Disciplinary Literacy and Its Implications for Teacher Practice

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CERTIFICATION OF THESIS/PROJECT CAPSTONE WORK

We, the undersigned, certify that this project entitled Disciplinary Literacy and Its Implications for Teacher Practice by Kayleigh Degenfelder, Candidate for the Degree of Master of Science in Education, Literacy Birth to Grade 12 is acceptable in form and content and demonstrates a satisfactory knowledge of the field covered by this project.
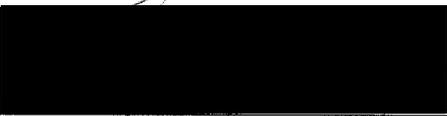
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DISCIPLINARY LITERACY AND ITS IMPLICATIONS FOR TEACHER PRACTICE

ABSTRACT

Implementation of the Common Core State Standards has increased the emphasis on literacy in the content areas and caused teachers to reflect on their literacy instruction within content areas. While many teachers appear to use the term "content area literacy" interchangeably with the emerging term "disciplinary literacy," these are two distinct forms of literacy with distinctive instructional practices. The problem related to equating these two terms is that teachers then equate the instructional strategies. A related research question is, how does knowing the difference between content area literacy and disciplinary literacy impact a teacher's instructional practice? This study addresses this question of definition and practice through a research synthesis. Findings indicate that disciplinary literacy refers to distinctive literacy skills and practices specific to disciplinary communities and their way of thinking, that this definition of "disciplinary literacy" carries implications for instructional practices in classrooms although there is yet no consensus about appropriate grade levels for employing these instructional practices, and that this definition and instructional practices meet the demands of both college and career readiness and Common Core Standards. Further findings indicate that disciplinary literacy instructional practices have the capability to be integrated with existing instructional practices, that no research on the implementation of disciplinary literacy has been conducted with practicing K-12 teachers, and that the research with preservice teachers indicates that they develop their understanding and instructional strategies based on their own learning experiences. These findings are then disseminated to teachers through an interactive professional development workshop.

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Chapter 1: Introduction

Statement of Problem

The Common Core State Standards (CCSS) emphasize the requirement of literacy instruction by teachers in the areas of science, history, literature and mathematics (Shanahan & Shanahan, 2014). This requirement has caused teachers to reflect on their current teaching practices of literacy in these content areas. At first glance, content area literacy and disciplinary literacy may appear to be the same thing. A content area can easily be considered a discipline. Fang and Coatoam (2013) recognize that "disciplinary literacy and content area literacy are approaches to academic literacy development in the content areas" (p. 627). While Fang and Coatoam identify these two literacies as distinctive, many teachers appear to use these terms interchangeably. The problem related to equating the two terms is that teachers then equate these terms in definition and in practice: According to Shanahan and Shanahan (2014), "many teachers still don't understand the distinctions between content area reading and disciplinary literacy" (p. 628). This research project explores ways to address this problem of distinguishing between content area literacy and disciplinary literacy and between the distinct teaching practices associated with each. A relevant research question is, how does knowing the difference between content area literacy and disciplinary literacy impact a teacher's instructional practice? The most appropriate way to address this question of definition and practice is to conduct an extensive literature review, synthesize the findings, and disseminate the results to teachers through professional development.

Background

      My own experience as a professional in the field of literacy has pushed me to explore the topic of distinguishing the uniqueness between content area literacy and disciplinary literacy. During my undergraduate experience as a preservice teacher, I took courses that often discussed the use of literacy in the content areas. Because I minored in English, I was frequently taught how to apply my knowledge of literacy and various English Language Arts (ELA) teaching strategies within the content areas of science, mathematics and social studies. When I took a literacy and technology course that included education majors with minors in areas other than ELA however, my fellow undergraduates expressed that they felt as though they had a deficit in knowledge of how to implement literacy in their specific concentration fields. Memory of this apparent lack of knowledge is what originally pushed me in the direction of my capstone topic: the implementation of literacy in the content areas. Once I started researching this topic, I soon realized that not only was there a great deal of research on this topic, there was also something I had never heard of: "disciplinary literacy." I first found these two terms mentioned as distinct in the Fang and Coatoam (2013) article. This caused me to rethink my topic. I decided to investigate these two distinct terms and the implications of this distinction. A recent event also strengthened my decision to research these two terms. During a graduate student panel interview with a visiting educator for national accreditation of the university's teacher preparation programs, this educator with over years of teaching experience asked about our areas of interest for our theses. When expressing my interest in the relationship between content area literacy and disciplinary literacy, his response was similar to that from other educational professionals I had met: "What is the difference?" This event strengthened my thinking about a research project to

provide professional development to educators about how the approaches of content area literacy and disciplinary literacy provide distinct approaches to literacy instruction in subject-based classrooms.

Terminology

The two key terms to be defined through this research study are "content area literacy" and "disciplinary literacy". In order to make the distinction between these terms, this research study seeks to determine a definition of disciplinary literacy based on research and the term's use within the field. However, at this initial point in the research, the working definition of content area literacy will be the one given by Brozo, Moorman, Meyer, and Stewart (2013): "the belief that general reading and writing strategies can find expression in a variety of content classrooms" (p. 354). This concept of literacy use in the content areas has been "largely unchanged for over a hundred years" (Brozo, et al., 2013, p. 354). With the implementation of the Common Core standards, this traditional concept has been challenged by the newer concept of "disciplinary literacy" being developed by the literacy profession. According to Fang (2014), the disciplinary literacy approach focuses more on the idea that "literacy instruction in the content areas should aim to promote the development of students' ability to engage in social, semiotic, and cognitive practices compatible with those undertaken by disciplinary experts" (p. 444). This differs from the concept of content area literacy in the way that specific literacy skills are taught in certain content areas in order to pertain to a certain field, rather than literacy skills being taught that can be generalized across several different content areas. While the difference between these two

terms may appear to be theoretical, the difference is made visible in teacher practice. This

definition will also continue to be expanded through the research conducted in this study.

Theoretical Framework

The theory that connects to the distinctions between content area literacy and disciplinary

literacy is literacy as a social practice, as "situated language" (Gee, 2001). Literacy skills have

traditionally been viewed as a set of skills that can be generalized into all areas of study that

occur in a mainstream classroom. However, due to the lack of literacy proficiency exhibited in

content area classrooms, researchers have begun to look at a possibly more effective method for

teaching literacy in subject area classrooms. This method involves the concept of disciplinary

literacy. While content area literacy embodies the idea that literacy skills are generalizable across

all subject areas, disciplinary literacy focuses on teaching skills within specific "Discourses"

(Gee, 2001, p. 3). This means that literacy is viewed as existing within specific contexts or

"situations" (Gee, 2001 p. 8) like a Discourse which Gee (2001) explains as an "identity kit"

(Gee, 2001 p. 3). With disciplinary literacy, a reader (or student) is asked to take on the identity

of the discipline, such as in science, to think and read like a scientist. As explained by

MacMahon (2014), disciplinary literacy is "built on the premise that each subject area or

discipline has a discourse community with its own language, texts and ways of knowing, doing

and communicating" (p. 22). This concept aligns very closely with the concept that literacies are

part of an "identity kit which comes complete with the appropriate costume and instructions on

how to act and talk so as to take on a particular role that others will recognize" (Gee, 2001, p. 3).

