstract and concrete elements of program building and sensemaking.
Subquestion 1: How do school leaders make sense of disciplinary literacy?	Interviews allowed leaders to identify and reflect on their understanding of disciplinary literacy, including how that understanding has changed over time. Document analysis allowed for the examination of concrete attempts to build sense around disciplinary literacy, including possibly how that understanding has changed over time.
Subquestion 2: What practices, processes, and structures do leaders use to attempt to develop instructional programs around disciplinary literacy?	Interviews allowed leaders to detail enactment, selection, and retention processes related to disciplinary literacy. Document analysis allowed for the examination of concrete resources that highlight disciplinary literacy, and the associated sensemaking.
Subquestion 3: What environmental conditions enable or constrain school leaders as they attempt to build instructional programs around disciplinary literacy?	Interviews allowed for leaders to identify and reflect on conditions that have been accelerated or restrained the building of instructional programs.
Subquestion 4: How do leaders' sensemaking processes impede or facilitate enactment of coherent instructional programming around disciplinary literacy?	Interviews allowed leaders to reflect on their own sensemaking processes and discuss coherence as a potential goal.

Figure 3. *Connection Between Research Questions and Data Collection*

Collectively, disciplinary literacy, sensemaking, and coherence all combine the abstract and the concrete. Disciplinary literacy involves a set of beliefs about what constitutes a discipline (as described in Moje, 2015) and the skill set needed to engage authentically within that discipline. Within a school, those abstract beliefs play out concretely, with the creation of lessons and resources, as well as the products created by students as they practice and demonstrate competency in disciplinary literacy skills. Sensemaking proceeds as a mixture of individual and collective thinking, spoken discourse, and the enactment of concrete actions. Models of coherence combine concrete resources (such as curriculum maps) with more abstract

considerations (such as collective instructional identity). The methodology of this study, then, was designed to mirror that combination, with interviews providing input on abstract processes and document analysis allowing for examination of more concrete products. The triangulation between these methods mirrors the nuanced interaction between abstract and concrete elements of disciplinary literacy, sensemaking, and coherence.

Data Analysis

Interview data was analyzed using cycles of thematic coding. Data collection was followed by memoing in order to capture initial analysis just after interviews. Following the transcription process, initial read-throughs focused on deductive coding that extended from the conceptual framework. Codes on disciplinary literacy, leadership, sensemaking, and coherence were developed prior to coding as guiding concepts. Further read-throughs continued the process of interpretive, etic coding, looking for further themes or higher-order (pattern) codes (Hays & Singh, 2012). (See Appendix C for both initial and updated codes.) Similar methods of coding were used for document analysis, utilizing similar sets of codes. Bowen (2009) notes that "[d]ocument analysis involves skimming (superficial examination), reading (thorough examination), and interpretation" (p. 32). A similar process was used for this study, promoting what Bowen describes as an "iterative process … of content analysis and thematic analysis." By tracking similar codes across different forms of data, this analytical mode allowed for triangulation and a comparison of how individual actors characterized elements of the study versus how these elements were captured in written form. Across both forms of data, space was allowed for consideration of new codes that expand or complicate initial conceptions of the study.

Limitations

As suggested above, the combination of semi-structured interviews and document analysis allowed for "rich descriptions of a single phenomenon, event, organisation, or program" (Bowen, 2009, p. 29). However, the study does bring with it several limitations. The primary limitation involves generalizability, which is a common limitation of case study research. This study took place within a single school within a single district. Context is an integral component of the sensemaking process (Spillane, et al., 2002), and a shifting context may limit how much a strategy or observation may transfer to a new setting. As such, potential findings and suggestions are forwarded with the acknowledgement that they may not apply widely to a new population; however, as noted above, theoretical generalizability may be possible (Yin, 2018). Additionally, the bounding of this study focused on school leaders and their work. While this lens allows for a wide focus, it did not extend into classrooms to determine how integrated disciplinary literacy has become within a school, nor does it comment on the efficacy of instruction or its impact on student outcomes. Certainly, both would be worthy of study in future research projects.

Role of the Researcher

As a former English teacher, literacy has been a topic of both professional responsibility and passion for many years. This belief in the importance of literacy extended beyond the English classroom to believing in the need for reading, writing, and discussion to be a key element for students across all of their courses. Further, in working as a school and district leader, I have further believed in the value of literacy as an empowering agent for students in their own learning and for teachers attempting to engage students in the authentic study of their discipline. In these leadership roles, I have continued to advocate for literacy. As such, I recognize that I am positively oriented to literacy – specifically disciplinary literacy – as an area

of focus. To address this bias, this study is designed to explore the development of disciplinary literacy programs, but in doing so also looks to explore the challenges of disciplinary literacy for school leaders and take a balanced approach toward its implementation.

Conclusion

Advancing a conceptual framework that explores leaders' sensemaking as they attempt to build a coherent program around disciplinary literacy, this study implemented a descriptive single case study in order to build the knowledge base around leaders' navigation of complex and ambiguous instructional change. Within the case study, interviews and document analysis were combined in order to better understand leaders' enactment, selection, and retention of disciplinary literacy programming.

Chapter IV - Findings

The design and data collection for this case study centered on one primary research question ("How do school leaders attempt to build coherent instructional programs around disciplinary literacy?"), which was supported by four subquestions focused on the interrelation between principles of disciplinary literacy, coherence, and sensemaking processes. This report of findings begins with a high-level summary of the five-year process that Redmond High School underwent, as shared by many of the school staff members who participated in that process and as articulated within the documents created by those same staff members in pursuit of the goal of increasing the use of literacy practices within their school. This grounding summary will then be followed by a report of findings by subquestion; this discussion will build upon the initial summary and explore elements within it in greater depth. By progressing through the subquestions in their stated order, the analysis attempts to better discern school leaders' past experiences and initial understanding of disciplinary literacy (Subquestion 1), catalogue the concrete actions that leaders took in support of a disciplinary literacy program (Subquestion 2), report on participants' sense of the environment that these actions took place within (Subquestion 3), and finally describe leaders' sensemaking around these actions in order to analyze the positive and negative impact of this sensemaking on the creation of an instructional program (Subquestion 4). Each of these subquestions represents parts of potential answers to the primary research question surrounding coherent practices toward a disciplinary literacy program. As such, after presenting findings related to each subquestion individually, the analysis ends with a report of the overarching findings related to the primary research question.

Redmond High School's Literacy Journey

Redmond High School's initial experience with literacy was heavily crafted by the district, which identified secondary literacy as an area of focus and committed sustained time and financial resources to the development of this initiative. According to the principal, Year 1 of this program was preparatory and took place mostly independent of Redmond's school and staff, as central office specialists built their own understanding and created framing documents to help guide school-level work. The primary contact point at this time for Redmond was the principal, who reported participating alongside other middle and high principals in multiple sessions working with a national literacy expert. These sessions consisted of structured support in defining literacy as a general concept, as well as building a more nuanced understanding of disciplinary literacy. Central office staff worked to gain feedback from principals on definitions, specific recommended instructional practices attached to literacy, and the usability of teacher- and school-facing resources that might be utilized in future years. The principal of Redmond described the beginning of this process, stating that, "Principals were all over the place on [literacy], but I was an early adopter on that. I really liked it. It made a lot of sense to me." At the end of Year 1, schools were tasked with identifying a literacy team made up of administrators, teacher leaders from a variety of disciplines, and other school leaders such as librarians or instructional coaches. As one Redmond leader described this process, the conversation at the administrative level was "who can we send that will just kind of eat this up, become leaders and start thinking about ways we can incorporate literacy and start talking about literacy schoolwide through different content areas?" In doing so, leaders described some negotiation and discussion of the initial team members. One staff member noted that, in her view, about 80% of the initial team were leaders "who saw the value in it for students and were willing to push themselves out of their comfort zone."

After the formation of the literacy team, Year 2 represented the first substantial work at the school level around disciplinary literacy, a year in which the team started to build common understandings that would shape many of their later decisions and began to understand the demands of this kind of teacher-based leadership. Redmond's literacy team participated in two full days of professional development during the summer and then four days of follow-up learning throughout the first year. Seven team members identified this professional learning as their first explicit exposure to disciplinary literacy. Year 2 for the school was presented by several interviewees as a year of learning, during which they built an understanding of the concepts but didn't necessarily institute widespread concrete action at the school level. As one member of the team described it, in the first school-based year "we attended the training [but] the teachers were hesitant to set their own vision." At the end of that year, the school took some members off of the literacy team (e.g., members that leaders identified as being "on the fence" or even negative about the work) and replaced them with new members.

Several team members identified Year 3 as a moment of change for the team, especially in terms of increased efficacy in the team taking ownership of the work and marshalling team members in support of both whole school processes and differentiated supports distributed through departments and course-specific teams. One team member noted that "I think that year two [of school-based work] was where we really gained some momentum." Several team members identified this time period as one where they started to take the reins of the work and worked to increase the presence of disciplinary literacy within the school. Discussion of this time period centers not just on focused-upon literacy concepts but also specific conversations about how to best implement these practices within the school. The team worked to give everyone in the building an understanding of what disciplinary literacy was, and also began to focus on specific practices such as annotation. Additionally, the decision was made as a team to spread

this message in a differentiated way, focusing on how individual disciplines might use disciplinary literacy.

Within Year 4, the team continued to develop the school's understanding of disciplinary literacy, including more specific strategic planning and integration into school processes. During this year, literacy was incorporated into a larger school-wide focus on engagement and was included as a component within Redmond's school improvement plan (SIP). This explicit focus included delineation of specific schoolwide strategies (e.g., using text sets and reading with a purpose) and also articulated strategic decisions for the literacy team (e.g., opening up their own classrooms for visits and supporting other members of their departments in experimenting with strategies). Based on both interviews and document analysis, this year was the most active one for the literacy team.

At the beginning of Year 5, an external event impacted the literacy team and its constitution, creating a year of ambiguity that most of the interviewees identified as having a negative impact on the spread of literacy within the school. The district began 1-to-1 technology integration, and all students within the district were given laptops as part of this initiative. The district attempted to integrate these two work processes, combining the literacy team with another technology-focused team that had been working in parallel with the literacy team during Year 4. As a result of this combination, some members of the original literacy team were no longer at the center of this work. This change in make-up also coincided with several members of the literacy team leaving the school for new positions elsewhere in the county. District-level professional learning also hybridized, as central office specialists attempted to combine elements of technology integration and blended learning with disciplinary literacy. As will be discussed below, eight interviewees marked this change in their responses, with almost

all identifying it as having a negative impact on the momentum of the literacy team, as well as the spread of disciplinary literacy within the school.

Making Sense of Disciplinary Literacy (Research Subquestion 1)

To understand what past familiarity and varying conceptions members of the Redmond literacy team might have had surrounding disciplinary literacy, interviewed staff members were asked to articulate their own experiences prior to the studied period of time, as well as to consider how their thinking evolved over the course of the five years studied. Findings suggest that team members had limited exposure prior to the current disciplinary literacy initiative but were able to develop nuanced and consistent understandings around disciplinary literacy, even moving beyond strategy-based approaches to see the impact that disciplinary literacy had on the overall study of their discipline.

Traditional Past Experiences With Literacy

Overall, data suggest relatively limited yet varied initial exposure for all Redmond staff members to general literacy practices. Staff members reported even more limited exposure to disciplinary literacy practices prior to the studied initiative. Five of the 10 interviewees experienced literacy education through pre-service experiences, in the form of college coursework prior to beginning their teaching careers. These classes were mixed in terms of whether they represented content area literacy approaches to literacy or disciplinary approaches to literacy. For example, one team member recalled being taught about the use of generalized student journaling (i.e., a form of “writing to learn”), which he applied during his student teaching. Another teacher identified a class that was on disciplinary instructional methods but didn’t discuss literacy explicitly; still, based on her later experiences on the literacy team, she was able to retroactively recognize that the course was partially focused on building

authentic content-specific literacy skills, such as working with disciplinary text and analyzing in specific disciplinary modes.

Both administrators identified experiences surrounding literacy that occurred during their educational careers in the area of special education. In both cases, serving as either a teacher or administrator in a special education setting, the administrators noted that literacy was specifically viewed as a form of intervention for students. These exposures to literacy came either in the form of specific programs meant to promote reading growth for individual students, or in more disciplinary approaches, such as focusing on the reading required for mathematics word problems. Other staff members identified more compartmentalized professional learning opportunities that discussed literacy, though many of those appeared to be more generic strategies, such as general comprehension or writing strategies. For example, one team member described professional development from the Language Arts office on working with struggling readers within the setting of the English classroom.

Two team members – a teacher and an instructional coach – discussed prior literacy initiatives, which were run either at the studied site or in the current district. One staff member recalled a content area literacy initiative at Redmond that lasted a single year before staff turnover led to its abandonment. In her estimation, this occurred about five years before the current literacy initiative. As she noted in referring to past literacy initiatives during her time in the district, “There’s been a tremendous amount of work done over the years that doesn’t necessarily always carry through from year to year.” Another staff member, who is new to the school, had experience with the current central literacy initiative as it was instituted at a previous school. In contrast to the studied school, which took a differentiated and dispersed approach to literacy (as discussed further below), this staff member’s previous school took a highly uniform approach to literacy, requiring the same strategy across disciplines with minimal

differentiation (e.g., asking all departments to have students write paragraphs about course content). The result of that, according to the staff member, was disengagement from many departments, especially mathematics, for whom such writing may not represent authentic engagement with text. The variation in interpretation and action between the respondent's current and former schools suggests the breadth of possible conceptions of literacy, and the equally diverse application of those conceptions, even within the same centralized literacy initiative.

Conceptualizing Literacy as a Disciplinary Feature

Overall, eight out of 10 staff members interviewed articulated evolution from variant initial understandings of literacy to more nuanced and uniform understandings of disciplinary literacy concepts. Many respondents self-identified a narrow initial definition of literacy. One staff member, for instance, represented it this way: "I always thought of literacy … for most of my career [as] just a general kind of surface level definition that like the man on the street definition, it's like literacy is your ability to read and write." Another interviewee mirrored this, noting that "It was really eye opening to just know that when you say literacy, you don't really just mean reading. You're talking about reading and writing and discussing – all of that going together." Others interviewed recognized that their view of literacy was heavily shaped by the discipline they worked within and the way in which that caused them to look at literacy in the beginning. Many staff members identified that they saw literacy as something pertaining only to English (as one put it, her thinking was "Oh, that's the English teacher's job").

Other teachers identified not a narrow definition but a lack of realizing that literacy needed to be a consideration within their discipline at all. As one staff member described it, "I never really thought about literacy as something that was in the math world and something I needed to be concerned about as a math teacher." Even multiple English teachers, who

generally assume that literacy forms the bulk of their discipline, discussed looking at literacy through a sort of "English lens," not always recognizing the difference between general and disciplinary-specific practices, either within their own disciplines or spanning across others'. These different conceptions of literacy suggest that teachers may enter into a literacy initiative with variable, incomplete, or limited understandings of what literacy is, generally speaking, and how literacy may play a role within their discipline, specifically. This could include uncertainty about how what elements are important within a literacy program or about how they interact (e.g., not understanding the role that discussion might play in supporting students' reading or writing), or the need for these skills in fully engaging students within a discipline (e.g., not understanding how specific strategies within a social studies class might be needed in support of general literacy strategies promoted in other classes).

Finally, there was some discussion of literacy conceived as a form of intervention, both in terms of initial understanding but also continuing forward into the present life of the school. To some degree, this conception is a semantic one, as the school maintains a literacy program, which works on reading and writing intervention within the English department. The department staffs several teachers who work on placing and instructing students within literacy classes. Several interviewees listed either teaching these classes or working with the teachers of these classes as part of their initial interactions with literacy. Others, though, recognized the potential confusion for teachers within the school of having both literacy classes and a disciplinary literacy initiative, which, while supportive of each other, may also drive different conversations or actions. As one teacher described this confusion:

> I feel like there's probably pockets of people doing [disciplinary literacy] work, but I also feel like there's probably larger pockets of people that when you say literacy, they're going to say, 'Oh yeah, you should go talk to the literacy teacher.'

As this team member notes, the use of the term “literacy” across different contexts and in different ways potentially creates confusion within Redmond between the team’s widespread instructional efforts and the more contained work of a single department. The risk of conflating overall literacy development with literacy intervention is manifold for a school, as it changes the audience of literacy work (from all students to students in need of intervention), as well as the potential purpose of the work (from developing skills across all classes and engaging students in high-level disciplinary work to a program that exists within the English department).

Literacy as a Wider Instructional Feature

Across the board, interviewees were able to build on these initial conceptions of literacy and articulate how their conceptions of literacy had changed over time, including the framing of disciplinary literacy as a foundational element for conceptualizing a discipline (as opposed to a set of distinct skills). For many, they explicitly pointed to central professional learning that helped them re-envision the concept of literacy and how that might be applied in their disciplines and in their classrooms. As one team member noted:

> I really saw a shift in the word literacy in the county from meaning just a word that relates to English/Language Arts, to being a word that other people were using more globally about how students read, write, think, and discuss.

This perspective suggests a broadening of the term at the district level that led, in this team member’s opinion, to a change in the common language used by staff members more broadly, as it pertains to literacy. Interviewees most commonly described this evolution as the recognition that literacy isn’t just the purview of English teachers but is a consideration across all content areas, and that each discipline might require different literacy skills. For instance, one staff member with a mathematics background described it as “the power of understanding how different kids learn and how when you have kids who come into a math world ... some people

gravitate to numbers, some people gravitate to words, some people gravitate to both equally." Comments such as these operate in a truly disciplinary sense, recognizing the need, for instance, to redefine what the concept of "text" means within the realm of mathematics; they also recognize unique aspects of language within the mathematics classroom and suggest a responsibility for teachers to adjust their instruction to recognize these differences. Other team members also described a recognition that literacy represented more than just a set of skills or understandings but also as a deeper way of engaging with course content. For one interviewee, literacy was a skill set "that helped students construct their own meaning rather than just sort of telling them all the time and … that kids need to read and write in an authentic way in their subject area, in the classroom." For another teacher, this new understanding of literacy changed how she planned, as well as the types of activities that she led in her class. "[Literacy's] giving them more opportunity to not only discuss but like lead discussion and to challenge them with questions that are more than just like, can you tell me what you just read? We're actually like analyzing." As such, a nuanced understanding of literacy not only impacts school members' sense of the concept but also the concrete choices they make in teaching and leading. In general, across interviews, literacy team members were able to articulate their own movement and evolution, from literacy as a contained, compartmentalized concept, to literacy as a disseminated concept across content areas, to, in some cases, a wider mindset for empowering students to engage in deeper, more authentic work within each discipline.

Putting Literacy Into Practice (Research Subquestion 2)

As Redmond's literacy team grew in its understanding of disciplinary literacy as a concept, it took numerous steps to diversify the practices, processes, and structures that it implemented to promote literacy practices across teams, departments, and the greater school. This included broad decisions, such as the creation of a schoolwide team, as well as highly

specific choices, such as the creation of a common annotation structure or the differentiation of individual professional learning sessions. Through interviews, team members identified practices, processes, and structures that they recalled from their school-based work and recounted their perceptions of the efficacy of different elements. Document analysis allowed for the separate examination of these resources to help understand how they were created, how they evolved, and how they operated in their final forms. Findings suggest that cross-disciplinary teams hold both individual and collective benefits for team members, especially when the team allows for differentiation of strategies and concrete resources, and the application of increased strategic processes.

Formation of a Cross-Disciplinary Team

Several members of the literacy team highlighted the benefits of coming together in a cross-disciplinary literacy team to help lead the work at the school and department level. These benefits included individual growth as teachers, collective growth through cross-curricular communication around both literacy and larger pedagogical concepts within their own classrooms, and cultural growth as teachers better understood perspectives of teachers from other departments. Initial action around literacy processes was dictated by the district, which required schools to form a literacy team with the recommendation of a mix of administrators, teacher leaders, and other leaders within the school (such as instructional coaches, librarians, or technology specialists). While the number of team members able to attend professional learning was set by the district, schools did have the ability to determine who the members of that team were. At Redmond, school leaders followed the district recommendation, forming a team made up of administrators, teacher leaders from a variety of disciplines, and other leaders such as instructional coaches. Additionally, the principal also often attended professional learning sessions as a contributing member.

Four interviewed members of the literacy team suggested that a primary benefit of the formation of the team came in the form of individual growth, as educators developed as a result of this sustained collaboration. One instructional coach noted this broadly, citing this growth as the biggest success of the school's work with literacy: "[Team members] learned a tremendous amount about themselves as educators, about what they believed about the instruction they were giving to students, about the way that students should drive what we were doing." Indeed, she argued that the work around literacy increased not just their knowledge of literacy strategies, but also their general growth as a teacher:

> [T]he work out of literacy really made them incredible teachers in how reflective they were in what was happening within their classroom … every person who stuck with our team longer than a year … their instruction changed foundationally in some way around having students do more authentic work. The different type of tasks that those teachers were asking students to do were so much more authentic and so much more about building sustained knowledge, not just completing and checking off a benchmark in a curriculum framework.

In the eyes of this coach, membership on the literacy team first impacted team members' own classrooms, resulting in not just the increase of isolated disciplinary literacy strategies but also in the quality and authenticity of the academic tasks that students were asked to complete. One teacher noted this change in her own classroom, sharing that the work around literacy had led to her "trying different things and new things." She continued, "I'm also trying to pay attention to specifically what I'm doing and what works and what doesn't and what's improving my students' engagement and performance." Perspectives such as these speak generally to the potential benefits of teams of teachers working together in exploratory, reflective ways as they examine individual and school instructional practices. Much like the construction of Professional

Learning Communities, a literacy team provides collaborative conversation around literacy strategies across a wide number of teachers. While the scope of a literacy team may seem to be bound to a narrower subset of strategies, team members at Redmond suggested the opposite, that discussions of literacy grew outward, allowing team members to examine their practice holistically and look at concepts such as student engagement or authenticity of academic task as a result of looking through a literacy lens.

This growth among individual members of the team was also paralleled by growth as a team, especially in terms of building instructional trust and community. The cross-curricular nature of the team allowed for individuals on the team to better understand the work of other teachers in other departments in the building. One instructional coach noted that teachers generally have a compartmentalized community created by their disciplines. In the case of the literacy team, she argued, “having that bigger circle that you can reach out to it kind of became like a nice little family.” Across interviews, different team members identified this kind of collaboration in a number of ways, as “building community,” “building trust,” and creating an “understanding environment … where [team members] could feel safe and could talk to each other.” Said one teacher: “It’s that close connection colleague to colleague, like that power that comes with sharing strategies with someone who knows you and might not know you super well, but has a sense of what you're doing and trusts you.” This trend, as identified by several interviewed team members, suggests that “having that bigger circle” may promote teacher growth beyond the general benefits of reflective instructional conversation among teachers.

While team members clearly also identified the need to differentiate literacy strategies and learning for different departments, they also identified cultural growth through this work across departments. For one teacher, this came in the ability to place her own work within the greater context of the school: “It was interesting in bringing together people from all different

backgrounds and different content knowledge areas to come together and work together and see their commonalities and to try to appease everyone but help them understand each other." The learning for some, she added, was that "even though history is super, super, super crazy important to one person, it is not such a priority to someone else." While a defining characteristic of disciplinary literacy, in general, is the distinctness of different literacies, and the need to account for that both in instruction and in implementation, Redmond team members were able to articulate communal growth as a result of moving beyond the compartmentalization present in most secondary schools.

Differentiated Commonality

Extending beyond the initial makeup of the team, numerous team members identified a conscious choice made to differentiate the work of the team by their disciplinary affiliation. Part of this choice was tied to the disciplinary difference created by a disciplinary literacy approach. For administrators on the team, this was an intentional choice that gave teachers needed autonomy to differentiate based on their individual disciplines' needs:

> I was conscious of it because I wanted the math lead who's on the symposium or the math department chair to feel that she could differentiate it to what she needed. And then the same with history and the same with science. They all have very different ideas, so I think it was okay that there were different strategies.

This perspective captures a moment of retrospective sensemaking around choices made early in the process involving the differentiation needed across the members of the team. This choice suggests not only the recognition of different needs across the school based on department but also a stated acknowledgement that this creates a more dispersed set of strategies (with the potential for more complicated implementation or tracking needed).

Teachers on the team mirrored their administrator's statement, recognizing the need to distribute widely to choose the best strategies for the other teachers in their department. As one teacher noted in comparing her work in mathematics to other disciplines:

> The strategies that the history department wanted to use were strategies we don't necessarily have an opportunity every day to use. Like annotating is very difficult to do in math, but annotating's what history [does]. It blends into the curriculum flawlessly. It didn't fit with us, so we couldn't do all of the same strategies that they wanted to focus on.

This quotation represents a conscious and explicit acknowledgement of perceived differences between two departments (mathematics and social studies), in terms of curriculum and instructional strategy, and implicitly speaks to differences in what literacies each might prioritize. Annotation is a common literacy strategy, but in the eyes of this mathematics teacher, it is less relevant in the literacies of her discipline and is thus less useful as an area of focus. One staff member interviewed illustrated this by describing an opposite experience that occurred to him at his previous school under the same district literacy initiative. All teachers within his school were expected to utilize the same approach across the school (a common writing prompt and response type). For him, he responded by saying "As a department chair, it's like, okay, we gotta do this, so let's do it. But I didn't take it seriously. I didn't understand why we're doing it and it seemed very disconnected from the work we would do." By taking a wide approach without any differentiation, this strategy at his former school impacted his desire to fully engage with literacy as an instructional platform. He noted that, "I don't see that as a valuable way to integrate disciplinary literacy within a content level … because it's not contextual. It's bolted on, it's not integrated within your work. And so it's not something that's gonna live." By contrast, Redmond's team members felt that their approach at the team and administrative level

promoted the opposite; by differentiating, they felt they allowed for a focus on authentic practice for teachers as opposed to something “not contextual” or “bolted on” when applied universally.

This explicit belief about the need to differentiate based on disciplinary difference was mirrored in the team’s development and use of concrete resources, as seen regularly through document analysis. For example, in an initial professional learning session that served as an introduction to disciplinary literacy, departments were introduced to a common literacy concept, such as what constitutes a text within a discipline. Within this concept, different departments were asked to brainstorm the answer to this question and contribute to a schoolwide document. They were then also asked to look at specific texts from within their discipline to understand how they might ask students to work through these. In general, this use of resources resulted in a type of “differentiated commonality,” in which core common structures were put in place and then adjusted for individual departments.

This “differentiated commonality” was frequently observable within professional development (PD) materials, and team members identified this form of diversified professional learning as a key component of increasing the momentum of literacy practices within the school. Literacy team members worked to include literacy into PD plans over the course of several years. Like other decisions, the professional development was developed to be delivered through department and PLC level trainings. In the eyes of literacy team members, this was an intentional choice to build buy-in and accessibility for teachers. As one member described it, they wanted to create meaningful teacher learning “but at a level that they could digest that makes sense … we wanted to show them how relevant it was to what they were already doing.” By organizing teacher learning in this way, team members were also able to lean on existing

relationships and disciplinary expertise. One member described the thought process of the team in this area as such:

> The people that were leading the PD were from their department. So it wasn't some outsider. We had that buy-in a little bit more because it was like, 'Hey, we're peers. Like, I believe in this, and I believe that you can do this.' So we felt that was the best 'in' that we could start with.

This mindset was reinforced by the concrete choices by team members in building documents in a differentiated way. Each training was built using a common template with key elements left open to be created by the disciplinary expert leading the training. For instance, in a mathematics department training, the common practice of "Setting a Purpose for Reading" was explored through the concepts of linear equations and how teachers might provide a purpose for reading these equations. Similarly, the common literacy concept of providing text sets was shown through an interactive activity where mathematics teachers were asked to evaluate different forms of data and analyze the data in complex ways. By comparison, this same presentation was adapted for science teachers by examining reading purpose through laboratory experiment instructions and exploring text sets through historical documents explaining the benefits of radioactive elements. Document analysis identified more than 20 different documents that were templates to be adapted by the different members of the literacy team as they worked through their content areas. In other trainings, additional common structures, such as lesson planning or unit planning templates, allowed literacy team members to balance common elements with differentiated elements.

Surveys collected by the literacy team after differentiated trainings such as these showed positive teacher feedback overall. For example, one teacher noted that "I enjoyed that you recognized that English/Literacy already reads for a purpose and that we were able to

modify our PD to make it more beneficial for the good of the group," while another said, "Thank you for finding ways to illustrate this concept in the math curriculum." This positive response extended to non-core teachers, who are not always well-served through more generic literacy trainings. As one teacher articulated it, "Very helpful PD, especially because it was somewhat catered to our content area rather than one of the core contents." This collected feedback mirrored the feelings that team members expressed in interviews about positive responses that they received in more anecdotal ways.

While most identified this wide distribution as a positive trend (especially with those staff members tasked with working with a single department), one administrator, working at the whole school level, did identify some challenges with this approach: "The challenge was I didn't really know exactly what everyone was doing until they came back and shared it, but I trusted that they were so excited about literacy, that they were spearheading in their [team], that they were going to do something." While this was an isolated comment, it did represent at least some challenge to administrative understanding of what was happening across the literacy team. Despite this, as the administrator's comments indicate, this challenge was worth the benefits gained through the differentiated use of materials.

School Goal-Setting

Over the course of the three years focused on literacy, literacy team members believe they became more intentional about integrating literacy into other aspects of the school and intentionally planning for literacy. As one teacher on the literacy team describes their evolution of process, "The first year we didn't do anything huge. The second year we rolled out, we had a turnaround training essentially, and we focused on reading and reading strategies across disciplines." Other team members recognized a change in the team in terms of what kinds of strategic actions might be required in order to move a large-scale initiative:

> It was one of those things that we had to kind of stop and just say, "Well, what's our big picture idea?" Like more looking at the long-term goal, then looking at the short term goals and kind of planning backwards with like, if we want people to be here, like we're going to have to go slow to go fast kind of a thing.

Other staff members evinced a similar outlook of needed strategic planning within this initiative: "The goal has to be a long-term one and there has to be benchmarks in order to get there, and you have to be strategic and systematic about how to get there." The school's principal noted a similar approach: "[You] gotta look at it as a multiyear process, and I think professional development has to be phased in. … [S]tart with your small group of true believers, add to it, add to it, add to it." This belief translated also to concrete representations of this planning. "It helps to have not only a vision around the work, but a tangible three-year plan. Once we did it and actually charted out year one, year two, year three, it made the work feel so much more approachable." Commentary such as this was frequent across interviews, as team members recognized that the inherent messaging around the benefits of literacy will only carry it so far. While team members were learning about new instructional strategies, they also recognized the need for processes that support the strategic implementation of literacy across the school.