Disciplinary literacy as part of education requires students to learn "to act and talk" and read and

write like "recognizable" practitioners of these disciplines; It enables students to take on an

identity and become a member of these Discourses, a member of a defined community.

Therefore, the theoretical stance for this research is literacy as a socio-culturally based, as a

social practice.

Rationale

With the implementation of the Common Core State Standards (Common, 2012), by the

federal government, American schools have been required to adjust teaching practices to better

fit the new Standards. The Standards require greater emphasis on and use of literacy in the

content areas in order to support "college and career readiness" (Common, 2012, p. 2). Hart and

Bennett (2013) state that "historically, support for students' literacy development in content area

classes has focused on highly generalizable skills and abilities, such as decoding, fluency, and

comprehension strategies that can be applied across different content areas" (p. 221). This

approach, what Hart and Bennett (2013) call "content area literacy" was and is still commonly

used in classrooms today. Common Core's increased emphasis on literacy in the content areas

has given rise to a new way of considering literacy in the subject areas, what Hart and Bennett

(2013) call "disciplinary literacy". Hart and Bennett (2013) describe disciplinary literacy as "a

disciplinary perspective of literacies specific to the specialized language, text structures, and

habits of thinking within particular subject areas" (p. 221). Further evidence of increasing

interest in and recognition of a difference between content area literacy and disciplinary literacy

can be found in a research study recently begun by Associate Professor Nance Wilson, at the

State University of New York at Cortland. Her intent is to survey teacher educators and literacy

researchers to gain perspectives on the concept of disciplinary literacy. This evidence indicates

the current and relevant nature of this research topic.

Chapter 2: Literature Review

Introduction to the Review

      The most appropriate way to address the research question of defining disciplinary literacy and determining its impact on teacher instruction is to conduct an extensive literature review. Because the term "disciplinary literacy" is still emerging and frequently equated with content area literacy, very few research studies have been found that appear to study disciplinary literacy directly. The results of the initial database search have led to a broader search for any peer-reviewed journal articles that specifically used and defined the term "disciplinary literacy." These articles that attempt to introduce and define the term using various types of support are included in this literature review. Searching the major academic databases for studies related to content area and disciplinary literacy resulted in finding 17 articles that examined or presented existing definitions of disciplinary literacy as well as research into disciplinary literacy. These studies are reviewed and presented in three groups: definitions and concepts of disciplinary literacy, instructional practices of disciplinary literacy, and the understandings of disciplinary literacy in regards to teacher preparation.

Definitions and Concepts of Disciplinary Literacy

      The works reviewed in this section discuss the term "disciplinary literacy" and offer a definition based on how disciplinary literacy is addressed in the work. Part of the intent of this research project is to determine when the term "disciplinary literacy" was first used in the

literacy education field. The earliest reference to this was found in McConachie et al. (2006) who wrote an opinion piece that claimed that "the disciplinary literacy framework [was] first introduced in 2002 by the Institute for Learning at the University of Pittsburgh" (p. 8). McConachie et. al. explained that this framework was "grounded in five principles for designing rigorous, inquiry-based instruction that integrates academic content and discipline-appropriate habits of thinking" (p. 8). These five principles emphasized: the metacognition required in disciplinary literacy; opportunities for students to participate in disciplines, acting as "professionals" (p. 10) would in the discipline; the concept that "teachers to mentor students" (p. 11); that "guiding students to deeper levels of understanding" (p. 11) required ongoing assessment; and finally that conversations that take place in the classroom had just as much impact as explicit instruction on the development of discipline-specific skills in disciplinary literacy. Each principle in the disciplinary literacy framework as outlined by McConachie et. al. was supported through the use of stories told by teachers who have implemented disciplinary literacy in their classroom. These stories exhibited forms of application that could be used to address each separate principle in the framework. With the use of the framework introduced by the University of Pittsburgh, and the stories provided by teachers in the field, McConachie et. al. indicated their definition of disciplinary literacy to be "an apprenticeship approach" (p. 14) that is grounded in theoretical and pedagogical principles. Their application was presented within the recounted stories and through what instruction may be adapted based on the approaches presented in the stories.

A frequently referenced article when identifying and defining disciplinary literacy is a project report by Shanahan and Shanahan (2008). These two authors are not the first to coin the term "disciplinary literacy", but their concepts and definitions are very frequently referenced.

Shanahan and Shanahan presented data from "the first two years of a study on disciplinary

literacy" (p. 40) that examined "how content experts and secondary content teachers read

disciplinary texts, make use of comprehension strategies, and subsequently teach those strategies

to adolescent readers" (p. 40). Their project was conducted with their view of literacy in the

subject areas being a view that challenged the traditional concept of content area literacy as a

"basic set of skills, widely adaptable and applicable to all kinds of texts and reading situations"

(p. 40). Shanahan and Shanahan proposed that while this statement of content area literacy is

"partially correct" (p. 40), there is a "need for advanced literacy instruction" (p. 41) that teaches

literacy skills that go beyond the classroom and into eventual real-life practice. They concluded

that the definition and purpose of disciplinary literacy is to guide "students to better meet the

particular demands of reading and writing in the disciplines than has been provided by traditional

conceptions of content area reading" (p. 57). Shanahan and Shanahan did not provide examples

of the application of disciplinary literacy, but instead identified what problems exist with the

traditional concept of content area literacy and the generalization of reading skills into all

subjects. These problems were identified through Shanahan and Shanahan's research done

through the project in which discipline experts "emphasized a different array of reading

processes" (p. 49) that were found to be unique to their discipline.

In the same year as Shanahan and Shanahan's (2008) seminal project report, Moje (2008)

published a commentary on how to build disciplinary literacy through changes to instructional

programs. Moje identified challenges and restraints that had affected the teaching of literacy in

the subject areas in the past, including the belief by subject area teachers that it is "not their job"

to teach literacy practices in their subject areas. According to Moje, disciplinary literacy was

"teaching students what the privileged discourses are, when and why such discourses are useful,

and how these discourses and practices came to be valued" (p. 100). To think of a subject area as

a discourse (or what Moje defines as "metadiscursive" (p. 103)) means that teachers would

change instructional practices so students would not only be taught the ways of a discipline

(subject), but also be taught how and when to utilize literacy skills within a discipline. However,

Moje conceded that questions still exist about how to begin implementing disciplinary literacy

practices and about existing challenges to implementing disciplinary literacy. Moje listed some

of these challenges including the "subcultures" (p. 105) that exist between disciplines, "limited

opportunities" (p. 105) for teachers to work extensively within different disciplines, and the

timing of "the typical secondary school day" (p. 105). Moje's personal definition of disciplinary

literacy (viewing each discipline at its own discourse) is based on previous research, as well as

her personal experiences within the classroom. Moje concluded her commentary by offering

ways in which these questions and challenges could be used to contribute to the change

necessary to create in-school situations ideal for disciplinary literacy. Those these ways did not

include direct strategies or methods for application. Instead, Moje indicated that "rather than

merely encourage content teachers to employ literacy teaching practices and strategies" (p. 96),

building disciplinary literacy instructional programs may be the most effective way to implement

disciplinary literacy.