An analysis of the team's planning documents show a parallel evolution of the level of integrated planning around disciplinary literacy. Within the first year of the literacy work at the school, no whole-school planning documents were evident. In the second year, documents demonstrated a more visible presence in the school for the members of the literacy team as they provided whole-school introductory training within the teacher return week and additional differentiated professional development throughout the year. The work and its planning also became more granular within documents over the course of the year. For example, by the middle of the year, literacy team members had compiled examples from other schools of how

they were integrating literacy within their school improvement plans. Additionally, school documents show initial drafts of a schoolwide literacy goal. This coincided with additional planning around implementation and communication. One document, written in process, asked questions such as “What deliverables (outputs)?” “To whom, or which audiences?” and “What will success look like?” as the team brainstormed different specific answers to these questions. For this final question, this included possibilities such as the percent of participation by teachers, improving reading and writing test scores, or growth shown through pre- and post-surveys for students and teachers. These documents suggest the increased discussion around strategy, which mirrors similar reflections of four team members who noted that team discussions became increasingly strategic over time.

The third year of the literacy work showed the most tangible planning structures. Numerous interviews pointed to the inclusion of literacy in the school improvement plan as a key moment in the life of the team. In addition to a clearly stated literacy goal (“We can increase student engagement by providing authentic learning opportunities through reading, writing, thinking, and discussing in each content area.”), the school improvement plan also clearly articulated schoolwide, department, and classroom level strategies, the implementation of which were demonstrated throughout other reviewed documents from that year. In addition to the SIP, other documents showed literacy integrated into school professional development plans, professional development sessions, and planning from a newly formed professional development team (of which several literacy team members were also members). As such, this third year of literacy integration showed the most tightly aligned between planning and implementation of organizational strategy.

Understanding Enabling Environmental Conditions (Research Subquestion 3)

The previous section describes several practices and processes that the Redmond team implemented to support the cause of literacy within the school. In general, instructional changes happen within established environments containing features that are either beneficial or detrimental to implementing and further establishing new practices. Interviews with members of Redmond's literacy team and document analysis of their created resources suggested several conditions that helped further the spread of literacy within the school. Findings suggest that Redmond leaders were able to leverage existing relationships and expertise established through existing formal team and department structures to enable growth of literacy practices. Additionally, the team was able to utilize centralized conceptions of literacy to strengthen its own understandings and apply that to its work with teachers.

Pre-Existing Formal Organizational Structures

Department Level Structures. Several literacy team members identified the increased buy-in created by relying on disciplinary credibility and relationships that were already in place because of disciplinary organizational structures such as departments or course-level PLCs. As previously stated, processes such as professional learning were run by current members of departments and were extensions of their own experimentation within their own classrooms. For the principal, having literacy team leaders operating in visible ways represented a key strategic decision:

> The early adopters are the early adopters, but everybody else is watching. 'Okay, is this going to be here in two years? Do I need to put my time into this?' And that's where I think having the teachers coming in and doing it and say, 'Hey, this is really working.' That's when it really takes root.

This form of strategic modeling allowed for other members of departments to learn from the experiences of the teachers on the literacy team who could speak with authentic voices about their disciplines. Teachers on the team expressed similar ideas from their vantage point, and felt like the teachers in their department were receptive to their ideas, in part because they shared understanding as disciplinary colleagues. For example, one mathematics teacher shared the example of a complex assessment designed to ask students to analyze different types of graphs through writing. This idea met with some resistance from the teachers on her team, but she felt like she was able to maintain momentum for the assessment by functioning as the "driving force" for this change in her department.

The literacy team also chose to extend this beyond the members of the core team by including other teachers within the school who could highlight a disciplinary perspective. For instance, the team worked to include career and technical education and physical education teachers who one leader noted "are systematically left out of some of this work." The team placed them in key positions to share their perspective during professional learning sessions. In doing so, they attempted to engage the entire building even when there was not representation from that course or department on the core literacy team. Additionally, for departments where there was not direct representation, team members worked directly with those departments to continue to differentiate their processes.

Moving beyond the teacher-leaders on the literacy team, other leaders in the building felt that their past experiences in specific content areas allowed them to speak convincingly about the need for disciplinary literacy practices, even if they were no longer teachers. As one leader described it, "They also saw me as like, 'Oh, you're one of us, you came from the math world, so we trust you.' So I think that also helped like with a buy-in piece of it." By engaging within the disciplines that they previously had experiences in, leaders were able to speak about

authentic literacy practices in a way that felt realistic to teachers. However, some leaders noted that this authentic voice only carried through when they had direct experience in that discipline, and that they had to adjust when they worked in other disciplines.

Team-Level Structures. Coinciding with the decision to distribute the work of the literacy team widely across disciplines, team members regularly cited Professional Learning Communities by discipline and course as a key part of the process of moving literacy work forward. In some cases, staff members presented these PLCs as the site of the work of the literacy team members, as they promoted literacy through their own practice. As one leader stated, “They wanted to talk about it at their [PLC]s, they would brag about their [PLC]s if they were doing it. … So our team was definitely into it is how I saw it.” Another teacher on the team described this role as that of “ambassador,” noting that “we have definitely had representatives and ambassadors out there. I think the school philosophy for it was that this comes better through your [PLC]/department than as a giant push down from admin.” In the eyes of the principal, this was also an important step in the work of spreading literacy in an intentional way: “We had the seeds, we had the literacy team members, and then they were seeding the departments and [PLCs] and then we’re going bigger.” These perspectives of team members speak not only of the need to work at the discipline level for literacy but also suggest a conscious general decision to spread instructional change through more organic, “grassroots” processes. While the literacy team functioned as a schoolwide structure, its processes often were spread in much smaller, more reticulated settings.

This impact of leaders embedded within departments and PLCs extended beyond specific disciplinary concepts and also banked on established relationships. One instructional coach noted that while teachers weren’t necessarily sure of the impact they could have on a school level, they felt more confident about their abilities to create change within a department

or team. The coach describes their mindset as saying, "'I don't know that I'm a voice that can impact that culture [of the school],' which I sort of disagreed with, but they recognized that within their peer group or within their [PLC], they had a lot of sway." Teachers mirrored this view in their own comments: "So it wasn't some outsider … we had that buy-in a little bit more because it was like, 'Hey, we're peers. Like, I believe in this and I believe that you can do this.'" She added that, "We felt that was the best 'in' that we could start with." In some teachers' minds, this held more clout than a more centralized message based on positional power. As one teacher on the team noted, "It wasn't our principal saying literacy is now our focus, let's do it. But it was like, it felt more organic because it came from a colleague who's had experience and who's been trying strategies." Even the principal himself agreed with this, arguing that part of the power of the message came from the fact that it involved colleagues: "There were some [team members] that … weren't necessarily going to go stand on a soapbox and say, everybody, you need to do this, but that they would have an influence with their peers." Overall, members of the team and of the administration felt that the use of team members as envoys of the work was a supportive practice in spreading information about disciplinary literacy while also engendering positive buy-in for the comprehensive schoolwide program.

While the team did rely often on both formal organizational structures and informal relationships outside of those structures, some team members did question how much that action spread beyond the sphere of these team members. As one team member noted, "I would say that the really embedded change that I saw was within the team themselves and then each of their small peer groups, like their co-teaching partners or their friends in the [PLC]." In her mind, these informal networks were effective in spreading change across a smaller group but not to the larger school structure. She continued, "They really impacted instruction and in those smaller groups and not in the building as a whole, as much as I would have wanted there to be."

Another team member expressed similar concerns, “I just think we didn’t get as many other teachers wanting to go in, the rest of the school wasn’t buying into it, but the rest of the school was seeing it as one more thing.” So, while many members of the team recognized the value of working on the smaller team level, some members of the team did question whether that strategic process led to the spread of practices as widely as possible.

Centralized Understandings of Literacy

As noted previously, interviewed team members showed generally consistent understandings of what disciplinary literacy was and how it varied from other forms of literacy. To some degree, this understanding was supported by district level definitions and structures that provided understanding for literacy team members as well as support for sharing this understanding with other school members. In articulating this understanding, the school’s principal cited early principal training (which predated the school level work and the formation of the literacy team in Year 1) as building this understanding across building leaders. This training was facilitated by a national literacy expert and was key in helping set the stage for the principal: “It made a lot of sense to me. I think she probably hooked me when she said, you read science books differently than you read history books. And I went, oh my god, yes.” This level of understanding at the principal level is important for helping start the work, as the principal and other leaders were key determinants prior to the initial formation of the literacy team. Additionally, decisions to work at the department level stem, in part, from building principals’ and other leaders’ common understanding as to how disciplinary learning might differ from more traditional literacy programming. Other team members cited early professional development with literacy teams as promoting a kind of coalescence of thought around key literacy ideas and concepts, which they were able to put this understanding to use back at Redmond.

After developing their own understandings, team members used this district-wide common language in professional development over the course of several years, and visible signs of this common language (such as posters) were used throughout the school. Reviewed professional development artifacts showed that team members returned to this language across multiple trainings and even across multiple years as a way of maintaining consistent language throughout the process. Additionally, these understandings developed in the school by the team were supplemented by the use of county level resources that embedded beliefs about disciplinary literacy within them. For instance, during professional development sessions within Year 3, the team used centralized graphic organizers to guide teachers within each discipline in articulating what it meant to read, write, and discuss within different content areas. Directions for presenters noted that they should "Encourage groups to not just focus on examples of reading (for example) but to think bigger picture about why they are asking students to read (i.e., what is the purpose of a DBQ)." In using these common examples and then including their further collective thinking, the literacy team was able to underscore notions of disciplinary literacy such as the need for differentiated approaches and the need for meaningful reading within the discipline.

Further, the literacy team created their own unique concrete structures for use within the school to reinforce literacy concepts. One team member described one of these structures, a common visual for annotation: "We [wanted] teachers to do more annotating in their classes, and it didn't have to be an English class. So we had a vision. We were using the same language for that. We were using the same symbols." This annotation strategy identified and defined seven separate generic annotation strategies that could be used across different classes. While these annotation marks likely represented an intermediate approach rather than a truly disciplinary approach, they did also serve as explicit reminders of common understanding and

practice across the school. Overall, team members demonstrated a highly consistent understanding of disciplinary literacy across the team, in part because of the work done centrally to build common understandings, but also because of their own use within their team and the building to reinforce this understanding and even build beyond it.

Understanding Constraining Environmental Conditions (Research Subquestion 3)

While several enabling environment conditions were identified, several trends also emerged around features that were less facilitative to the work of establishing an instructional program around disciplinary literacy. While some of these features were contained to the work of individuals on the team, many represented larger-scale forces that, from the perspective of Redmond staff members, constrained their work and stalled some of the momentum built across several school years. Findings suggest that while the use of wide use of disciplinary experts on the literacy team and the widespread differentiation of literacy work supported disciplinary literacy, working across disciplinary lines still proved difficult for staff members and required specific collaborative stances. Additionally, several structural challenges around working within a large organization were identified, including the challenge of vision setting, working across organizational "levels" in the school, and navigating continued external instructional changes.

Working Across Disciplinary Lines

As previously noted, numerous interviewees discussed the ways in which department expertise (either in a current teaching role or prior to changing to a non-teaching role) allowed them to work with teachers in authentic ways around disciplinary literacy. Conversely, several staff members noted that working across disciplinary lines (and through the mediating structures of teams and departments) did create some difficulties for them or require different stances in working with teachers from different content areas. For example, one instructional

coach who had a background in mathematics discussed working on literacy with a Spanish teacher, an experience which she said “was scary at first.” With the goal of increasing discussion time within the classroom, the coach worked with the teacher to survey and even interview students to determine their needs. The two collaborated to build more general discussion structures, but included “sentence starters,” which could either be general or disciplinary structures depending on their construction. Similarly, a reading intervention teacher discussed the stance needed to work with teachers in other disciplines. Acknowledging the need to listen with an ear toward disciplinary difference, she detailed a process of how she might work with a science teacher to understand the literacies of that discipline. First she might have to ask, “What are the goals? What are the look-fors that we want kids to be able to do?” Next, “for me to be able to support that team, I would really need to sit down and talk with them ... so that we could design some lessons or a program that would help them meet that goal.” In focusing on outcomes here (i.e., goals and look-fors), the teacher has started a conversation about literacy skills while acknowledging that the answers to those questions will likely come from the discipline and the disciplinary teacher. As these examples suggest, an authentic move across disciplinary boundaries places practitioners in a situation where they must rely on the expertise of the teachers they are consulting with (or perhaps other disciplinary experts within the building). While they can support in general ways, such as helping teachers implement a generalized discussion structure, they must work in concert with the teachers within the discipline in order to attempt more disciplinary-specific structures. Such a realization provides support for the team’s decision to differentiate professional learning by discipline, but it is also unrealistic that this form of 1-to-1 disciplinary match can always occur. For instance, administrators often supervise multiple disciplines and will not always be able to work with disciplines that they have backgrounds in. Similarly, instructional coaches and intervention

specialists may have to work widely across the school and may not be able to focus in on just the departments in which they have expertise.

Vision Setting Across a Large Organization

Moving from the more micro-concerns of working with teachers 1-on-1 across disciplines to the more macro-work of the literacy team, many Redmond team members interviewed stated that they did not feel that the school had an explicit vision surrounding disciplinary literacy, using terminology such as "not necessarily," "maybe," or "I don't feel like there is an explicit one … there might be an implicit understanding." One teacher argued that "it's not that we don't have a vision, [or] we don't focus on it, but it's like we never rolled out with a clear, concise message of this is what we wanted to attain through promoting literacy." Others felt that a previous vision had either receded in recent years or taken a backseat to other initiatives. For example, when asked whether the school had a vision, the principal stated, "No, not like we did before. I think we've got to bring it back to the forefront." Another staff member interviewed used similar language, stating that literacy was "not at the forefront of our vision anymore." These staff members identified a number of different initiatives that were competing with literacy, including changes in accountability numbers, other district-level initiatives, and most specifically, a centralized focus from the district around instructional technology.

Other staff members were able to identify a specific vision, though sometimes that might have been conflated with a mission (i.e., the process of the team in reaching a vision). One instructional coach identified this mission as "to raise awareness of what disciplinary literacy was and how, with just a little bit of thoughtful planning, we could ask students to engage in authentic literacy in every class pretty easily." Similarly, a teacher interviewed used the terms interchangeably, noting that "it's not totally void of a mission, but … I don't think if you walked into someone who wasn't on the team, they could say, 'Yeah, our literacy vision is

blank.'" She followed up this discussion of the team's possible lack of an explicit vision by articulating a defined mission of the team and their procedure in trying to promote literacy: "So the steps that [we] took were definitely doing team planning and then turning around and you know, sharing the information, the learning and strategies that we had and that we were doing in our classrooms."

In some cases, team members identified other forms that a vision may take instead of an explicitly expressed belief system. For some, a vision was represented by inclusion within the school improvement plan. Multiple members of the team cited the inclusion of disciplinary literacy practices within the SIP as a sign that it was an element of the school's focus. A review of the SIP from that year shows the most clearly articulated goal statement within both interviews and reviewed documents: "We can increase student engagement by providing authentic learning opportunities through reading, writing, thinking, and discussing in each content area."

For others, a stated vision was not present, but a vision was expressed as an accumulation of the practices promoted by the literacy team. For example, one administrator discussed a common annotation strategy as a vision supported by common vocabulary across the school. Another team member mentioned using "text as expert," a strategy for incorporating more specific texts into a classroom, and disciplinary text sets as the sustained focus for the year. While she did not explicitly identify that as an explicit vision, she did note that "for the entire year … those two things were the only things we really talked about."

Overall, discussion of vision (or lack thereof) permeated all interviews with the Redmond team (and with other staff members who were not on the team). While there was permeation, there was also some collective diffusion, as different members of the team disagreed on whether there was a vision, what that vision was, what constituted a vision (e.g.,

specific literacy practices vs. a goal statement), where that vision may have lived (e.g., in professional development, in the SIP), and how intact that vision might have been within the school at the time of this study. This variation was in stark contrast to the relative uniformity with which team members could articulate nuanced understandings of disciplinary literacy. Such inconsistency suggests less intentional explicit discussion of vision, though as noted above, several documents reviewed either reinforced common understandings of literacy and literacy practices or articulated goal statements, such as those in the SIP. Other environmental elements discussed in the following sections provide possible factors that might interfere with an articulated vision.

Challenges of Positional and Non-Positional Leadership

Several staff members discussed the challenges of the dynamics of change at the administrative level. The studied school has a large administrative team, with each member having different responsibilities and focuses. Different members of the Redmond literacy team discussed the need to promote literacy within this administrative structure. In doing so, they used language of competition, including the need to advocate strongly for literacy. One team member described it as such: "[W]e really had to fight to get it on the SIP, because that was our way to know we can get people talking about it because the SIP is supposed to be a living document." Another staff member mirrored this sentiment: "There's a lot of conflicting priorities at [Redmond]. And I feel like for a while the loudest voice got the most attention, and I was good at being the loudest voice when I needed to be." Others built on this by suggesting the need to get other administrators in the building bought in and up to speed on literacy, especially given the department leadership that is part of each assistant principal's responsibilities. As one team member describes it the process of working with new initiatives among the administrative team:

> It just becomes another thing of, 'Hey, I need teachers, or I want to do a professional development.' Like it almost becomes … not your full team buys into it like you do. But they'll do it, right? So it's more of a passive compliance … We all don't go to the same trainings, so it's just hard to get everybody on the same page all the time."

While much of the discussion of collective learning from staff member interviews revolved around the work of the literacy team, comments such as this suggest that other stakeholders outside of teachers play a role in implementing literacy in an authentic way. As instructional leaders of separate disciplines, each administrator theoretically needs a strong understanding not just of literacy on the whole, but also on the specific literacy practices within their supervised disciplines.

In thinking more about the interplay between these two teams (i.e., administrative and literacy), several literacy team members discussed the desire to get a clear vision from administrators in promoting a direction for the literacy team. "We got not a lot of guidance out of that work from the administrators in my building. Teachers were always clamoring for some clear vision around what we were doing, not just in that disciplinary literacy in, in more areas." Another team member discussed this in similar terms: "I think there's kind of your basic assumptions around … if you asked an administrative leader, they would tell you that, 'Hey, we're about engagement, we're about Tier 1 instruction, you know, we're about student learning.' But I don't feel like that's a well-defined message that's articulated." From the perspective of the literacy team, comments such as these place the onus of vision-setting on administrators, in tension with decisions made at the administrative and literacy team level to differentiate and distribute leadership through teacher leaders at the discipline level.

For the literacy team, from several members' perspectives, ultimately the change in direction came not from the administrative level, but from the team empowering itself to do the

work and to create its own vision. Multiple team members referenced a key conversation that occurred at the start of the second year of school-based work, which one described as such:

> We just had a real conversation and named the elephant in the room at the beginning of the year around – well, we went to this training last year and not a lot of things happened, and it's not clear that it's a priority for other people, but it's a priority for us. So let's figure out how we can impact the school as a whole and stop asking for permission. Let's just do it. We don't have a school culture where someone's going to come in and say, you shouldn't do that. You know, so by shifting the conversation to let's stop waiting, let's start doing it ourselves.

As this comment suggests, part of this delay seems to have come from questions of positional leadership and who owns the work of instructional change broadly and of disciplinary literacy specifically. As one team member noted, "We are all waiting for a formal leader to step up, including me. As an instructional coach, I was waiting for ... someone who had the word 'leader' in their name to step up and lead the work." In this team member's mind, this mindset had a negative impact on the momentum of the team: "I waited and waited too long, unfortunately." Ultimately, this conversation led, in her opinion to a more empowering situation, as she notes that "When I finally realized that wasn't going to happen, I think I decided that we needed to empower the team to be their own leader. And by doing that, it really did jumpstart the work." As a formative moment in the life of the literacy team (at least in the view of some team members), this referenced conversation highlights the complicated nature of instructional work that exists between different "levels" of the school. In the case of Redmond, these levels included administrators, other leaders not in teaching roles, teacher leaders on the literacy team, and teachers not on the literacy team. In an initiative such as disciplinary literacy, which promotes teacher leadership, this tension is only heightened.

Interestingly, while the staff member described this conversation and the empowerment of the team that followed in her mind, this same staff member also noted that moving the work of leadership to the teachers on the team may have presented additional challenges. “I tried to make sure that this work moved from being driven by me to being driven by teachers. And I think when that happened and that shift happened, I don’t know that it carried the same, the same weight or the teachers felt empowered enough to really articulate what they needed from behind it.” In this team member’s opinion, teacher empowerment and teacher leadership was an important part of the process for building the instructional program around disciplinary literacy, but it also created additional challenges in terms of their parallel status with other teachers within the school.

Centralized Changes

The interviews conducted occurred at a moment of instructional transition both centrally and at the school. In Year 5, the district had combined the previous iteration of the literary team with a second team focused on the integration of instructional technology. This change at the school level in team make-up paralleled a change in professional development, which focused on both literacy and technology integration in an attempt to weave them together explicitly for schools.

Numerous staff members identified this as a point of demarcation in the process of literacy at this school. Many literacy team members noted that they were no longer a part of this new team, and many also noted that they felt that it had impacted the momentum of literacy within the school. One staff member described it succinctly as “watered down,” and others mirrored this sense, noting that “literacy feels a little lost in the transition,” and that “It’s not that it’s literacy is dead and gone, but I do think the overall focus is a little lost.” Several team members were unclear from a district perspective of what the change in focus really

meant. As one described it, “It was a little confusing … like what we were doing. We’d went to a couple of trainings and it was engaging. I was learning a lot, but I was like, what is the baseline of this team?” The principal noted a similar shift as required by this central change in team make-up and focus:

> We were really pushing and really pushing, and it was definitely upfront. Then, as we morphed … and it became about technology as well. ... I appreciate it, not losing the literacy altogether. But I will tell you that what we have done is ... we made progress and then we kind of stayed.

Together, these perspectives suggest that team members (even those who were selected for the new team) were uncertain about how these two initiatives overlapped and interacted with each other. There were some literacy team members who articulated positive connections between literacy and technology, with one teacher noting how teachers on her team were using technology to increase opportunities for students to read, write, and discuss collaboratively. Another discussed a new online program in use in the mathematics department that allowed students to work with literacy in a mathematics setting. In general, though, whereas initial literacy training seemed to help the team craft relatively uniform common understanding around literacy, the new change wasn’t as clearly defined in the minds of the teachers leading the work.

Others built off this, noting that it wasn’t just the nature of the change at the county level but also how that change was processed at the school, especially around team make-up. Because two large teams (literacy and technology) were combined into one team, schools needed to decide how to staff those teams. For members of the literacy team, several felt like the new team had a larger focus on technology: “People don’t know it’s a literacy committee. They think it’s the [1:1] committee because the majority of the members were the [1:1]

committee last year." Others noted that their removal from the team changed the degree to which they focused on literacy within the school. One team member described her own feelings about not being on the team any more: "At first I thought, well wait, let me keep going with them even though it's got a new name. But it changed. And that's where I needed to pull back." This change also had a personal impact on the team member. As she noted, "So, that's probably also why maybe my feelings were hurt, I don't know. But I'm like, okay, it's time for me to shift and focus on something else." These ideas suggest that the reconstitution of the literacy and technology teams not only impacted the external view of the team and its purpose, but also potentially the internal views of both remaining and exiting members.

Interestingly, some staff members who were members of this new literacy/technology team described the process of this new team forming using similar language that respondents used to describe what the literacy team had gone through at the beginning of their process three years prior. In discussing the new team, one member noted, "We're still trying to find our voice as a team. And I think that connects to like, what's the voice of the building around instruction." He described the team as one in flux and uncertainty as it determined its purpose. Similar to the formation of the literacy team in Year 2, he also discussed how the team's purpose fit into the greater school's purpose:

> Without like a really strong explicit message about our [schoolwide] instructional vision, it's kinda hard for that team to develop theirs. … Maybe we need this explicit instructional vision to kind of help us guide our work because there's so many, there's so many places we could go, all of which can be good and powerful for student learning.

Similar to the other members of the original literacy team, this member of the new team saw that this team needed to fit into a greater narrative within the school, of a bigger, schoolwide picture of what instruction looks like at Redmond High School.

Sensemaking and its Role in Disciplinary Literacy Leadership (Research Subquestion 4)

Findings have been reviewed around prior experiences, evolving conceptions, concrete practices and processes, and enabling and constraining conditions that impacted disciplinary literacy at Redmond. In examining the school's literacy journey, attempts were also made to understand the cycle of thought and action that leaders underwent as they engaged with his new, complex initiative. Through their own description of their initial thinking, their actions, and their progress over five years, as well as their analysis of these elements retrospectively, school literacy leaders helped elucidate some of these trends. Reviewed documents helped triangulate or complicate those conceptions, and analysis across both documents and interviews suggests other forms of collective sensemaking that may have occurred across multiple team members. Findings suggest that some sensemaking processes aided the team in making key choices around the distribution of differentiated processes, as well as in identifying how to approach the integration of disciplinary literacy into the existing school culture. Other sensemaking processes, as perceived by team members, may have slowed implementing disciplinary literacy. This includes sensemaking around the amount of directive leadership to apply in support of literacy implementation, as well as sensemaking around changing district level instructional focus (and how Redmond chose to integrate that focus with disciplinary literacy).

Sensemaking Around Distribution of Literacy Work

As stated previously, team members identified the formation of a cross-disciplinary team as a key strategy for promoting productive conversation and action around disciplinary literacy. Further decisions were made to distribute the work widely through the use of teacher leaders as key actors in this process. Multiple leaders involved in the selection of this discussed the sensemaking that occurred at this initial seminal step. Leaders worked to find the right combination of teacher leaders, which one school leader stated "was beyond just having good

classroom management, [but was] that you valued those tenets of disciplinary literacy as part of your instruction every day." Instead, it was about a certain mindset around instruction and the ability to lead others in that work. When names were suggested by administrators that were not necessarily consistent with that vision, instructional coaches worked to discuss these choices and suggest alternatives when necessary. This germinal sensemaking and iterative action helped ensure that the early make-up of the team was most open to the concepts of disciplinary literacy. This process did not lead to a perfect team. (One leader noted that a teacher said, "she was doing it because she didn't want to make anyone else in her department do it.") Multiple leaders acknowledged the need to alter the makeup of the team after the first year, stating that some initial team members still felt negatively toward the work. As one leader described it, "people who sort of went in with a closed mindset, I believe, remained pretty closed." So, continued alteration of the team created a new team structure and thus a new environment for literacy to spread within. With the right leadership and the right membership on the team, Redmond's literacy team also benefited from early sensemaking around the roles that teachers should play on this team. By consciously working through departments and teams, Redmond's literacy team sidestepped many issues that have historically beset many literacy initiatives.

Sensemaking About Integrating Literacy Into Existing School Culture

Numerous staff members articulated a consistent element of the team's sensemaking in how they approached their task of spreading literacy throughout the school. This element was developed as a new code throughout the coding cycle and was called "not another thing." In this code, staff members identified the need to express to other teachers within the school that disciplinary literacy was "not another thing," and identified this idea as an intentional strategy made by the team in adopting that mindset. While this sentiment took several forms across different interviews, it was a pervasive element across almost all interviews. In some cases, this

notion of literacy not being a new thing was presented as an element for helping others understand this new instructional idea, perhaps of lessening ambiguity felt in response to a large instructional initiative. The following is a sampling of these types of responses from different team members:

- "[Literacy] didn't have to be an add-on. It should just be a refining of the processes that were happening."
- "I think it was just more just the understanding that we're already doing some of this work and that it's not new. … We wanted to make sure people understood [literacy] wasn't something else. We were just tying it back to what they were already doing. And it might be, I'm just refining some of the things."
- "I think we were laser focused and bringing [literacy] in … and now we were sneaking it in. Because you also don't want it to feel like something new."

Framed in this way, literacy is presented as something that could be more easily integrated, both for literacy team members working to embed it within the school and for the teachers with which they are working to integrate it within their classroom. By delivering this message in this way, team members perhaps cultivated buy-in from teachers who can recognize elements of literacy within their own current work. While it is unclear what impact this type of message may have on slowing momentum for change (in the sense that teachers may feel satisfied with their current state and be less likely to adapt their practice), it does seem to be an attempt by literacy team members to minimize ambiguity either for themselves as the front line of change or for teachers receiving this message.

Other staff members identified this same idea less as a stance for presenting literacy to teachers but as an obstacle for moving literacy forward. One team member stated that "We know that we're going to have a lot of resistance and people are gonna see it as like another

thing," while another noted that, "The rest of the school wasn't buying into it, but the rest of the school was seeing it as one more thing." A third added that, "We knew that it would be hard and people would fight us on it and we wanted to show them how relevant it was to what they were already doing." It was, in general, unclear from interviews whether this resistance was actuality or perception, but it was clear that it was an element that shaped the strategy of the team. In some cases, this was a piece of how they messaged literacy: "We had to start and realize, what can we tie this to that people are already doing. So that we could get that buy-in process from day one versus like trying to pull it out of people." In other cases, it changed how they structured professional development: "We wanted to make sure that [professional development] was meaningful, but at a level that they could digest that makes sense." In still other cases, it shaped how the speed at which the literacy team moved forward: "Last year we had a bunch of people who really pushed back on delivering a full literacy vision because they were fearful that it would be just another thing and people are already doing it."

This outlook appeared not just in the thinking of the team members through their interviews, but also within their created materials. In the introductory professional development materials from Year 2, for instance, the team included a quotation from a national literacy expert working with the district that said, "Literacy is not an add on – it is a vehicle." In doing so, the team stated in their notes that "We are trying to end with a positive quote from [this expert] to remind teachers we are not asking them to do more but think deliberately about the literacy they are already doing in their classrooms."

The embedded nature of this element suggests that it was either a key aspect of the school's existing culture, or at least a perceived element of the school's culture as seen by the literacy team as they anticipated their work with teachers. As such it speaks to the environment in which the change of disciplinary literacy was enacted into, or at least the sense that literacy

team members made of what that environment was, what their counterparts within the school would say in response to literacy, and their best step forward in terms of how to approach that change.

Sensemaking About Directive Change

Part of this idea of "not another thing" overlaps with sensemaking around the need to be directive, or even the ability of literacy team members to be directive in pushing for these changes. As some teachers noted, they were uncertain about how to push these changes through with their colleagues. One described this conversation as such:

> A lot of our discussions were around trying to get buy-in from other teachers. We felt that when teachers hear the words literacy or disciplinary literacy, they shy away from it. Not knowing that a lot of what goes into it as simply best practices, stuff that they're already doing. So trying to figure out how to convince teachers that it's not something extra on their plate. How do we do it without forcing them?

As before, much of this dialogue incorporates the idea of helping teachers process what disciplinary literacy is, as either "simply best practices" or "stuff that they're already doing." While it's unclear whether this is conscious intent or not, this prioritizes a type of mitigation surrounding the ambiguity that literacy might bring. Further, this teacher presents two different options for the role of the literacy team: to convince or to force. As earlier cited evidence suggests, literacy team members sought out this type of direction from the administrative level in order to empower their own actions or to locate their team's place within the structure of the school. Other team members noted, though, that this sense of directiveness changed over time. As one noted, "I think at the beginning we were really hesitant because of so many things that were already happening in the building. We're hesitant to tell teachers you have to do this." But, with time, the team changed their stance to be increasingly directive. "We really evolved into,

you should be doing this, you don't have to do it, but you should be doing this. … So we got a little pushier." As a team with both teacher leaders and administrators on it, the literacy team straddles different structural levels of the school but represents a mostly parallel power structure, with many teachers filling these roles without the positional power of a principal or assistant principal. Combined with the decision to disperse this work widely, wherein teachers might be working with other teachers to drive this work, the Redmond team situated itself in a complicated place with regards to whether it could or should be directive towards the rest of the staff.