Five years after Moje's (2008) commentary, Warren (2013) wrote an argument that

looked at the use of a specific strategy (rhetorical reading) implemented in classrooms prior to

the understanding of disciplinary literacy. He defined disciplinary literacy as contrasting to

traditional content area literacy practices: "disciplinary literacy programs challenge the notion

that a single approach to reading and writing is appropriate across all disciplines" (p. 392). Like

Moje (2008), Warren believed that in order to achieve effective disciplinary literacy

implementation, "ideally, ELA teachers and literacy experts would collaborate with disciplinary

experts to develop full-scale instructional programs" (p. 393). However, because extensive

collaboration is not always possible, instructional practices that incorporate discipline-specific

practices may be a "gateway" (p. 394) into teaching disciplinary literacy. One such specific

practice, according to Warren, was rhetorical reading: "a metacognitive process in which the

reader constructs a rhetorical frame for texts" (p. 393). This "frame" for thinking developed

within rhetorical reading allowed students to read texts "as if the author were across the table

from them" (p. 396). Warren suggested that in order to use rhetorical reading for disciplinary

literacy purposes, the reader had to view the reading of academic texts as an "ongoing

conversation" (p. 396). Warren concluded by suggesting a way to begin putting the instructional

approach of rhetorical reading into practice for disciplinary literacy. Warren's argument for the

use of rhetorical reading as an instructional practice indicated the need for changes in strategies

used in subject area classrooms. Warren suggested that these small changes to instructional

strategies would lead to the eventual development of "full-scale" (p. 393) instructional programs.

Following Moje's (2008) commentary, Heller (2010) wrote a commentary that directly

challenged Moje's view of disciplinary literacy. Heller summarized Moje's ideas, one being that

generic comprehension strategies are not sufficient enough to provide students with college and

career readiness. Heller conceded that Moje did have grounds on which to argue for disciplinary

literacy's effectiveness; however, Heller argued that disciplinary literacy should not be practiced

in Kindergarten to grade 12 classrooms because of the differences that he saw existing between

school and post-secondary educational practices: that is, K-12 offers a broad overview of specific

subject matter while college engages in the specifics of subject matter. Citing many of Moje's

own words, Heller took them to mean that the relationship between subject area classes in

secondary schools may be more "distant" (p. 268) from discipline-based practices than Moje claimed them to be. He argued that it makes "better sense" (p. 268) to consider content area classes in school "as being derived from, drawn from, or undergirded by the disciplines" (p. 268), sort of halfway "between generic and disciplinary literacy instruction" (p. 270). Thus students become "well-informed amateurs" (p. 271) using a type of "amateur" (p. 271) discipline literacy. Heller concluded that the "truly disciplinary literacy instruction" (p. 273) should be taught at the college level, and any subject matter teaching below that level should be an overview of the disciplines. Heller did not provide an application for his "well-informed amateur" (p. 271) definition of disciplinary, and he supported his definition with some research and his own experiences in secondary and college level classrooms.

Wineberg and Reisman (2015) addressed "issues in disciplinary literacy in history" (p. 636) in their argument presented in a department column in the *Journal of Adolescent and Adult Literacy*. Aligning with Shanahan and Shanahan (2008) and Moje's (2008) works, Wineberg and Reisman began by explaining "what disciplinary literacy is not" (p. 636): not "summarizing, backtracking, or any host of generic reading strategies" (p. 637). Instead they offered a definition specific to the field of history: a way to "critique and verify sources' legitimacy" through "sourcing" (p. 636), which they explained as a way to give "credibility" (p. 636) to a text and to let the reader know that the text's content "need not be questioned, interrogated, or overturned" (p 636). Wineburg and Reisman emphasized that disciplinary literacy "calls on students to bring the full weight of their intellect to the act of reading" (p. 637). This definition was synthesized by Wineberg and Reisman from Shanahan and Shanahan (2008) and Moje's (2008) concepts of disciplinary literacy, as well as from observations conducted in the field by both authors. The authors cited situations in the field in which the context of a historical source

was removed from lessons and then described the "chilling" (p. 637) effect that removal had on the students' understanding. Therefore, Wineberg and Reisman concluded that disciplinary literacy was a practice that required student intellectual involvement and a clear sense of context for readings within the discipline of history.

Shifting from the adolescent level, more recent work by Shanahan and Shanahan (2014) asked the question, "does disciplinary literacy have a place in elementary school?" (p. 636). Shanahan and Shanahan repeated their definition of "disciplinary literacy" as "specialized ways of reading, understanding, and thinking used in each academic discipline" (p. 636). They then explained why elementary educators should know about disciplinary literacy. Their reasoning and developed definition was supported through citations of research (much being from their 2008 project report) that support their definition, as well as requirements of the Common Core State Standards that can be addressed through disciplinary literacy. The researchers justified their move from high school instruction to elementary school instruction by explaining that "elementary teachers still have an important role to play if their students are to eventually reach college-and-career readiness" (p. 636). They explained that while elementary level informational texts do not possess as many distinct discipline differences, the Common Core State Standards' heavy emphasis on informational texts "will increase the likelihood that students will confront these differences earlier" (p. 637) in their school career. Shanahan and Shanahan's commentary gave direct application of disciplinary literacy by providing suggestions for how elementary teachers could integrate disciplinary literacy practices into existing curriculum and the CCSS. The researchers concluded by suggesting that disciplinary literacy instruction at the elementary level involves encountering a variety of text types, focusing on reading different types of texts within a topic, and developing discipline specific vocabulary.

Theory and Instructional Practices Supportive of Disciplinary Literacy

Some works determined ways in which to apply specific theories or instructional practices in the classroom based on their developed definition of disciplinary literacy. To determine a theory that grounds disciplinary literacy, Carney and Indrisano (2013) conducted a research synthesis on selected literature that looked at the "theory, research and practice in disciplinary literacy" (p. 39). The researchers began this study based on the hypothesis that the framework of "Pedagogical Content Knowledge (PCK)" (p. 39) in Shulman (1987) has "insights into the major forms of knowledge can also inform those who teach disciplinary literacy and the teacher educators who guide these efforts" (p. 39). For the purposes of their synthesis, the researchers defined disciplinary literacy as "means by which we learn about, with, and from texts to acquire knowledge" (p. 40). Carney and Idrisano then summarized the literature in relation to Shulman's three "forms of knowledge" (p. 40) outlined in his 1987 study on the framework of PCK: "subject matter content knowledge, pedagogical content knowledge, and curricular knowledge" (p. 40). This theory indicated that, in terms of practices of disciplinary literacy, a teacher's ultimate role was to "blend" (p. 47) Schulman's three forms of knowledge in order for teachers to be able to "provide effective pedagogy" (p. 47) related to each specific discipline. Based on the research related to disciplinary literacy, Carney and Idrisano concluded their study by stating that the research "affirmed their hypothesis" (p. 46) that Shulman's theory of Pedagogical Content Knowledge was a theory that is behind the practices that inform disciplinary literacy instruction.

Part of the Shanahan and Shanahan team completed independent research regarding instructional practices that incorporate disciplinary literacy. Hynd-Shanahan's (2013)

commentary was driven by her research into two "reactions" (p. 93) to disciplinary literacy from

teachers in her previous research. Hynd-Shanahan found that teachers were unsure of "what the

term means and how to teach it" (p. 93) or teachers "think they know what it means [but] they

are teaching content area reading" (p. 93). Key to addressing these reactions was Hynd-

Shanahan's explanation of the distinctions between "content knowledge" and "discipline

knowledge": "content knowledge, which is knowledge about particular topics of study, and

discipline knowledge, which is knowledge that is created, communicated, and shared within a

discipline" (p. 94). Hynd- Shanahan's commentary provides direct application for teaching

disciplinary literacy by explicitly organizing the commentary around questions that subject

teachers ask, and providing practices as solutions to these questions. Her authority for providing

this application is based on her past research and her general knowledge of each discipline.

Rather than discounting all traditional content area reading practices, Hynd-Shanahan in her

definition emphasized the differing "knowledges" between content and disciplinary literacy, and

how these traditional practices could be adjusted to address discipline real-world practices.

Like Hynd-Shanahan (2013), Zygouris-Coe (2012) produced an argument that provided

application of disciplinary literacy to instructional practices, but looked specifically at its

application at the secondary school level. Zygouris-Coe began by challenging the traditional

concept of content area literacy and the concept of "sprinkling" (p. 37) subject areas with

generalizable literacy strategies. Instead, like Shanahan and Shanahan (2008), Zygouris-Coe

argued for the need for "advanced literacy" (p. 35) and proposed that this "advanced literacy"

should contrast the concept of content area literacy. Zygouris-Coe supported her proposal by

showing the connection that disciplinary literacy has to the CCSS: teachers are required to

present content using discipline-specific practices that will help students to build background

knowledge, improve understanding of author purpose, and "develop discipline-specific

vocabulary and discourse knowledge" (p. 43). Her justifications for these suggestions are

through her thorough knowledge of the requirements of the CCSS and citations of previous

research conducted by other experts on disciplinary literacy. Zygouris-Coe also provided

application of her definition of disciplinary literacy as "advanced literacy" (p. 38) with

consideration of different learner types such as students with disabilities and English language

learners. This argument indicated that Zygouris-Coe viewed disciplinary literacy as concepts that

can be implemented into secondary classroom practice not only to meet the CCSS, but also to

improve literacy practices in all subject areas.

Rainey and Moje (2012) saw disciplinary literacy as an instructional approach that could

address the problem of a lack of proficiency in literacy practices required for college and career

readiness. This lack of proficiency was determined based on statistical data the authors gathered

from the National Assessment of Educational Progress (NAEP). The researchers began by

defining disciplinary literacy as "shared ways" (p. 73) or "cultural constructions" (p. 74) of

literacy that existed in specific academic fields. The researchers proposed that in order to become

aware of this disciplinary "culture" (p. 74), secondary level students required an understanding

that goes beyond how disciplines exist in the classroom, an understanding that is present in jobs

and practices that exist outside the classroom. Following their presentation of what disciplinary

literacy looks like in secondary level subject areas, Rainey and Moje then used case-studies to

support their definition of disciplinary literacy applied in practice. These case-studies showed

how secondary students employed disciplinary literacy in their course work, and what outcomes

resulted from this practice. Rainey and Moje combined their concept of disciplinary literacy as

an instructional practice with their findings from the case studies in order to suggest how the

resulting knowledge could be applied to ELA instruction and teacher education programs. They

proposed that the use of disciplinary literacy would best help students at the secondary school

level develop literacy practices that would assist them with developing their college and career

readiness.

MacMahon (2014) focused on the use of disciplinary literacy as an instructional method

by conducting a case study in three co-educational secondary schools. MacMahon grounded his

context of the study on his definition of disciplinary literacy. His definition was formed on the

idea that subject area or discipline exists as "a discourse community with its own language, texts

and ways of knowing, doing and communicating'" (p. 22). This definition was synthesized by

MacMahon based on works published by Shanahan and Shanahan (2012) and Moje (2008).

MacMahon wanted to determine how struggling readers and their teachers viewed subject area

practices, and if these practices were effectively supported by disciplinary literacy concepts.

Participants in this study were 9 students and 21 subject area teachers. MacMahon's findings

through the interviewing of teachers indicated that "literacy 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). This finding contrasted

MacMahon's definition of disciplinary literacy, indicating that participating teachers did not

view subject-area literacy from a disciplinary literacy approach. MacMahon's findings also

indicated that the "narrow range of support strategies" (p. 34) described by the subject teachers

indicated a "lack" (p. 32) of professional knowledge to support students with literacy difficulties.

MacMahon concluded that this "lack" of professional knowledge indicates that teachers may be

unaware of a precise definition of disciplinary literacy, and therefore cannot implement effective

disciplinary literacy practices. MacMahon stated that "it is argued" (p. 22) that the

implementation of "apprentice-like" (p. 22) practices contained within his definition of

disciplinary literacy would be a more effective support than the traditional support when

instructing struggling readers in the secondary subject-area classrooms.

Understandings of Disciplinary Literacy in Teacher Preparation

With the proposal by several researchers for a shift from content area literacy to

disciplinary literacy in the schools, several studies have examined the use of disciplinary literacy

practices in preservice teacher preparation. Johnson, Watson, Delahunty, McSwiggen, and

Smith (2011) explored the "disconnection between content disciplines, teaching methods, and

literacy education" (p. 102) that they felt preservice teachers possessed. The researchers wanted

to eliminate this disconnect by incorporating the knowledge of disciplinary literacy into teacher

preparation programs. They asked the question, "what does it mean to be literate in particular

disciplines and how do we begin to shift to disciplinary literacy?" (p. 101). The researchers

conducted "a content analysis of 12 current textbooks and found that the types of knowledge

within the texts were divided into two major categories, pedagogical and content, attending to

how to teach and what to teach respectively" (p. 102). The researchers also conducted

interviews with colleagues at their respective colleges in which they discussed perspectives in

literacy as well as specific content areas. Data analysis produced three "understandings" (p.

107). The first was that subject area classrooms "should aim to build an understanding of how

knowledge is constructed within the discipline, rather than transmitting knowledge about the

discipline" (p. 107); second was that "to be literate in a discipline, means not just accumulating

knowledge about the discipline, but understanding the discipline's important theoretical ideas"

(p. 107); and third was that to effectively teach literacy within that discipline, educators

themselves will require a thorough understanding of the discipline and its literacies. Based on

their findings, Johnson et. al. urged that disciplinary literacy could only be taught well by

teachers who have been thoroughly trained in the definition and the instructional practices of

discipline-specific disciplinary literacy.

Also looking at the development of disciplinary literacies pedagogies in preservice

teachers, Rodriguez (2015) conducted a case study to look at "the experiences of one [graduate

level] secondary preservice teacher" (p. 162) that was enrolled in a content area reading course

offered for both undergraduate and graduate level preservice teachers. The course was

reconfigured from previous offerings based on the "Disciplinary Literacies Pedagogy" (p. 165)

which is "grounded in approaches to reading instruction that focus on how disciplinary insiders

negotiate text" (p. 135). The study was conducted to determine the preservice teacher's

understanding of the use of the Disciplinary Literacies Pedagogy as a method of teaching

disciplinary literacy. Data were collected from the analysis of the participant's completion of

assignments required for the content area reading course, and an adjoining "field experience" (p.

170) required for the course. The data of this study were analyzed to determine how the

participant's pedagogies were affected by the use of the Disciplinary Literacies Pedagogy in his

graduate course, as well as how his pedagogies in attempting to teach disciplinary literacy were

affected by previous classroom experience. The results of the study indicated that the

participant's teaching practices "embodied sociocultural and constructivist theories" (p. 177).