Relatedly, the school's principal talked extensively about the concept of directiveness, noting that "I go home every night and I'm wondering if I'm being too directive or not directive enough." This suggests a cycle of sensemaking around this topic within the principal's thought processes. In describing this, the principal discussed an illustrative example unrelated to literacy, that of the work in the school over the past few years in trying to institute PLCs. Citing his desire to increase and improve the use of PLCs within the school early in his tenure, the principal noted that the introduction of literacy took place "in the middle of a pitched battle over … PLCs." Noting the resistance that he and other administrators faced in this, including around small changes such as using common agendas, the principal discussed the need to balance directiveness. "[You're] trying to find that sweet spot. I think if you get too directive, you know, the principal could still get people to comply, right? … I can get compliance pretty easy, but compliance isn't implementation." In reflecting on his own role in the literacy process, then, he notes that "If I had it to do over, I think I would have been a little bit more directive and maybe we would be a little further along, not iron-fisted, more directive." But as he notes, that this level of directiveness is in tension with more collective approaches to leadership, including ones that may be more natural for disciplinary literacy leadership: "I think it's almost situational on

how much direct influence you put on something and how much you sow the seeds and then help people grow into it." The principal's comments, when combined with that of the teachers on the literacy team, suggest that disciplinary literacy initiatives, when instituted with distributed processes, may require a careful balance of teacher and administrator action, of directive and non-directive forces, in order to increase the chances of authentic implementation.

Sensemaking Around Central Change and the School's Response

As detailed above, the studied time period within the school covers two instances of ambiguity created by potential instructional change – the introduction of disciplinary literacy to the school and the restructuring of literacy teams to include technology integration as an additional focus. In the first case, presented with disciplinary literacy as instructional change, school leaders identified a process that played out over four years and eventually led to the integration of disciplinary literacy practices within the school. In the second case, school leaders were in the midst of another change process, which several literacy team members felt had destabilized the work done by the team.

As leaders discussed this transitional time and the changes that had occurred over that span, they reflected on the role of the school district's central office in that process. As noted above, several literacy team members expressed confusion about what the change in team structure meant overall and for the literacy change process. Similarly, team members felt that the momentum of literacy had been lost in this change, though different respondents located that loss of focus differently, at either the school or district level.

In considering that loss of momentum, two trends emerged around leaders' sensemaking. The first surrounds where leaders placed the locus of control for deciding what instructional change to focus on. Several respondents utilized language that suggested

frustration with the amount of direction from the district. As one teacher noted, “It’s just like every year we get hit with something else from the [district] level that we’re expected to focus on.” She discussed new basal resources and new digital tools that English teachers were expected to use. Another staff member described similar changes, and noted change brought on by outside accountability measures:

> We fell to the yellow zone in writing and reading scores. So that's dropped. … Our gaps have gotten wider in what our need is for our students for reading and writing. So you would think that would help us do more content literacy. But instead it’s, it’s made us go back to honing in on the skills ... and [county digital tools], like these things that the county pushes down your throat.

In mentioning this, this staff member identifies an element (dropping reading and writing test scores) which should solidify the need for a focus on literacy but instead seems to have drawn attention away from it. Other staff members mentioned changes in the focus for instructional coaches as other elements that had shifted throughout the process. As leaders reflected on these changes, they used language that expressed a lack of control such as “we get hit with something else from the county” or “these things that the [district] pushes down your throat.” As one leader suggested, these changes at the district level changed their focus at the school: “I’ve kind of shifted in that and I have, to be honest, since a [district] initiative has kind of dropped then, you know, I shift my focus as well.” These comments suggest that members of Redmond’s team are to some degree directed (or redirected) by messages coming from the district level without necessarily considering how these new directives fit into the steps taken by the school to create an instructional program. As the team member above indicates, new English resources or low test scores in reading or writing shouldn’t necessarily take away from a focus on literacy. However, they do represent small or large sources of ambiguity that could

potentially destabilize the work that has already been done without proper attention to how to fold them into the environment created by a focus on literacy.

A second related trend that emerged was the consideration of the number of initiatives present in the school at any given time. As one teacher describes it, “One of the hardest things … is that with so much happening … it’s hard to say, let’s try something else on top of the four other things that you already do and take up more of your time.” Another staff member spoke of “conflicting priorities,” while a third noted that “it’s just hard to get everybody on the same page all the time.” As literacy team members discussed the fading role of literacy in the current school year’s focus, they were asked what had taken over for literacy in its place. The answers were widely variant, covering topics such as multi-tiered systems of support, student engagement, classroom observation, technology integration, vertical articulation, representation in advanced classes, among others. Documents analyzed showed similar trends over how many different initiatives were present in the school. For instance, within Year 3, which literacy team members identified as the most focused year of literacy work, literacy lived within a greater umbrella of student engagement and attempts were made to tie these two concepts together. At a share fair early in the year, 26 different sessions were offered across a variety of topics; about six were explicitly or tangentially tied to literacy. A later daylong professional development was devoted entirely to literacy. A third daylong session had five major topics: student-centered instruction and workshop model, project-based learning, feedback, student voice and choice, and blended learning. Some of these topics are direct extensions of literacy, while others overlap to some degree with literacy. While this represents a large volume of rich professional learning topics, it also represents a large number of variations of different topics for teachers to process and understand. Taken together, these two trends raise questions about the ways in which new instructional guidance is processed by leaders at

Redmond, as they receive, parse, evaluate, and act (or don't act) on new initiatives and ideas moving across structural lines, from district office to within the school.

Building Coherent Programs Around Disciplinary Literacy (Primary Research Question)

The research questions of this study attempted to understand a) how school leaders build off of (or diverge from) prior experiences and understanding of literacy, b) what practices and processes they implement in support of this, c) what elements enable and constrain this work, and d) how sensemaking processes accelerate or decelerate all of these aspects of disciplinary literacy. Data collected through interviews of Redmond High School staff and reviewed documents coalesce to suggest several major findings toward this study's primary research question, which seeks to understand how school leaders attempt to build coherent instructional programs around disciplinary literacy. These major findings focus on several key areas, including the impact of literacy team formation, decision-making around literacy work, and the role of intentional strategic planning. Additionally, data suggest that leaders' sensemaking processes are key in establishing and maintaining momentum of disciplinary literacy processes.

First, data suggest that leaders at Redmond were able to increase the coherence of their program by going through the process of carefully selecting and training a cross-discipline literacy team. This decision was required by the district, and leaders went through an intentional process of defining what type of teacher they might want on the team and then selecting members that they believed may meet those criteria. Cycles of short-term sensemaking resulted in dialogue about ideal team members at Redmond, and further dialogue occurred if team members who may not have matched that ideal were put forward. Additional sensemaking occurred at the end of each year as leaders analyzed the performance of the current team and considered new members who might increase performance in the coming year, or who were

needed to replace teachers departing Redmond. This team underwent regular centralized training, which was supplemented by further work back at the school. While the team brought a wide variety of past experiences and initial understandings around what literacy was, this consistent professional development helped create a coherent common sense of disciplinary literacy among the teacher leaders and the administrators on the team. This began at the instructional strategy level, but for many team members it extended to an understanding of literacy as a broader educational platform that incorporates elements of authenticity, student engagement, and student autonomy in the construction of their own learning.

Second, in processing this understanding of disciplinary literacy, the Redmond team made an initial strategic decision to differentiate the work by content area to allow for the differentiation of common resources and strategies. In some cases, this meant advocating a strategy widely across the school but allowing for the adaptation of that strategy based on the needs of the department (in a kind of "differentiated commonality"). In other cases, it meant allowing a department or team to focus on a unique strategy that may not be relevant or important for another department at that time. In doing so, the team reported that they were able to build buy-in among their colleagues by invoking their disciplinary expertise and by leveraging pre-existing formal structures and informal relationships. Additionally, sensemaking around existing school culture led team members to focus on highlighting the ways in which literacy was "not another thing," and was an extension of strategies that teachers may have already been using. In attempting to connect literacy to established practices, the literacy team built toward coherence by attempting to integrate literacy into already understood concepts within the school. This decision to differentiate carried through created resources, including the team's professional development delivery, as individual team members worked with individual departments, as well as their work on individual professional learning communities situated at

the course level. Redmond literacy team members did report that this decision at times led to being unclear what each department was working on as concepts became more widely dispersed. Additionally, team members who worked across disciplinary lines reported the need to take more open-ended and outward-facing stances toward departments in which they did not have prior expertise.

Third, team leaders gave increasing attention to broader strategic decisions and the need to plan for literacy at the schoolwide level. Most team members recognized that the first year of school-based work had not necessarily led to much change in momentum at Redmond. Initial sensemaking of the team led to recognition that initial strategic actions needed to be captured within a longer-term strategic plan, and reviewed documents show increasingly structured incorporation of literacy into schoolwide processes over the three main years of school-based work. This included incorporating literacy within yearlong professional development planning at the school level and the use of other strategic structures to allow the literacy team to organize and reflect upon their work. It also involved the eventual inclusion of literacy into the school improvement plan, where it captured not only a long-term literacy goal but also specific actions at the team, department, and school level.

Fourth, despite this positive momentum in strategic direction, Redmond team members identified several factors that inhibited attempts at instructional coherence. For instance, many members of the literacy team identified difficulty in setting or maintaining a schoolwide vision around literacy. Team members attributed some of this difficulty in feeling uncertain at first about their roles as leaders on the literacy team and reported waiting for more specific guidance for positional leaders in terms of their direction and goal. Sensemaking at the start of the second school-based year changed the mindset of the team, as they started taking more direct action and responsibility for the development of their peers. Leaders on the team and at the

administrative level also discussed the role of directiveness in this process, citing the complicated nature of producing change within staff from a teacher-based team working at a widely dispersed level. Additionally, analysis suggests that a feature of the Redmond culture was the use of more organic processes versus more directive processes, which further complicates the ability to push comprehensive and cohesive instructional change. Finally, team members ascribed a loss of momentum in the fourth year of school-based work to a change in centralized focus, as Redmond's district attempted to combine the literacy team with another team focused on blended learning. Members of the literacy team felt that this shift was ultimately confusing to the purpose of the team and resulted in a muddling of the message. Additionally, it changed the constitution of the team, leaving many of the literacy team members off of the newly created team, which they felt also led to a loss of the literacy focus at Redmond. Analysis suggests that sensemaking processes around centralized change and how Redmond leaders process that change impacted this transition, including how they incorporated it within the existing instructional programming of the school.

These four major findings interact to show how concrete actions, processes, and structures are complemented by intentional strategic thinking and reflection of school leaders as they attempt to build coherence within their school. Further, these findings suggest both concrete and abstract challenges hold the potential to inhibit coherence. In Chapter V, these findings will be placed in discussion with the relevant literature around disciplinary literacy, coherence, and sensemaking that was surveyed earlier within this study, as well as with the conceptual framework that extended from that research. The result of this discussion is the emergence of high-level synthetic themes that can inform the work of school leaders and shape practical recommendations for implementing the work of disciplinary literacy.

Chapter V - Discussion and Recommendations

This study's purpose was to delve into and describe the practices and processes that contribute to building a coherent program around disciplinary literacy, while increasing understanding of the challenges and complexities of this process. In doing so, the study attempted to understand what occurred within a single large comprehensive high school over the course of several years in pursuit of the integration of disciplinary literacy; in Chapter IV, findings were forwarded in support of this understanding. In this chapter, I will discuss these findings and how they interact with the study's conceptual framework, which emerged from existing literature in the fields of disciplinary literacy, sensemaking, and program coherence. This discussion is organized in the form of three high-level themes focused on differentiation, commonality, and leaders' sensemaking and the role that each of these play in increasing coherence. After discussing these major themes, I present seven recommendations for practitioners working to implement disciplinary literacy within their school.

Discussion of Themes

Theme One: Value of Differentiated Approaches

This study suggests that a nuanced understanding and a differentiated approach to secondary literacy allows school leaders to leverage disciplinary expertise and pre-existing organizational structures. Despite a variance of prior experience and initial understanding of literacy, members of the Redmond team were able to articulate consistent definitions of literacy, enumerate practices consistent with disciplinary literacy beliefs, discuss the benefits of disciplinary literacy for students, and reflect on their evolution of thinking over several years.

Crafting Consistency. This consistency of definition and practice differs from many studies, in which teachers struggled to process disciplinary literacy as an idea and a practice. Mac Mahon (2014) and Cantrell et al. (2008) both found that teachers often expressed narrow, imprecise, or even inaccurate conceptions of literacy and tended to identify these conceptions in terms inconsistent with disciplinary literacy. Redmond leaders pointed to sustained professional development and the resulting team conversations as integral pieces of the process of developing consistent understanding, suggesting forms of both individual and collective sensemaking. Team members further reified these understandings within teacher-facing materials such as professional development templates, wherein they used consistent and common language about literacy and its purpose. Further, their decisions to differentiate the materials by department show that they were able to apply these understandings using practices consistent with key components of disciplinary literacy. While the focus of the school occasionally utilized intermediate strategies (Shanahan & Shanahan, 2008), which are literacy concepts that can be applied uniformly across disciplines (e.g., a universal annotation strategy), department level work showed consistent use of disciplinary literacy features. Examples of this included the social studies department's focus on document-based questions or the math department's use of authentic data assessments. Additionally, departments showed evidence of Spires et al.'s (2018) identified literacies that teachers in different disciplines operationalize in different ways. For instance, the examples listed above suggest a social studies department focus on source literacy, and a mathematics department focus on analytic literacy. While the scope of the study did not allow for testing the fidelity of these common understandings and practices at the individual teacher level, the uniformity of the team suggests an important first step in that process.

Differentiated Choice. Perhaps because of strong understandings of disciplinary literacy, the Redmond team made a key early choice in allowing for differentiation across departments. Team leaders identified this as a conscious process that developed over the course of the first year of work at the school level. While the Redmond team itself did not develop robust measures to track teacher engagement with the disciplinary literacy process, they did describe increased buy-in that they saw from their work on the literacy team and their collaboration with departments, teams, and individual teachers. This kind of buy-in suggests positive results in terms of how teachers may be engaged in disciplinary literacy integration, and serves as a contrast to research that showed teachers disengaged with content area approaches. Whereas studies such as Siebert and Draper (2008) and Anagnostopoulos and Rutledge (2007) showed that teachers (especially mathematics teachers) were frustrated with approaches that tried to operate uniformly across disciplines, Redmond teachers found that members of their departments were open to these kinds of authentic tasks when approached with differentiated understanding and clear purpose. Part of this buy-in occurred because of the close alignment that allowed literacy team members to work as ambassadors within their own departments and navigate existing relationships. As such, as opposed to studies that suggest that departments might create impermeability for instructional change (Anagnostopoulos & Rutledge, 2007), this decision to work within departmental structures allowed team members to serve more intermediary roles and to connect meaningfully with colleagues.