This means that although the use of the Disciplinary Literacies Pedagogy influenced the case-

study participant's teaching of disciplinary literacy, past experience and classroom practice also

appeared to influence the preservice teacher's instructional practices of disciplinary literacy. The

use of the graduate student participant's experience contributed to Rodriguez's findings that the

"disciplinary insiders" (p. 135) concept of disciplinary literacy may be embodied in preservice

teachers' previously developed pedagogy and theories.

A key study that looked at the training of preservice teachers in disciplinary literacy was

Hart and Bennett (2013). These researchers used an exploratory study to examine the use of a

"Disciplinary Literacy Project (DLP)" (p. 225) in a graduate level content area literacy course for

preservice science, technology, engineering and mathematics (STEM) teachers. Hart and Bennett

(2013) wanted to determine the effect of this DLP on preservice teachers' disciplinary literacy

pedagogy. The researchers described the DLP as an approach to literacy instruction in which

"secondary content area disciplines represent separate communities of practice, with unique

discourses—shared repertoires of language, tools, routines, gesture, symbols, actions, and ways

of being" (p. 225). This approach served as their personal definition of disciplinary literacy as

well. Hart and Bennett acknowledged that "the intent of this study was to provide teacher

educators with a better understanding of the development of preservice teachers' disciplinary

literacy pedagogy and practice" (p. 223). Participants were 11 preservice teachers; all

participants had completed a bachelor's degree in their respective disciplines and were current

students in the selected content area course. Data were collected from different components of

the DLP such as "copies of final reports, presentation materials, and transcriptions of the

presentations" (p. 226). The qualitative data were then coded based on "literacy levels (basic,

intermediate, disciplinary) as framed by Shanahan and Shanahan (2008); and content knowledge,

identity, and discourse as framed by Moje (2008a)" (p. 226). Using the data and work samples

from the study, Hart and Bennett (2013) found that their concept of disciplinary literacy

"developed" (p. 236) in preservice teachers' "pedagogical beliefs over the duration of the

course" (p. 236). The researchers also determined that "structured inquiry enhanced" (p. 236) preservice teachers' understanding of disciplinary literacy development at the high school level. Therefore the concept of disciplinary literacy, as described by Hart and Bennett, can be developed in preservice teachers over a period of time and by using the strategy of active, inquiry-based instruction.

Rather than looking at preservice teachers as participants of disciplinary literacy in classroom practice, Park (2013) looked simply at the perceptions that preservice teachers held about disciplinary literacy, specifically when reading literature. The study followed a unit in which Park taught disciplinary literacy to the participants as "specific practices discourses, knowledge, and identities in the discipline" (p. 364). The data in this study were collected from two cohorts of preservice ELA teachers: one cohort with 10 and one with 11 preservice teachers. Qualitative analysis of interview data provided insight into how these preservice teachers viewed disciplinary literacy. In addition to these interviews, Park "collected preservice teachers' writing… and in class work, including focused freewrites, exit slips and charts and posters made by groups" (p. 367). Park's analysis of the data produced three themes that reflected preservice teachers' understandings of disciplinary literacy and "whether and how they would implement it in their classrooms" (p. 369). The first theme, "ways of reading literature" (p. 369), contained the strategies of close reading and understanding the contexts of texts. The second theme of "ideas for future practice" (p. 369) contained the ideas of using a broad range of texts in the classroom and developing "critical disciplinary literacy" (p. 375), that is, "getting students to tackle fundamental questions concerning the values of the discipline" (p. 375). The third theme of "questions around teaching disciplinary reading" (p. 369) included how to make student-to-world connections and gain "awareness of the particular practices, knowledge, and identities" (p. 381)

associated with a discipline. Through Park's determining of the themes from the preservice

teacher participants' data, Park concluded that the preservice teachers acknowledged that "ways

of reading" (p. 370) in the discipline of English are "not mutually exclusive" (p. 370). This

means that even within a discipline, reading practices differ and require a specific set of skills to

accomplish those practices. Park determined that through "examples of deep engagement and

powerful learning" (p. 379) within their teacher preparation programs, preservice teachers can

address these practices of disciplinary literacy.

Moving from preservice teachers' pedagogies influencing their disciplinary literacy

instruction, Pytash (2012) studied how preservice teachers in a content area literacy course

participated in an assignment that required them to utilize disciplinary literacy. This study was

conducted with the idea that "if teacher educators want preservice teachers to eventually teach

with a disciplinary literacy instruction perspective, then teacher educators need to provide

opportunities in which they [preservice teachers] live disciplinary literacy through their own

reading and writing assignments" (p. 529). For the purpose of this study, Pytash's definition of

disciplinary literacy was formed on Moje's (2008) "three tenets" (p. 528). These three tenets are

"the discourses and practices, the identities and identifications, and the knowledge in disciplinary

learning and literacy" (p. 528). Participants in this study were "41 preservice teachers in a

required secondary content area literacy course" (p. 529). The study involved engaging

preservice teachers in disciplinary literacy focused instruction and projects. Data for this study

were collected using open-ended questionnaires, "correspondence with professionals in the

preservice teachers' disciplines" (p. 530), and projects and group interviews completed by the

participants. Findings indicated that the course projects not only allowed preservice teachers to

further develop their understanding of disciplinary literacy, but also allowed them to understand

how disciplinary literacy might be understood from the student point of view. Based on the findings, Pytash concluded that "teacher educators' rationale and teaching of disciplinary literacy must be transparent so that preservice teachers can recognize how they can use this approach in their future classrooms" (p. 535). In other words, according to Pytash, the approach for learning to teach disciplinary literacy is to have teacher educators who overtly and explicitly teach how to teach disciplinary literacy.

Summary of the Review

This literature review contains reviews of 10 journal articles and seven research studies, all of which were peer reviewed. This accounts for a total of 17 reviewed works. They have been grouped according to the major sections implied in the research question. Comprising the literature review are three sections: the first being seven works that provided definitions and concepts of disciplinary literacy; the second being five works that provided applications of theories and instructional practices that embodied disciplinary literacy; and the third being five studies that examined the understandings of disciplinary literacy concepts and practices in teacher preparation programs. The reviewed research all took place within the range of the last ten years: The first study found was published in 2006; the most recent was published in 2015. All 17 articles contained reported research that took place in the U.S. except for MacMahon (2014), which was conducted in Ireland. All of the research conducted also used qualitative measures to gather data. The five studies that looked at perceptions and experience of preservice teachers gathered data using interviews. Student work produced by the preservice teachers as

well as secondary students in the studies was also collected and coded to produce data. The

analysis of the literature gathered for this review will be conducted in the next chapter.

Chapter 3: Methodology

Data Collection

To begin researching the role that distinguishing disciplinary literacy from content area literacy has on teacher instructional practices, a basic search of the term *content area literacy* was conducted using academic databases. After finding an overwhelming number of results regarding the topic, the search was refocused using the key term *disciplinary literacy.* This search of *disciplinary literacy* lead to several results including the seven research studies contained in the literature review. However, due to topic being a fairly new concept, little original research appears to have been done on disciplinary literacy. This minimal return in original research related to disciplinary literacy resulted in the inclusion of 10 peer reviewed research articles that addressed the task of defining "disciplinary literacy" which addressed the research question for this study. These peer reviewed articles were also found in academic databases such as and Academic Search Complete. These 17 found articles became the data collected for this study. The first data analysis was to organize the found studies and articles into categories: 1) articles that defined and outlined concepts of disciplinary literacy, 2) articles that provided theory and instructional practices supportive of disciplinary literacy, and 3) studies that examined the understandings of disciplinary literacy by students in teacher preparation programs. Further analysis is presented in the next section of this chapter.

Data Analysis

The first category contains seven articles that present definitions and concepts of "disciplinary literacy." The first article of the literature review (McConachie et. al., 2006) is an opinion piece that offers an explanation of the origin of the term "disciplinary literacy": a term included in a framework of ways of thinking developed by the University of Pittsburgh in 2002 and connected to pedagogical practice. Besides being a way of thinking, a second concept emerging from this category is that disciplinary literacy is distinct from traditional content area literacy (Shanahan & Shanahan, 2008); it is not generic literacy skills applied to disciplines (subject areas), but rather literacy skills existing within specific disciplines, skills such as those used exclusively by historians or mathematicians. Further analysis reveals that traditional content area reading appears to be an insufficient way to teach the literacy skills of the disciplines (content/subject areas) (Moje, 2008). Instead, a pedagogy with disciplinary literacy teaches literacy skills that are utilized by discipline professionals in the real world (Moje, 2008). That is, disciplinary literacy means thinking of literacy as being specific to each subject area and using that literacy as being a means to engaging in those separate discipline communities. Besides the concepts of ways of thinking and discipline specific, disciplinary literacy is also seen as a being an approach that can be applied through existing, traditional instructional practices. While a full-scale instructional program appears to be are the most appropriate pedagogy for the implementation of disciplinary literacy practices (Warren, 2013), such a pedagogy may not be feasible in mainstream classrooms as they currently exist. Instead, the implementation of disciplinary literacy can be achieved through existing instructional practices that are present in content area classrooms (Warren, 2013; Wineberg & Reisman, 2015).

Analysis of this category also finds some disagreement about the pedagogical implications of disciplinary literacy: some scholars feel that disciplinary literacy skills and practices could be taught as early as elementary school (Shanahan & Shanahan, 2014), while others feel they should only be taught in post-secondary schooling with a modified type of "amateur" disciplinary literacy taught at the secondary school level (Heller, 2010). However, overall analysis of this category indicates some consensus that the definition of "disciplinary literacy" refers to distinct literacy skills and practices specific to disciplinary communities and their way of thinking. Analysis also indicates some consensus that the concept of "disciplinary literacy" includes pedagogical (instructional) implications; however there does not appear to be consensus about appropriate grade levels for instruction.

The second category contains five articles that present theory and instructional practices that are supportive of disciplinary literacy. One theory emerging from the analysis of this category is that the concepts of disciplinary literacy closely align with Pedagogical Content Knowledge (PCK) (Carney & Idrisano, 2013). In addition to theory, analysis also reveals that the concept of disciplinary literacy can be applied to existing instructional practices (Hynd-Shanahan, 2014; Zygouris-Coe, 2012): This finding aligns with the similar finding in the previous category. Further, the application of disciplinary literacy to existing instructional practices achieves the advanced literacy and college and career skills required by the Common Core State Standards (Common Core, 2012; Hynd-Shanahan, 2014; Zygouris-Coe, 2012). Another finding is that disciplinary literacy is itself considered an instructional practice, one that encompasses the culture of a discipline that exists outside the classroom (Rainey & Moje, 2012). This meaning of disciplinary literacy as an instructional approach requires the literacies taught within the disciplines to take on the forms in which they are presented in the disciplines and

professions that utilize them (MacMahon, 2014). While recent research conducted in Ireland has

indicated that teachers there are not equipped with the professional knowledge about disciplinary

literacy to use it as an instructional practice (MacMahon, 2014), no similar research has been

found in the U.S. Instead, American research examines disciplinary literacy in the preparation of

preservice teachers. Overall, analysis of this category of studies that provide theory and

instructional practices for disciplinary literacy indicates that, theoretically, disciplinary literacy

ties to a form of pedagogical content knowledge and can be a distinct instructional practice, one

that meets the demands of both the college and career readiness of the Common Core Standards

and of the disciplines that exist outside of the classroom.

Analysis of the third category containing works that examine the understandings of

disciplinary literacy by students in teacher preparation programs shows that understanding of the

concept precedes instructional use. In order for preservice teachers to gain this understanding,

teacher educators must first be trained in understanding the term and the related instructional

practices (Johnson et. al, 2011; McMahon, 2014). Informed teacher educators are then able to

teach and train preservice teachers in the instructional practices of disciplinary literacy. Further

analysis indicates that the definition provided to them in their preservice training as well as their

preservice classroom experiences influence how preservice teachers understand and instruct

disciplinary literacies within their subject areas (Rodriguez, 2015; Hart & Bennett, 2013; Pytash,

2012; Park, 2013). Overall, analysis of the five works in this category finds that the definitions

and instruction provided by teacher educators have a strong influence on preservice teacher's

perceptions and pedagogies of disciplinary literacy. That is, preservice teachers develop their

concept of disciplinary literacy from that of their teacher educators and develop their disciplinary

literacy instructional strategies based on their own learning experiences with those strategies.

Synthesis

The results emerging from the analysis of the three categories can now be synthesized (combined) into findings that address the research question for this study. The definition of "disciplinary literacy" used to ground this study is from Fang (2014) who identifies it as the "social, semiotic, and cognitive practices . . . undertaken by disciplinary experts" (p. 444). This definition aligns with the theory of literacy as social practice that is distinct and unique for a "community" or social group. As a social group, each discipline has its own form of literacy, one that must be taught and learned before someone can be identified as part of that group. Results of the analysis of the first category align with Fang's definition: that the definition of "disciplinary literacy" refers to distinct literacy skills and practices specific to disciplinary communities and their way of thinking. The second finding is that this definition of "disciplinary literacy" does carry implications for instructional practices although there appears to be no consensus about appropriate grade levels for employing these instructional practices. A finding specifically related to instructional practices for disciplinary literacy indicates that disciplinary literacy is a form of pedagogical content knowledge with a distinct instructional practice that also meets the demands of both college and career readiness curriculum requirements and of the real-world discipline of which the disciplinary literacy is a part. Another finding specifically related to instructional practices is that disciplinary literacy is a concept that can be integrated with existing instructional practices, especially those strategies that require inquiry-based thinking and development of discipline-related literacy tasks.

After findings on definitions and instructional practices, the third set of findings relates to implementation of instructional strategies. The third category of the literature review contains

research studies with preservice teachers. The existence of this category indicates another finding

from this study: that no research into disciplinary literacy has yet been conducted with practicing

teachers at any Kindergarten to grade 12 level. Another finding is that teacher understanding of

the concept precedes its instructional use, and this teacher understanding starts with teacher

educators who influence the perceptions and understandings of preservice teachers. In addition

to preservice teachers developing their concept of disciplinary literacy from their teacher

educators, this study also finds that preservice teachers develop their disciplinary literacy

instructional strategies based on their own learning experiences with those strategies. These six

findings will be the basis of a professional development project intended to clarify the definition

and concepts of disciplinary literacy for teachers so that its practices can be applied to classroom

instruction. This professional development project is detailed in the next chapter.