Use of Formalized Structures and Informal Networks. By differentiating processes by departments and utilizing teacher leaders, Redmond's literacy team benefited from both formalized structures and informal networks operating within those structures. Numerous studies reviewed suggested that formal structures (e.g., Donaldson et al., 2016; Louis et al., 2005) and informal networks (e.g., Coburn, 2001; Siciliano et al., 2017) can both serve roles in

collective sensemaking for teachers engaging in instructional change. Redmond leaders utilized formal structures, including the literacy team, departments, professional learning communities, as well as informal colleague relationships formed by working within these structures. By highlighting the work of literacy team members experimenting with disciplinary literacy in their own classrooms, Redmond reinforced findings by Siciliano et al. (2017), which suggest that teachers seek out those who see value in a specific change. Further, Coburn (2001) noted that teachers often gravitate to those with "similar worldviews and approaches" (p. 156). Given that disciplinary literacy is not discipline-neutral (as opposed to other instructional initiatives that may be the same across different disciplines), formal structures and informal networks are compressed as teachers who have similar backgrounds and beliefs within their discipline are grouped together. By using teachers to lead this work, Redmond integrated the two, allowing informal leadership to work in more formal ways.

Theme Two: Creation of Commonality

While school leaders espoused several benefits of dispersing disciplinary literacy work across departments and teams, this study suggests that common schoolwide structures are essential in helping establish and maintain coherence within this process. While respondents were generally positive about the work that they had done as part of the literacy team, they also acknowledged difficulty in establishing and maintaining a schoolwide vision for literacy. Part of this difficulty emerged from the very differentiation that built teacher buy-in, whereas other challenges emerged in building and maintaining consistency and commonality across the school.

Differentiated Leadership. In framing some of the difficulties of secondary literacy leadership, Ippolito and Fisher (2019) note that "A schoolwide focus on literacy risks not honoring real discipline-specific differences in reading, writing, and communication; but a department-by-department or team-by-team approach risks never converging on a unified

schoolwide instructional philosophy and set of practices" (p. 52). Redmond leaders' discussion of their own school's process echo both halves of this idea. They clearly saw the benefits of working on a team-by-team approach, and as teachers worked within these discipline-specific teams, they likely developed a deeper understanding of literacy in their discipline. However, Redmond team members also acknowledged the challenge of bringing this work back to the whole school level, and individual teachers may have lacked some of the bigger picture understanding of disciplinary literacy's purpose or how it was operating across the school.

Part of this challenge comes in the way that disciplinary literacy requires both disciplinary expertise and consistent leadership in order to change instructional practice (Lochmiller & Acker-Hocevar, 2016). For non-teacher leaders, this often means attempting to work across disciplinary lines, which studies showed was challenging for administrators (McNeill et al., 2018), reading intervention teachers (Bean et al., 2015) and instructional coaches (Wilder, 2014; Di Domenico et al., 2018). Doing so requires taking different stances toward listening, questioning, and coaching, as multiple Redmond team members acknowledged. For teacher leaders in the building, this means not only operating as models of practice within their departments and teams but also becoming heavily involved in whole school strategic and structural decisions. Data suggest that Redmond teachers took an active role in many of these processes, opening up their classrooms for observations, leading professional development sessions, and working on a person-by-person level to advocate for change in practice. In addition, though, some staff members noted that teachers had to be empowered to serve in these roles and that sometimes they felt uncertain about whether they should or would be allowed this access without explicit administrative direction. This specific feeling at Redmond is supported by more comprehensive nationwide data by Bean et al. (2015), which found that

reading teachers and literacy specialists reported increasing complexity and increasing leadership responsibility in their job descriptions and tasks.

Connections to Coherence. An examination of how this differentiated leadership played out at Redmond suggests that literacy leaders in the school built toward coherent concrete practice but did not necessarily achieve a unified whole school approach. Reviewed models of coherence (Mehta & Fine, 2015; Newmann et al., 2001; Hopkins & Spillane, 2015) all recognize the importance of concrete practices as a piece of coherent instructional programs. Reviewed documents and interviews suggest that the presences of many sub-elements of coherence were either in place or were developing over the course of several years at Redmond. For instance, the literacy team increasingly built "thick mechanisms for adult learning" (Mehta & Fine, 2015), as they not only increased the regularity with which they engaged with staff but also the types of tasks they did in these sessions. Initial sessions with smaller, one-off activities built to more embedded structures such as common planning around a shared literacy lesson. Another example of a practice in progress at Redmond was that of "coherent organizational design" (Mehta & Fine, 2015). Over the course of several years, the Redmond literacy team not only became more strategic in their own internal practices and discussions, they also reached out beyond the scope of their team to embed themselves within the greater organizational structures of the school. For example, they became a part of the school improvement plan and rooted themselves into the work of professional learning communities.

In other cases, though, coherent actions were in progress but didn't necessarily achieve the staying power needed to maintain a whole school focus on literacy. An example of this is in the area of instructional "granularity," another sub-element identified as aiding coherence by Mehta and Fine (2015). The authors describe this quality as meaning that "administrative leaders, teachers, and students share a highly developed picture of what they think good

instruction looks like, and that this picture serves as the anchor for much of what happens at these schools" (p. 501). In Redmond's case, this process began as literacy team leaders identified key practices to focus upon, often working on one to two strategies per year. Individual members of the team built upon this by also advocating for additional specific practices in their departments and teams. However, team members also suggested that this understanding of instruction lessened the further removed one became from the literacy team and that individual leaders and teachers not associated with the team may or may not be able to articulate these ideas as clearly. Further, there did not appear to be a concrete digital or analog place where these ideas lived within the school and could be accessed by staff members not on the team. As such, the team had begun a move toward granularity that required more time and attention in order to become fully integrated into the school. Broadly, this speaks to the need for wide cohesive measures that help leaders hold potentially diffuse work together under a single banner.

Theme Three: Integration and Sensemaking

This study suggests that as a large element of an instructional program, disciplinary literacy interacts with many other structural and instructional elements of the school. It also suggests that leaders' sensemaking in this integrative process impacts whether this occurs coherently to build common understanding and collective action. Redmond leaders made intentional strides to connect literacy with other elements of the school. Initial sensemaking processes (such as the decision to frame literacy as a practice already occurring within the school) addressed some cultural elements of the school and allowed leaders to adapt disciplinary literacy to Redmond, though other sensemaking processes (such as those surrounding the integration of a district technology initiative) seemed to stall the momentum of disciplinary literacy within the school.

Integrating Literacy Within School Structures. Redmond leaders identified increased enactment of concrete strategic actions, which paralleled an increased focus on intentional strategic thinking in support of literacy. While initial actions were contained more to the scope of the team, and focused on developing internal understanding, team actions were increasingly outward focused and aimed at integrating within whole school processes and structures. This involved an increased focus on professional development, including the integration of literacy within a newly established schoolwide professional development team. An increased strategic focus also led to the integration of disciplinary literacy into Redmond's school improvement plan, providing the most direct description of how disciplinary literacy fit into the school, as well as strategic actions that various stakeholders would take in support of literacy. This document was closest in nature to the kind of concrete instructional frameworks discussed in several models of coherence (Newmann et al., 2001; Hopkins & Spillane, 2015). The team also increased the frequency with which teacher leaders worked within their professional learning communities and foregrounded conversation and action about literacy. This mirrors research, such as Charner-Laird et al. (2016), that located professional learning communities as a site of disciplinary literacy work and emphasized the importance of teacher leaders in authentically leading that work.

Sensemaking and School Culture. One of the key suggestions forwarded by studies of coherence is the importance of the abstract elements that surround more concrete resources within a building. Researchers studying coherence have conceptualized these abstract elements using new institutional concepts such as regulative, normative, and cultural-cognitive dimensions (Hopkins & Spillane, 2015) or in more generalized nomenclature, such as "collective identity" (Mehta & Fine, 2015). These studies argue that an understanding of the concrete elements of a school does not entirely account for resulting change that may occur. Instead,

surrounding elements also impact the scope, the efficacy, or the fidelity of change. In some cases, leaders on the team explicitly identified cultural aspects of their school in many of their comments, noting, for example, that “We don't have a school culture where someone's going to come in and say, you shouldn't do that.” In others, a cultural element was implied by the comments of team members; for instance, team leaders regularly discussed how literacy was “not another thing,” even building this idea into their professional development resources and including it in their strategies in how they worked with teachers. As such, this suggests that the culture of Redmond was perhaps more primed for non-directive, organic growth around literacy. This organic concept is in line with previously discussed disciplinary literacy research (e.g., Shanahan & Shanahan, 2008), which promotes the value of a differentiated approach. However, the lack of more directive (or, in the framework of Hopkins and Spillane [2015], “regulative”) forces in support of the concrete steps taken by the literacy team is something that may have slowed the momentum of literacy within the school. While non-administrator members of the literacy team were able to provide the content expertise needed to build authenticity, they lacked the positional power to provide additional emphasis to the importance of disciplinary literacy integration within the school’s vision and practice.

Sensemaking and Change. Findings suggest that Redmond leaders took numerous actions, both concrete and abstract, that they believed helped facilitate the adoption of literacy practices. Additionally, leaders’ sensemaking played a role in helping catalyze many of these concrete steps. For example, continuous sensemaking around team composition or the importance of differentiated resources and support were integral in the team’s forward progress. In two related ways, though, Redmond leaders’ sensemaking processes around district input and influence appeared to disrupt the spread of literacy within the school.

Sensemaking around further centralized instructional change impacted the coherence with which literacy was preserved and maintained. With the introduction of a district level technology initiative, Redmond was unable to integrate these two initiatives successfully in a way that made sense to literacy team members, resulting in a shift in the work occurring at the school. Literacy team leaders felt that choices made in the constitution of the new instructional team pushed the focus away from literacy toward technology. This connects to research by Coburn (2005), which suggests that leaders not only have the ability to shape individual moments of sensemaking but also the "the overarching interpretative frame" through which others understand change (p. 494). By reforming the team without building on the work of the previous literacy team, the overall frame of the Redmond team changed and the focus on literacy was minimized as a focus on technology increased. As Weick (2015) notes, this level of change is to be anticipated, since organizing is "always ambiguous" and "always interrupted" (p. 120). Given this, organizations must attend to what Weick calls "grasp," which is the process of "leaning into" the complexity of a situation to try to understand its depth and recognize the challenges of navigating this new reality. As Weick describes it, "To grasp ambiguity is to rework sense, repeatedly, since both you and the world change continuously even though you continue to navigate using unchanging, discontinuous concepts" (p. 123). In Redmond's case, this might represent continued conversation and sensemaking around how literacy and technology fit together (and conversely how they don't), and how two distinct teams might successfully or unsuccessfully fit together. This kind of intentional processing is challenging but a requisite of the complex undertaking of instructional change.

Relatedly and more broadly, Redmond staff members' sensemaking about change suggested a complicated relationship with central directives. Members of the literacy team indicated that they were open to district initiatives but some commentary by the team

suggested that they felt bound to implement many of the changes suggested by various centralized forces that might put pressure upon a school. Additionally, there were additional ideas generated within the school itself. The result, as many literacy team members articulated (and which was triangulated with reviewed documents), was an overabundance of ideas and initiatives within the school. As Mehta and Fine (2015) observed, schools with high degrees of coherence were able to insulate themselves against this kind of external profusion of ideas. They note, "Much as it is said that 'strategy is as much about what you say no to as what you say yes to,' these schools are as clear about what they would not let in as what they would" (p. 503). In this way, disciplinary literacy represents a challenge for school leaders. Given its complexity, it represents a significant learning curve for teachers and school leaders as they work to integrate it into the instruction in a school. Given its breadth, it connects to many different other instructional concepts. As such, leaders must use sensemaking processes to ensure that stakeholders are not overwhelmed by disciplinary literacy, to insulate the school against taking on too many additional concepts or initiatives, and to still be able to understand and share connections between disciplinary literacy and other key instructional ideas when necessary.

Implications for Conceptual Framework

As detailed in Chapter III, this study advanced a conceptual framework suggesting that leaders' utilization of concrete structures and sensemaking processes held the potential to create increased coherence out of complexity and ambiguity. Findings from this study support much of this conceptualization. Redmond engaged with much of the proposed ambiguity, working through varied initial conceptions of literacy to create nuanced understandings of disciplinary literacy through collective sensemaking processes. They used this understanding to distribute literacy widely across the school through the use of differentiated resources. They also placed teacher leaders in key roles to foreground existing disciplinary experience within the

school. Redmond's team also identified elements of coherence articulated within the framework, such as organizational alignment, as key to the spread of disciplinary literacy. For instance, an increased focus on strategic thinking helped spur integration of literacy within schoolwide structures. However, in other cases Redmond leaders were less able to build coherence in the face of new challenges, in part due to the interaction between sensemaking processes and coherence elements. For example, leaders were unable to integrate a new technology focus within a collective instructional identity and instead reformed the literacy team within a new digital integration team, which literacy team members identified as a regressive step. Overall, the data and resulting findings and themes were consistent with the conceptual framework proposed, as sensemaking interacted with elements of coherence in an iterative cycle.

Recommendations for Practice

These three major themes suggest seven recommendations for school leaders attempting to implement a disciplinary literacy program within the complexity of secondary schooling. These recommendations are informed by reviewed literature in Chapter II and shaped by interview and document review data discussed in Chapter IV. As an extension of the study's research questions and conceptual framework, these recommendations provide suggestions about key considerations around disciplinary literacy, about the benefit of sensemaking within this process, and about strategies for working toward program coherence.

Form a Representative Cross-Disciplinary Literacy Team

The formation of a diverse team of literacy leaders within the school was a key element in helping spread literacy practice in this study. While the formation of this team was required by Redmond's district, Redmond leaders were intentional and iterative in their attempts to maintain the right members in order to support their work. Intentionality around creating a mix

of teacher leaders and non-teacher leaders on the team allows for a balance of practitioner knowledge and understanding of whole school processes. By diversifying the representation of both kinds of roles, school leaders can ensure that complementary skill sets are available to support literacy. For teachers, this means having representative knowledge from a number of disciplines. While Redmond leaders were limited on how many literacy team members they were able to send to district professional development, they expanded beyond this number in their own school, drawing on the expertise of non-core teachers. In doing so, they continued to build a coalition of teachers throughout the diversity of disciplines found in a high school setting. For non-teachers, representation means including instructional coaches, interventionalists, technology specialists, administrators, and other support roles, each of which will bring a different eye to what disciplinary literacy is and how they might support teachers in their leadership of this process.

By working iteratively, school leaders can undergo sensemaking around the make-up of the team and its ability to reach a vast number of staff within the school. That process involves developing an understanding of the strengths and weaknesses of each team member, what skills and knowledge they may be able to leverage in support of the literacy team, what place they hold in the formal and informal structures of their department, and their willingness and capacity to provide leadership to their colleagues in a parallel way (i.e., not through any formalized power structure). By engaging intentionally in these sensemaking processes as identified in this study, leaders can ensure that they have the correct team members in place and can develop plans for support if leaders on the team are still emerging in their ability to lead in the complex ways that disciplinary literacy may require.

Build Common Understanding of Disciplinary Literacy Within Team

As surveyed literature (Mac Mahon, 2014; Cantrell et al., 2008) suggests, educators often bring incomplete or incorrect understandings of what constitutes literacy in a broad sense and how disciplinary literacy may differ from a more generalized form of literacy. The result of this is that a team of budding literacy leaders may be operating on problematic definitions of literacy or of what practices support literacy in the classroom. Research also suggests that teachers and leaders often make sense of new information utilizing their past experiences (Sleegers et al., 2009; Coburn, 2005; Matsumara & Wang, 2014). New team members' past involvement with literacy may include either a complete lack of literacy experience, a modest exposure to literacy concepts (for instance in a pre-service course at the beginning of their teaching careers), or some connection to previous content area literacy initiatives, which, while perhaps useful to the team, will require further definition to convert to a disciplinary approach.

Because of these factors, findings from this study suggest school leaders must take intentional action to build a common understanding of what disciplinary literacy is, what practices support it, and how it can benefit students as they engage in authentic disciplinary work. As Redmond's experiences show, this understanding can be built through sustained work on both initial sensemaking and continued refinement through discussion and action over the course of months and years. This understanding can also help shape the actions of the team as it moves forward in working with teachers and staff. Redmond teachers were adept at determining the need to differentiate their work based on discipline. This was a key element of their success and extended logically from a well-developed and commonly held understanding of disciplinary literacy among the members of the literacy team. Given the distributed nature of the work that disciplinary literacy seems to require, this common understanding among team members is also important in ensuring some degree of uniformity as this message is

disseminated widely throughout the various departments, teams, and individuals in a large school community.

Set Common Schoolwide Vision and Expectations

Redmond's data suggest that differentiated work holds the potential to build buy-in among teachers by allowing them to engage with literacy in ways that are authentic to what their discipline values and are relevant to the work occurring in their classrooms on a daily basis. Based on the experience of Redmond's literacy team, school leaders should support this form of differentiation of process in order to allow for disciplinary expertise to guide work at the department and team level. In addition to this, though, leaders must consider how they might continue to prioritize messaging and create common language at the schoolwide level. This includes not only creating a clear understanding of what constitutes literacy but also crafting a compelling and developed philosophy of why a focus on disciplinary literacy is important and how it might benefit both students and teachers within the school. This more moral appeal can help address the "why" of disciplinary literacy and build a more deep-seated motivation for a sustained literacy focus across different disciplines.

This developed vision can be supported by clear administrative expectation about the use of literacy practices and requires that school administrators develop their own understanding of literacy and its import. As studies such as McNeill et al. (2018) and Lochmiller and Acker-Hocevar (2016) suggest, this requires administrators to delve deeply into an understanding of what literacies the disciplines they supervise value, which can be difficult given the varying role responsibilities that school administrators hold in a complex modern school setting (Ippolito & Fisher, 2019). Further, both existing research (Wilder, 2014; Di Domenico et al., 2018) and data from this study suggest that developing this understanding requires leaning on the expertise of the teachers within each discipline and taking a listening and learning stance

through conversation, coaching, and feedback cycles. Leaders can then reinforce these disciplinary concepts by working directly with department, professional learning community, and literacy team leaders to develop plans for integrating literacy concepts within units and lessons.

Work Strategically to Integrate Literacy Into School Structures

As a wide-ranging and complex element of an instructional program, disciplinary literacy requires a sustained focus in order to build both common understanding and an embedded presence within the complex structures of secondary schools (Ippolito & Fisher, 2019). Further, as Redmond's work indicates, this form of complex work requires sustained focus on strategic planning and the continuous sensemaking that comes along with this form of organizational thinking. Mehta and Fine (2015) call this "coherent organizational design" and argue that in coherent school settings, "[s]tructure, culture, and instructional vision are tied together into an integrated package" (p. 503). Leaders at Redmond increasingly focused on this element of their work, eventually tying literacy into the work of professional learning communities, professional development committees, and school improvement planning.

In addition to these ideas, school leaders can reinforce literacy expectations by tying disciplinary literacy into accountability structures, such as observation forms, unit and lesson planning templates, meeting agendas, and more job-embedded professional learning protocols (e.g., action research or disciplined inquiry cycles). By doing so, school leaders develop further kinds of coherence, for instance what Mehta and Fine term "thick mechanisms for adult learning" and "transparent structures." In doing so, leaders begin to further codify literacy and literacy practice in discipline-neutral ways, allowing teachers to develop the content of what they are focusing on while still allowing administrators to reinforce the importance and need for continued focus on these strategies. In doing so, leaders balance more normative and regulative

forces with the authenticity provided by an approach differentiated by discipline. This also helps mitigate potential "drift" in purpose and action created by a highly differentiated movement around literacy, while also building a kind of collective responsibility and action around literacy that creates momentum at the schoolwide level.

Use Existing Structures and Relationships as Accelerants

Several disciplinary literacy studies (e.g., Anagnostopoulos & Rutledge, 2007; Siebert & Draper, 2008) are concerned with the ways that disciplinary departments serve as mediating structures around how literacy is perceived and implemented by teachers. Outside of disciplinary literacy, studies such as Coburn (2001) found that teachers utilized both formal structures and informal networks to gain clarity on instructional change and to inform their individual and collective sensemaking around the change. Literacy leaders within a school can harness both informal relationships and formal structures as a way of accelerating literacy growth. By leveraging the literacy team to develop early adopters and positive models of disciplinary literacy within each department, school leaders help build credibility for the initiative at the teacher level. Redmond's principal noted as much by arguing that teachers want to see that something works and is worth their time. Teachers on the literacy team were able to build off on existing relationships that predated literacy and use this to their strategic advantage in advocating for positive change. This kind of organic growth allows disciplinary literacy strategies and ideas to flourish among the teachers most qualified to see their value and to experiment with and refine them within their classrooms.

This positive informal momentum supports the growth of more formalized structures that generally provide shape to isolated strategies and ideas. This includes the planning, assessment, and intervention discussion of the PLC cycle that occurs within teams and more robust department level work such as professional development, vertical articulation,

observation protocols, or even master scheduling. Taken together, this dual focus on informal and formal processes allows for ideas to percolate at the teacher level in a way that builds positive progress but allows for more structured and sustained focus over time.

Create Resources That Balance Commonality and Difference

The major theoretical construct of disciplinary literacy (Shanahan & Shanahan, 2008) identifies different levels of literacy strategies. Two of those are generally more relevant for secondary schools: intermediate and disciplinary strategies. As previously discussed, intermediate strategies are more easily generalized across disciplines, whereas disciplinary strategies are more distinct to a specific discipline. In practice, disciplinary strategies are often extensions of intermediate strategies; for example, annotation may exist in all classes as an intermediate strategy but is specified within each content area as a disciplinary strategy. As such, there is the possibility to craft a sense of commonality while still allowing for differentiation. This played out at Redmond in many areas. For instance, literacy team members built common professional development templates and then tailored individual sessions to department need. Similarly, literacy team members often identified a single skill or two of focus for the whole school and then altered how that skill might play out within each department.

These types of strategic literacy team processes can even be applied to individual teams and teachers. School leaders can follow this precept and extend this practice into further areas throughout the school in concrete ways, asking teachers and teams to work collaboratively as they build curricula and instructional resources while still allowing for personalization at the team and teacher level. For instance, leaders can require that common assessments allow teachers to assess students' disciplinary literacy skills as part of their design. Teachers can then develop resources under that belief, focusing on DBQ writing in social studies classrooms or authentic written analysis of graphs and data in mathematics classes. This level of differentiation

around a core of commonality builds coherence across the school while allowing teachers to meet the needs of their students and their disciplines.

Connect Literacy to Past, Current, and Future Initiatives

In the face of continuous ambiguity and change, school leaders are required to introduce ideas into an existing environment, maintain and refine that work through the bulk of the change, and then process and evaluate new ideas as they emerge. Specifically, as a process that involves students' reading, writing, discussing, and even thinking, disciplinary literacy overlaps with many other instructional ideas that already exist in the school and with new ideas that arise. As an extended core element of an instructional program, the staying power of disciplinary literacy will to some degree depend on the ability of leaders to help teachers understand how literacy connects to what they are already doing, how to directly connect literacy work with other key pedagogical strategies within their disciplines, and how to incorporate new ideas into a literacy program once it becomes established. At Redmond, literacy team members paid close attention to this first element, naming existing practices alongside teachers to codify those already existing practices as forms of literacy. In this, they prioritized building coherence as teachers strived to understand disciplinary literacy. On the other hand, school leaders were less successful at connecting a new technology initiative to already established literacy practice, and as a result, team members admitted that they had lost much of the momentum built in previous years.

Given this, school leaders must attend to their own sensemaking as new instructional ideas emerge in order to help ensure that these ideas fit with literacy on a broad level and to focus on the specifics on how to make these connections clear to leaders and teachers within the building. In making this transition, they must move from sensemaking to sensegiving (Gioia & Chittipeddi, 1991) and help others frame new learning within a literacy context. With

continued attention to this over time, disciplinary literacy becomes less of an isolated or short-term initiative and more of a core value within a school, the bedrock upon which other initiatives are laid.

Summary

In this section, I have discussed major themes that extended from a synthesis of both the literature and interview and documentary data from Redmond High School. From these themes, I have forwarded seven recommendations that attempt to integrate literature and data to provide practical guidance for school literacy leaders at both the administrative, literacy team, and teacher leader level. These recommendations suggest several high-level considerations and changes that school leaders can use to build engagement with literacy, operate in a strategic manner around literacy, and process the complex organizing and sensemaking that accompany large-scale instructional change.

Action Communications

In the next section, I include three products designed for use in communicating findings, themes, and recommendations with Redmond High School and central office staff. The first product is a high-level memo that summarizes the major results of the study, as well as next steps for action in continuing literacy work at the school level. While every school setting is different, my hope is that this set of recommendations are potentially useful for any secondary school leader attempting to integrate disciplinary literacy within their building and form a sort of framework for action and reflection. The second product is a presentation template for use in debriefing school leaders on the purpose of the study, which will be conducted with the principal and other members of the literacy team. The third product is a high-level memo that discusses implications for central office staff supporting schools in creating a program

around disciplinary literacy. This document adapts the school-focused themes of the study to consider their relevance to central office staff and suggests practical guidance for action steps and possible resources based on the school-based recommendations.

Action Communication 1: School Leader Briefing

Leadership for Disciplinary Literacy: Schoolwide Considerations and Actions

Subject: Leadership around disciplinary literacy, based on a study conducted at a large comprehensive high school.

Problem of Practice: Literacy is a key skill for students as they interact with higher level work in secondary disciplines. Disciplinary literacy offers a framework for the kinds of distinct skills that students might benefit from learning and that teachers might focus on to promote authentic engagement within their content area. Leadership around disciplinary literacy, though, is complex due to the differentiated knowledge it requires, as well as the complicated setting presented by secondary schools.

Context: This study focused on the leadership of literacy of Redmond High School as it attempted to implement a district initiative and embed disciplinary literacy within its classroom. Major concrete actions included the formation of a cross-disciplinary team, extended professional learning, and work at the department and team level. Major abstract actions included the consideration of ideal team members, the decision to allow for differentiation and choice, and the integration of literacy within existing ideas and structures, as well as new instructional ideas that arose over time.

Major Themes: The following themes extend from an analysis of the perceptions of Redmond staff members, as well as the documents created by the school during the studied time period. In sharing these themes, I hope that they are helpful in reflecting on your past journey, your current state, and your future actions.

- **Theme One: A nuanced understanding and a differentiated approach to secondary literacy allows school leaders to leverage disciplinary expertise and pre-existing structures and relationships.** Leaders can use a complex understanding of a discipline to help effect differentiated change within that discipline.

- **Theme Two: Common schoolwide structures are essential in helping establish and maintain coherence within this process.** Despite a differentiated approach, leaders must create common language and vision in order to lead a cohesive program.

- **Theme Three: Leaders' sensemaking in integrating disciplinary literacy with instructional ideas and structures within the school impacts whether a program builds coherence.** Leaders help set the stage for the understanding of others by making connections to other schoolwide processes, structures, and ideas.

Recommendations: As a result of these findings, I propose seven recommendations for this type of instructional leadership around disciplinary literacy:

- ***Form a representative cross-disciplinary literacy team.*** The formation of this team provides the necessary instructional and leadership expertise for disciplinary literacy work.

- ***Build common understanding of disciplinary literacy within team.*** Consistent language and vocabulary builds coherence for literacy team members and ultimately other stakeholders.

- ***Set common schoolwide vision and expectations.*** Collective understanding creates the impetus and understanding necessary for further action.

- ***Work strategically to integrate literacy into school structures.*** Integrated strategic practices and structures create intentionality in keeping literacy at the forefront.

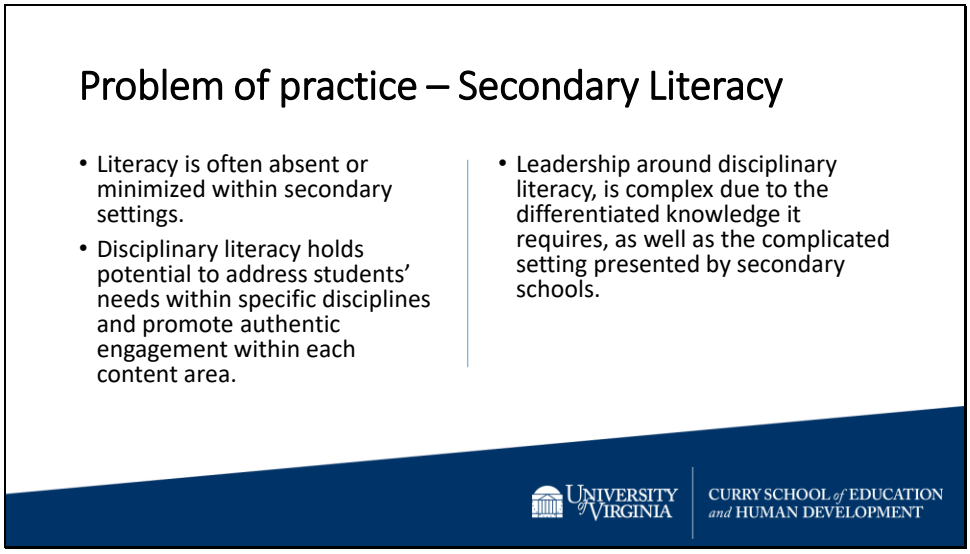
- ***Use existing structures and relationships as accelerants.*** Utilizing departments and teams harness both expertise and collaborative relationships for increased buy-in.

- ***Create resources that balance commonality and difference.*** Well-designed resources allow for both disciplinary choice and schoolwide consistency.

- ***Connect literacy to past, current, and future initiatives.*** Disciplinary literacy overlaps with numerous other instructional ideas, and leaders must draw these explicit connections.

Taken collectively, these recommendations hold the potential to increase coherence within the leadership process around disciplinary literacy.

Action Communication 2: Presentation to School Leaders



Purpose of the study

The purpose of this study is to understand how secondary school leaders make sense of literacy instruction and attempt to create coherent instructional programs centered on disciplinary literacy.

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Research Questions: Disciplinary Literacy

Primary research question: How do school leaders attempt to build coherent instructional programs around disciplinary literacy?

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Research Questions: Disciplinary Literacy

Subquestion 1: How do school leaders make sense of disciplinary literacy?

Subquestion 2: What practices, processes, and structures do leaders use to attempt to develop instructional programs around disciplinary literacy?

Subquestion 3: What environmental conditions enable or constrain school leaders as they attempt to build instructional programs around disciplinary literacy?

Subquestion 4: How do leaders' sensemaking processes impede or facilitate enactment of coherent instructional programming around disciplinary literacy?

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Study Design - Participants

- Case study at a large, public high school within a large, suburban district.
- Participants: School leaders, including principal, assistant principals, instructional coaches, teacher leaders, and other members of the literacy team.

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Study Design – Data Collection

- Semi-structured interviews to gain description of the individual and collective sensemaking that occurred around disciplinary literacy, and the attempts to build coherence around a complex initiative.
- Document analysis to understand how these ideas were codified concretely.

Documents reviewed: professional development materials, materials that define or articulate different elements of disciplinary literacy, school improvement plans, and high-level instructional materials (e.g., visible schoolwide/department-wide charts or processes).