Chapter 4: Results and Application

Results of the Review

      After completing a review of the literature to determine what research has been conducted to date on the definition of disciplinary literacy and its implications for teacher classroom practice, this researcher has determined six key findings. The first finding is that the concept of disciplinary literacy aligns with the theory of literacy as a social practice, meaning that each discipline has literacy skills and practices that exist exclusively within the "community" of that professional discipline. The second finding is that although no consensus has been reached through research about appropriate grade levels for implementing disciplinary literacy, its concepts do have implications for instructional practices in the classroom. A third finding is that disciplinary literacy is a form of pedagogical content knowledge (PCK) that meets the demands of both college and career readiness and the Common Core Standards. Another finding is that the PCK of disciplinary literacy is an instructional practice with the capability of being integrated into existing instructional practices; however, a fourth finding is that no research on the implementation of disciplinary has been conducted with practicing K-12 teachers. The fifth finding is that teacher understanding of the concept precedes its instructional use, and this teacher understanding starts with teacher educators who influence the perceptions and understandings of preservice teachers. In addition to preservice teachers developing their concept of disciplinary literacy from their teacher educators, the sixth finding is that preservice teachers develop their instructional strategies for disciplinary literacy based on their own learning experiences with those strategies.

Application of Results to a Professional Development Project

The findings from this study have significance to classroom teachers. Application of the

results can provide a definition of disciplinary literacy and explain how knowing this definition

can impact the classroom teachers' instructional practices for literacy instruction in subject areas.

Application will show how disciplinary literacy can be implemented through the use of existing

instructional strategies or through the use of disciplinary literacy instructional strategies. The

findings from this study can be shared with teachers in the form of professional development.

For the purpose of emphasizing disciplinary literacy's definition, its concepts, and how it can be

applied to classroom instruction, the most appropriate form of professional development is an

interactive half-day workshop, paired with an electronic list of research-based strategies that

incorporate disciplinary literacy. Although this study finds no consensus about the most

appropriate grade level to begin implementing disciplinary literacy, it does find disciplinary

literacy as suitable for all grade levels from elementary to college. Therefore this workshop will

be designed for teachers of grade one to 12 and especially teachers who specialize in a content

area.

Design of Professional Development Project

The design of this professional development project will be an interactive workshop. This

would preferably be held in-person in a school during a staff development day. Prior to

beginning the workshop, attendees would be sent an electronic survey (see Appendix A) with

questions on their perceptions and current understandings of disciplinary literacy. Based on the

understandings indicated through the survey, the presenter would then customize the workshop

to address the existing knowledge of the attendees.

Literacy coaching project goals and objectives.

The goal of this proposed professional development workshop is to increase teachers'

professional knowledge of the specific definition and practices of disciplinary literacy. Specific

learning objectives include having the participating teachers learn how disciplinary literacy can

be applied in their current subject area classrooms or lessons. This workshop also aims to have

the teacher participants reflect on their current practices in the subject areas and how these

practices are influencing their students once they are outside the classroom. Another objective is

to have teachers see and understand an example of what disciplinary literacy looks like when

implemented at various grade levels and in various subject areas. In addition, this workshop will

provide a resource for additional strategies that integrate the concepts of disciplinary literacy: an

electronic list of research-based instructional strategies that can be used continuously in order to

support the implementation of the concepts of disciplinary literacy following the workshop.

Proposed audience and location.

The proposed professional development project is for the professional audience of

teachers of grade one to 12, and especially teachers who specialize in the content areas. Although

this study finds no consensus about the most appropriate grade level to begin implementing

disciplinary literacy, it does find disciplinary literacy as suitable for all grade levels from

elementary to college. The workshop is intended for a half-day in-person session in a school. An electronic list of research-based strategies (such as an open-access Google Document) will be given to attendees and district teachers and is intended as an ongoing reference for teachers of grades one to 12 after the conclusion of the workshop.

Proposed project format and activities.

The format of this proposed professional development project is an interactive in-person workshop. The workshop (see Appendix B) would begin by the presenter explaining and emphasizing that disciplinary literacy is distinct from content area literacy. Following the clarification of the distinction between the two terms, an interactive demonstration would then be conducted: one carrying out an example of content area literacy being used in a subject area classroom, the second being a demonstration of what disciplinary literacy instruction would look like in a classroom. For the interactive portion, participants of the workshop will act as students for the demonstration of the two approaches. Following the interactive demonstration, a discussion will be facilitated by the presenter for all participants to voice how they plan to implement disciplinary literacy in their own classroom based on the new knowledge they gained from the workshop. The link to the electronic list of research-based strategies would be distributed to participants of the workshop following this discussion. Having this list as an editable electronic resource (such as an open access Google Doc) allows teachers to continuously add strategies that contribute to the teaching of disciplinary literacy in their own classroom. This workshop and the link to the electronic list of research strategies provide information and a resource that participants can take home with them and immediately apply to the classroom if

desired. As a conclusion to this workshop, a question and answer session would permit attendees

to ask questions of the presenter regarding disciplinary literacy and its application in the

classroom.

Proposed resources for project.

For the interactive workshop portion of this professional development, a designated space

would be needed to allow the workshop to be conducted effectively. Because of the interactive

nature of the workshop, the space should include a projector for the presenter to present the

definition and concepts of disciplinary literacy. For the portion of this workshop that includes the

interaction of professionals participating in first a content area literacy activity followed by a

disciplinary literacy activity, round tables should preferably be within the space to allow small

group collaboration. Following the workshop's conclusion, an electronic device that allows

access to the electronic list of strategies would be necessary. The combination of these resources

would allow an extensive but low cost resource to the entire district in which this project is

presented.

Proposed evaluation of project.

To evaluate how well the participants met the objectives of this professional development

project, a follow up survey (see Appendix C) would be sent via email to workshop participants to

gauge their understandings of disciplinary literacy as well as evaluate the effectiveness of the

workshop. The questions contained in this survey will measure the ILOs of this project, measure

how the participants view literacy in their subject area following the workshop, and if what was

presented in the workshop was of use to them. This would allow the presenter to gauge if the

format of the workshop conveyed the concepts of disciplinary literacy gained from this

synthesized research study in a way that was appropriate for the participating audience. The

questions contained in this survey will also pertain to whether or not teachers feel they can

confidently apply disciplinary literacy to their own classroom, and whether or not the electronic

list of strategies is a helpful resource.

Project Ties to Professional Standards

This professional development project ties to Standard 6 of the *Standards for Reading*

Professionals—Revised 2010 of the International Reading Association (IRA). This standard

states that educators "recognize the importance of, demonstrate, and facilitate professional

learning and leadership as a career-long effort and responsibility" (IRA, 2015, p. 15). Both the

participants as well as the presenter of the workshop meet this standard. The presenter of this

workshop serves as the facilitator, while the participants present the recognition of importance

and their responsibility to extending their professional skills as a "career-long effort" (IRA,

2015, p. 15). An "assumption" (IRA, 2015, p. 15) underneath this standard more specifically

outlines the idea that professional development is "based in ways that reflect both competent and

critical use of relevant research and is thoughtfully planned, ongoing, differentiated, and

embedded in the work of all faculty members" (IRA, 2015, p. 15). This professional

development project was developed using the knowledge gained from the synthesized

researched, thus achieving this portion of the standard as well. Teachers who participate in this

professional learning project also meet the New York State Teaching Standard VII, Element

VII.1.b. (NYSED, 2011). The element of this standard states that "teachers recognize the effect

of their prior experiences and possible biases on their practice" (NYSED, 2011). The findings

from this research synthesis on which the development of this project is based, suggest that

teachers' disciplinary literacy practices are influenced by their previous experiences and prior

knowledge of subject area literacy practices. By understanding their knowledge may differ from

the knowledge that this professional development presents, participants in the workshop achieve

this standard. This proposed form of professional development allows teachers to address these

standards and engage in the development of their professional skills.