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Theme 1: Value of Differentiated Approaches

A nuanced understanding and a differentiated approach to secondary literacy allows school leaders to leverage disciplinary expertise and pre-existing networks.

Leaders can use a complex understanding of a discipline to help effect differentiated change within that discipline.

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Theme 2: Creation of Commonality

Common schoolwide structures are essential in helping establish and maintain coherence within this process.

Despite a differentiated approach, leaders must create common language and vision in order to lead a cohesive program.

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Theme 3: Integration and Sensemaking

Leaders' sensemaking in integrating disciplinary literacy with instructional ideas and structures within the school impacts whether a program builds coherence.

Leaders help set the stage for the understanding of others by making connections to other schoolwide processes, structures, and ideas.

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Recommendations

- ***Form a representative cross-disciplinary literacy team.***
- ***Build common understanding of disciplinary literacy within team.***
- ***Set common schoolwide vision and expectations.***

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Recommendations

- ***Work strategically to integrate literacy into school structures.***
- ***Use existing networks and relationships as accelerants.***
- ***Create resources that balance commonality and difference.***
- ***Connect literacy to past, current, and future initiatives.***

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Questions and Feedback

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Action Communication 3: Central Office Briefing

Leadership for Disciplinary Literacy: Central Office Considerations and Actions

The following briefing summarizes a study related to disciplinary literacy and provides suggestions for central office personnel supporting schools in disciplinary literacy.

Subject: Leadership around disciplinary literacy, based on a study conducted at a large comprehensive high school.

Problem of Practice: Literacy is a key skill for students as they interact with higher level work in secondary disciplines. Disciplinary literacy offers a framework for the kinds of distinct skills that students might benefit from learning and that teachers might focus on to promote authentic engagement within their content area. Leadership around disciplinary literacy, though, is complex due to the differentiated knowledge it requires, as well as the complicated setting presented by secondary schools.

Context: This study focused on the leadership of literacy of Redmond High School as it attempted to implement a district initiative and embed disciplinary literacy within its classroom. Major concrete actions included the formation of a cross-disciplinary team, extended professional learning, and work at the department and team level. Major abstract actions included the consideration of ideal team members, the decision to allow for differentiation and choice, and the integration of literacy within existing ideas and structures, as well as new instructional ideas that arose over time.

Major Themes: The following themes extend from an analysis of the perceptions of Redmond staff members, as well as the documents created by the school during the studied time period. In sharing these themes and then considering what was learned as well about central office processes, I hope that they are helpful in reflecting on your past journey, your current state, and your future actions.

- **<u>Theme One</u>: A nuanced understanding and a differentiated approach to secondary literacy allows school leaders to leverage disciplinary expertise and pre-existing structures and relationships.** Leaders can use a complex understanding of a discipline to help effect differentiated change within that discipline.

  <u>Implications for central office personnel</u>:

  - School leaders cited the role of sustained professional development over several years to help construct a team and develop team members.
  - Values emerging from centralized support (such as differentiated approaches to literacy) were solidified at the team level through school-based work.

- **Theme Two: Common schoolwide structures are essential in helping establish and maintain coherence within this process.** Despite a differentiated approach, leaders must create common language and vision in order to lead a cohesive program.

  Implications for central office personnel:

  - School leaders discussed and utilized common definitions that extended from central office work.
  - Reviewed documents illustrated how team members embedded centralized common language as part of their professional development and messaging.
  - Team members "turned around" activities from centralized professional development and used them with staff members at their school.

- **Theme Three: Leaders' sensemaking in integrating disciplinary literacy with instructional ideas and structures within the school impacts whether a program builds coherence.** Leaders help set the stage for the understanding of others by making connections to other schoolwide processes, structures, and ideas.

  Implications for central office personnel:

  - While earlier central office decisions helped the team build coherence, a later decision created new sources of ambiguity for school team members.
  - Team members shared confusion about how this decision interacted with their previous work on literacy.
  - Further guidance for or facilitation of leaders' sensemaking would have supported team members in navigating this change.

Recommendations:

Broadly speaking, central office leaders would benefit from the following district-wide actions to impact coherence across a division:

- Create a sustained professional development structure that allows prolonged engagement with literacy.
- Direct the creation of a school-based literacy team to lead the work within a school.
- Craft common definitions, values, and actions that help schools speak in similar ways within their school and across schools.
- Work directly with school leaders to promote integration of literacy into other structures within the school.
- Facilitate reflective conversations that promote sensemaking processes around systemwide values, language, and goals.

Recommendations for school leaders were forwarded based on findings from the study. The chart below adapts these school-based recommendations to consider their implications for central office personnel.

Recommendation	**Implication for central office personnel**	**Potential resources and action steps**
Form a representative cross-disciplinary literacy team.	Schools may require support in forming a team that best leads the work.	- Create guidance for make-up of team by role. - Develop list of attributes for ideal candidates for literacy team.
Build common understanding of disciplinary literacy within team.	Schools may require support in building common understandings and vocabulary in order to help literacy team message literacy within a school.	- Centrally develop (or develop in conjunction with literacy teams) common definitions, strategies, and potential leadership actions for teams. - Build resources that embed key values of disciplinary literacy (e.g., the need for differentiated processes).
Set common schoolwide vision and expectations.	Schools may require support in crafting a schoolwide vision.	- Create school protocol for creating a vision around literacy. - Lead reflective team conversation to build consensus around literacy vision. - Work with administrative team to create common understandings among team members.
Work strategically to integrate literacy into school structures.	Because of the complexity of disciplinary literacy, teams may require explicit support in developing strategic action around literacy.	- Help administrators tie literacy into existing school structures through the creation of resources (e.g., observation forms, induction materials). - Create guidance/models for building a literacy plan and including literacy within school improvement plan.
Use existing structures and relationships as accelerants.	Schools may require support working through literacy in departments and teams.	- Create resources that help professional learning communities embed literacy in their processes (e.g., lesson and

		unit planning templates).
Create resources that balance commonality and difference.	Schools may require support in adapting materials to meet disciplinary needs while still reinforcing common language and understanding.	- Create models and templates of professional development materials and other instructional materials that demonstrate how schools may balance commonality and disciplinary difference.
Connect literacy to past, current, and future initiatives.	Schools may require support in processing connections between disciplinary literacy and other instructional elements.	- Create crosswalk between disciplinary literacy and current/upcoming district initiatives. - Help schools identify literacy strategies already in use by teachers. - Facilitate reflective conversations with literacy team to help them explicitly connect literacy to other instructional elements.

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Appendix A - Interview Guide for School Leaders (Whole School Lens)

Logistics:

Date of Interview:	Location:
Interviewee role:	Start Time:
Interviewed by:	End Time:
Audio file name:	Transcript file name:

Purpose - The Study:

This study attempts to understand how school leaders (including teacher leaders) build coherent instructional programs, specifically when they are working with disciplinary literacy.

Purpose - This Interview:

In this interview, I am hoping to gain understanding on your experiences working as a school leader as you try to build an instructional program that has as a key element a focus on disciplinary literacy. I want to understand the process that you have gone through as an individual and as a school and better understand how you have you have made sense of disciplinary literacy and how you have made it make sense to others. Finally, I want to understand what successes you have had and what challenges you have faced in this process.

Logistics - Confidentiality, recording:

I would like to record this in order to capture your exact wording. This recording would only be accessed by myself. I might also take notes during the interview. Is that okay?
____ Recording/____ Notetaking

You can withdraw your consent at any time. I will be using a pseudonym in any reporting on this interview. You can pick your own pseudonym if you'd like. Pseudonym_____

Research questions:

Primary question:

- How do school leaders attempt to build coherent instructional programs around disciplinary literacy?

Subquestions:

- How do school leaders make sense of disciplinary literacy?
- What practices, processes, and structures do leaders use to attempt to develop instructional programs around disciplinary literacy?
- What environmental conditions enable or constrain school leaders as they attempt to build instructional programs around disciplinary literacy?
- How do leaders' sensemaking processes impede or facilitate enactment of coherent instructional programming around disciplinary literacy?

Interview Questions:

1. Thinking back over your entire time as an educator, what have been your past experiences with literacy?

    Probes: Past initiatives, content area literacy, disciplinary literacy.

2. What is your awareness of any district initiatives related to disciplinary literacy?

3. Describe your school's initial experiences with disciplinary literacy.

    Probes: Initial conversations, changes in thinking, external changes, formation of a team, district training

4. How has your understanding of literacy evolved over time?

    Probes: Content area literacy vs. disciplinary literacy, relation of change to district initiatives or
    school actions/conversations

5. Do you feel that your school has a vision around disciplinary literacy? If so, what would you say that it is?

    Probes: Definitions of disciplinary literacy (vs. other conceptions), process of defining this vision, sharing this vision in the school, selection of key instructional elements

6. You work in a large, comprehensive high school with a large number of teachers and other personnel. Have you taken any actions as a school to try to build or share a vision around disciplinary literacy?

    Probes: Abstract, concrete, challenges to forming a vision, professional development, alignment of structures, collective sensemaking

7. Have you taken any actions as a school to try to increase the use of literacy practices within the classroom?

> Probes: Alignment of structures, whole school approaches vs. department or team approaches

8. [You have served as a leader in your role as a _____/You were identified as a leader of disciplinary literacy in this school by others.] What has been your experience as a leader helping build a program around disciplinary literacy?

> Probes: Internal, external, schoolwide successes, department, team or teacher successes, different challenges of wide distribution of literacy, schoolwide challenges, department, team or teacher challenges

9. How has your understanding of leading instructional change around literacy evolved over the past few years?

> Probes: Different challenges of wide distribution of literacy, teacher conception of literacy, teacher conception of literacy within their discipline

10. What would your recommendations be for other leaders who are attempting to build instructional programs that include disciplinary literacy?

11. Is there anything else you think I need to understand about this topic?

12. Are there any documents that you can share that help me understand your and your school's work around disciplinary literacy?

13. Is there anyone in your school that you feel like I should speak to around this topic?

14. Do you have any questions for me?

Appendix B - Interview Guide for School Leaders (Team or Department Lens)

Logistics:

Date of Interview:	Location:
Interviewee role:	Start Time:
Interviewed by:	End Time:
Audio file name:	Transcript file name:

Purpose - The Study:

This study attempts to understand how school leaders (including teacher leaders) build coherent instructional programs, specifically when they are working with disciplinary literacy.

Purpose - This Interview:

In this interview, I am hoping to gain understanding on your experiences working as a school leader as you try to build an instructional program that has as a key element a focus on disciplinary literacy. I want to understand the process that you have gone through as an individual and as a school and better understand how you have you have made sense of disciplinary literacy and how you have made it make sense to others. Finally, I want to understand what successes you have had and what challenges you have faced in this process.

Logistics - Confidentiality, recording:

I would like to record this in order to capture your exact wording. This recording would only be accessed by myself. I might also take notes during the interview. Is that okay?
____ Recording/____ Notetaking

You can withdraw your consent at any time. I will be using a pseudonym in any reporting on this interview. You can pick your own pseudonym if you'd like. Pseudonym_____

Research questions:

Primary question:

- How do school leaders attempt to build coherent instructional programs around disciplinary literacy?

Subquestions:

- How do school leaders make sense of disciplinary literacy?
- What practices, processes, and structures do leaders use to attempt to develop instructional programs around disciplinary literacy?
- What environmental conditions enable or constrain school leaders as they attempt to build instructional programs around disciplinary literacy?
- How do leaders' sensemaking processes impede or facilitate enactment of coherent instructional programming around disciplinary literacy?

Interview Questions:

1. Thinking back over your entire time as an educator, what have been your past experiences with literacy?

    Probes: Past initiatives, content area literacy, disciplinary literacy.

2. What is your awareness of any district initiatives related to disciplinary literacy?

3. Do you feel that your school has a vision around disciplinary literacy? If so, what would you say that it is?

    Probes: Definitions of disciplinary literacy (vs. other conceptions), process of defining this vision, sharing this vision in the school, selection of key instructional elements

4. Has your school taken any actions to try to build or share a vision around disciplinary literacy?

    Probes: Teacher response to actions, results of actions, differences between this and past experiences with literacy, collective sensemaking

5. Has your department or team taken any actions to try to increase the use of literacy practices within your classrooms?

    Probes: Alignment of structures, whole school approaches vs. department or team approaches, role of PLCs in this process, collective sensemaking

6. [You have served as a leader in your role as a _____/You were identified as a leader of disciplinary literacy in this school by others.] What has been your experience as a department or team leader building a program around disciplinary literacy?

    Probes: Individual department or team successes, individual department or team challenges

7. How has your understanding of literacy evolved over the course of your work in this area?

    Probes: Content area literacy vs. disciplinary literacy

8. How has your understanding of leading instructional change around literacy evolved over the course of your work in this area?

    Probes: Teacher conception of literacy, teacher conception of literacy within their discipline, PLC leadership

9. What would your recommendations be for other leaders who are attempting to build instructional programs that include disciplinary literacy?

10. Is there anything else you think I need to understand about this topic?

11. Are there any documents that you can share that help me understand your and your school's work around disciplinary literacy?

12. Is there anyone in your school that you feel like I should speak to around this topic?

13. Do you have any questions for me?

Appendix C - Updated Codebook

Code	Description
DL - Conceptions of literacy	Mental definition of what literacy is, what role it plays within a student's education, what role it plays within a discipline, and what student skills and teacher practices it includes. Could include individual or group conceptions.
DL - Past experiences with literacy	Prior experiences with literacy, either as a student or as an educator. Could be in response to external change (e.g., district initiative) or internal conception (e.g., deciding independently to include literacy elements). Could include individual or group experiences.
DL - Varying disciplinary expertise	Experience with using literacy within the classroom within a discipline. Experience with leading literacy, either in a general or disciplinary way. The relationship between past experiences or level of expertise and current leadership actions. In other types of instructional programming, expertise may be contained within centralized sources. Disciplinary literacy suggests that this is not the case.
DL - Wide distribution of literacy/disciplinary difference	The idea within disciplinary literacy that suggests that literacy skills or outcomes changes from discipline to discipline. This may require adaptation from actors within the school, such as department administrators or instructional coaches.
DL - Differentiation of resources	A leadership impact that extends from wide distribution/disciplinary difference. This could be either a challenge or a benefit of disciplinary literacy. This differentiation could apply to any number of concrete instructional resources, including curricula, unit maps, texts, writing products, or assessments.
DL - Benefits of forming a literacy team	Identified benefits of forming a cross-disciplinary literacy team.
SM - Enactment	A sensemaking action, as actors begin to notice and bracket and begin to change their environment (Weick et al., 2005).
SM - Selection	Actors begin to select specific actions or understandings "to generate a locally plausible story" (Weick et al., 2005, p. 414)
SM - Retention	The solidification of certain understandings or justifications based on what makes plausible sense (Weick et al., 2005).
SM - Iteration of sense	The process of ongoing, retrospective refinement of sense over

	time (Weick, 1995).
SM - Ambiguity created by change in central process	Ambiguity that interviewees ascribed to changes created by centralized district processes.
SM - "Not another thing"	Determination made by interviewees that literacy was not something additional but instead was something that teachers were already doing.
CO - Collective instructional identity/vision	A set of common beliefs or purposes for the instructional mission of the school.
CO - Instructional framework	A concrete resource that articulates instructional elements that exist within an instructional program.
CO - Organizational alignment	The arrangement of elements within a school (e.g., structural, instructional, cultural) in order to increase change in practice.
CO - Technology and Literacy	Connections made between technology integration (a new central initiative) and literacy.

Legend:
DL - Disciplinary literacy
SM - Sensemaking
CO - Coherence
Gray boxes - Codes that were added during analysis.