Chapter 5: Discussion and Conclusion

Overview of Study and Findings

Implementation of the Common Core State Standards has increased the emphasis on literacy in the content areas and caused teachers to reflect on their   literacy instruction within content areas. While many teachers appear to use the term "content area literacy" interchangeably with the emerging term "disciplinary literacy," these are two distinct forms of literacy with distinctive instructional practices associated with each. The problem related to equating these two terms is that teachers then equate the instructional strategies. A related research question is then, how does knowing the difference between content area literacy and disciplinary literacy impact a teacher's instructional practice? This study has addressed this question of definition and practice through a research synthesis and has produced six findings. These findings indicate that disciplinary literacy refers to distinctive literacy skills and practices specific to disciplinary communities and their way of thinking, that this definition of "disciplinary literacy" carries implications for instructional practices in classrooms although there is yet no consensus about appropriate grade levels for employing these instructional practices, and that this definition and instructional practices meet the demands of both college and career readiness and Common Core Standards. The other findings indicate that disciplinary literacy instructional practices have the capability to be integrated with existing instructional practices, that no research on the implementation of disciplinary literacy has been conducted with practicing K-12 teachers, and that the research with preservice teachers indicates that they develop their understanding and instructional strategies from their teacher educators who

influence the perceptions and understandings of preservice teachers through information and the preservice teachers' own learning experiences with those strategies. These findings are then disseminated through an interactive professional development workshop for teachers.

Significance of the Findings

This study is significant to the field of literacy research because it presents a succinct definition of "disciplinary literacy" based on this synthesis of the research. These findings are significant because they contribute new knowledge to the field. They assist to clarify the definition of "disciplinary literacy" and to explain how knowing this definition can influence teachers' instructional practices. The findings also have significance for research because they indicate gaps in the research or what is missing from the research landscape, including research into the use of disciplinary literacy by currently practicing teachers. These findings are also significant to the literacy profession because they have implications for teacher practice. The findings offer teachers a better understanding of the concepts framing disciplinary literacy, and how these concepts differ from that of traditional content area practices. These concepts can be applied and implemented in current instructional practices. The findings are also significant because the concepts presented in disciplinary literacy align with the college and career readiness skills demanded by the Common Core State Standards (CCSS). This means the findings have immediate use in current mainstream classrooms following adequate professional development.

Limitations of the Findings

The findings for this synthesis do have limitations. One is that because the use and understanding of disciplinary literacy as a distinct instructional approach is a relatively new concept, original studies utilizing the term "disciplinary literacy" are scarce. There was also no research found on the implementation of disciplinary literacy by current classroom teachers. The original studies were instead of preservice teachers and their uses of disciplinary literacy as well as their perceptions of the term. The term is also a fairly new concept for research and subject area literacy instruction; therefore research conducted prior to 2008, when the term became more widely used, refers to "content area" literacy even if the concept or approach used in the research reflects a more distinctive disciplinary literacy based concept.

Conclusion: Answer to the Research Question

The compilation of the findings and results from this study suggest a conclusion that addresses the research question of how does knowing the difference between content area literacy and disciplinary literacy impact a teacher's instructional practice? Findings indicate that there is a distinct difference between the concept of content area literacy and disciplinary literacy, and that this difference results in distinct instructional strategies for each concept. Further, findings show that teacher understanding of the concept precedes its instructional use, and this teacher understanding starts with teacher educators who influence the perceptions and understandings of preservice teachers through information and preservice teacher learning experiences with disciplinary literacy instructional strategies. This study's finding that no

research exists on disciplinary literacy use by practicing teachers suggests that few practicing teachers may know the difference between the two, thus their instructional practices cannot be impacted by something they do not know. Therefore, as an answer to the research question of how does knowing the difference between content area literacy and disciplinary literacy impact a teacher's instructional practice, this study concludes that distinguishing the two terms precedes instructional practice. This understanding of the two distinct terms then influences instructional practices in the way that implementers of disciplinary literacy teach subject area literacy that focuses on student development of real-world literacy skills that exist within the community of professionals in the disciplines.

Recommendations for Future Research

Because very little research using the term "disciplinary literacy" exists, the first recommendation is for more research explicitly using the term as a distinct approach, rather than equating the term with content area literacy. This would contribute to a distinction for teachers as well as researchers. Another recommendation is to conduct original studies with practicing teachers and their use of disciplinary literacy in the classroom. This would provide more immediate application for teachers to see how disciplinary literacy is utilized in current curriculum and at various grade levels. Distinguishing disciplinary literacy as a distinct approach to that of content area literacy and showing teacher use of the concept in an existing classroom would assist in developing the understanding of disciplinary literacy and its implications for teacher practice.

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Appendix A

Pre-Workshop Perception Survey

1. Which subject area do you currently teach?

2. Circle any of the following with which you agree:

   a. Explicit teaching of literacy skills is necessary in my subject area.
   b. I do not have time for literacy instruction in my subject area.
   c. The literacy skills taught in my classroom reflect discipline practices that exist outside of the classroom.
   d. It is not my responsibility to teach literacy in my subject area.
   e. Literacy skills taught in English Language Arts are transferrable into various subject areas.
   f. The demands of Common Core and scripted curricula influence the literacy instruction in my subject area classroom.

3. What reading or writing strategies do you frequently use in day to day instruction?

4. Where did you learn how to use the strategies listed above (undergraduate/graduate courses, professional development, colleagues, research, etc.)?

5. How often per week do you integrate literacy instruction into your subject area instruction?

6. What forms of reading or writing is required in your classroom?

Appendix B

Workshop Format

8:30 a.m.   Coffee and Registration

9:00 am   Opening Remarks

9:30 am   Introduction to Disciplinary Literacy

10:00 am   Interactive Demonstration of Content Area Literacy versus Disciplinary Literacy

10:30 am   Reflection and Discussion of Demonstration

11:00 am   Question and Answer Session

11:30 am   Distribution and Explanation of Electronic list resource links

12:00   Closing Remarks

Appendix C

Workshop Evaluation

Thank you for attending the workshop on Disciplinary Literacy. Please take the time to complete the following survey. Information provided will remain anonymous and will be used to enhance future workshops.

What subject area do you currently teach?

Circle any of the following in which you agree with after the participating in this workshop:

    a. Explicit teaching of literacy skills is necessary in my subject area.
    b. I do not have time for literacy instruction in my subject area.
    c. The literacy skills taught in my classroom reflect discipline practices that exist outside of the classroom.
    d. It is not my responsibility to teach literacy in my subject area.
    e. Literacy skills taught in English Language Arts are transferrable into various subject areas.
    f. The demands of Common Core and scripted curricula influence the literacy instruction in my subject area classroom.

Mark an X under the statement that best describes your experience:

	Very	Somewhat	Not at All
How useful did you find this information?	[ ]	[ ]	[ ]
How confident would you feel implementing disciplinary literacy in your classroom following this workshop and using the provided list of research-based strategies?	[ ]	[ ]	[ ]
How likely are you to recommend this workshop and the content presented to a colleague?	[ ]	[ ]	[ ]

What did you find most helpful or least helpful in the format in which the content was presented? (Workshop and provided electronic list of research-based strategies).

Suggestions/Comments:

Thank you!