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A Multi Case Study of Community College Discipline Faculty's Participation in a Disciplinary Literacy Professional Learning Community

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A MULTI CASE STUDY OF COMMUNITY COLLEGE DISCIPLINE FACULTY'S PARTICIPATION IN A DISCIPLINARY LITERACY PROFESSIONAL LEARNING COMMUNITY

by

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ABSTRACT

A MULTI CASE STUDY OF COMMUNITY COLLEGE DISCIPLINE FACULTY'S PARTICIPATION IN A DISCIPLINARY LITERACY PROFESSIONAL LEARNING COMMUNITY

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Old Dominion University, 2018
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Many students enter college with inadequate reading, writing, and critical thinking skills to successfully navigate discipline-specific college-level coursework (Duff, 2010; Hyland, 2006; Lea & Street, 1998; Tsui, 2002). As such, college faculty, and specifically community college faculty, are challenged to meet the multiple literacy needs of their students while still maintaining high expectations within their discipline-specific courses. One option is for discipline faculty (e.g., history) to integrate disciplinary literacy instruction within their courses. As discipline faculty are deemed experts in their content area and often not trained in literacy, professional development focused on disciplinary literacy could provide the knowledge and experience for faculty to make this pedagogical shift.

This multi-case study investigated the impact participating in a disciplinary literacy learning community had on community college discipline faculty's perceptions, self-efficacy, and practice regarding incorporating disciplinary literacy instruction within their courses. Ten faculty from a large, multi-campus mid-Atlantic community college participated in three discipline-specific learning communities, where they learned about Moje's (2015) 4E framework for teaching disciplinary literacy, collaborated with their peers, enhanced an assignment to

address disciplinary literacy, and reflected on their experiences. The following data were collected for this study: learning community curriculum and documents, initial and final semi-structured focus group interviews, faculty journal entries, enhanced course activities, and researcher observations and reflexive journal. Data were analyzed using open and axial coding and constant comparative analysis (Corbin & Strauss, 2008) to identify within-case patterns and replicative relationships across the cases (Yin, 2018). The findings revealed similarities and differences across the learning communities, and they provide insight for community college discipline faculty, literacy personnel, and administration.

DEDICATION

This dissertation is dedicated to Matt, Paige, and Cailyn. I am eternally grateful for your unconditional love and support. I could not have accomplished this without you. I also dedicate this dissertation to those who provided instrumental love and support throughout the process: Heather for your daily check ins and reality checks, Dad and Stephanee for your unconditional belief in me, Tim for your loving support, Kristyn for our early morning walks, Amanda for your confidence-boosting pep talks, Mark for your listening ear, Becca for our many coffee breaks, Maggie for your timely scripture, and Gram for your company during late night writing sessions. Your love and support are so humbling and immensely appreciated.

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CHAPTER 1

INTRODUCTION

Large numbers of high school graduates are entering higher education underprepared for the coursework they are about to encounter (Bailey, Jeong, & Cho, 2010; Greene & Foster, 2003). Nationally, approximately 20% of all first-year undergraduates in higher education enroll in at least one developmental course focused on strengthening English or Mathematics skills and preparing students for college-level coursework. This statistic increases to 24% when specific to community college students (National Center for Educational Statistics, 2013a). However, the state of being underprepared academically for college level coursework does not only apply to developmental education students. Many students who test into college-level courses are entering college with inadequate reading, writing, and critical thinking skills to successfully navigate discipline-specific higher education coursework (Duff, 2010; Hyland, 2006; Lea & Street, 1998; Tsui, 2002). As such, college faculty, and specifically community college faculty, are challenged to meet the multiple needs of their students while still maintaining high expectations within their discipline-specific courses. In order to support students with literacy skills and strategies specific to the disciplines, it is important for community college faculty to understand the tenets and instructional strategies associated with disciplinary literacy.

The College Reading and Learning Association (CRLA) adopted a revised position statement in 2016 entitled *The Rights of Postsecondary Readers and Learners* (Greenbaum & Angus, 2018). This position statement was written to serve as a "guideline for educators seeking to improve the quality of adult education" (Greenbaum & Angus, 2018, p. 138). The authors outlined thirty postsecondary student rights across the following five areas: instructors, instruction, assessments, materials, and institutions. While all thirty postsecondary student rights

are deemed important for postsecondary readers and learners (see Greenbaum & Angus, 2018, for the full position statement), the following rights are particularly applicable to community college students who are in the situation outlined in the previous paragraph:

> Postsecondary learners have a right to instructors who
> - Engage in ongoing development and have a commitment to lifelong learning for themselves and their students.
> - Are knowledgeable about adult development and learning and understand the unique needs and complexities of the diverse adult learning population.
> - Possess expertise in their field of study.
>
> Postsecondary learners have a right to instruction that
> - Allows them to see literacy development as a constructive and lifelong process.
> - Encourages reflection, critical analysis, and affective response.
> - Is based on current research, theory, and practice.
>
> Postsecondary learners have a right to institutions that
> - Assess programs and support professional development of reading instructors.

This list of rights lays the groundwork for considerations by faculty and administrators as they design and redesign coursework across the disciplines. More specifically, these considerations include the preparation of instructors, the level of literacy included within discipline instruction, and the support the institution provides for professional development.

Across educational levels, discipline faculty are credentialed in their discipline and are deemed experts in their field. However, they often have limited, if any, coursework in pedagogy and literacy instruction (Fang & Coatoam, 2013; Moje, 2008; Thibodeau, 2008; Tsui, 2002). Further, college faculty often do not have the background in pedagogy or adult learning to integrate literacy instruction into their higher education curriculum (Hammer & Green, 2011; Thibodeau, 2008; Tsui, 2002). This presents challenges for community college faculty when they are faced with students who struggle with reading, writing, communicating, and critical thinking skills. Since these skills are strongly represented in community college general education outcomes, students who lack these skills are at risk of not succeeding in their courses.

Community college discipline faculty often rely on developmental education and English coursework, as well as learning assistance centers, to provide students with targeted literacy instruction and support. While students gain general literacy strategies in these venues, this practice is being questioned as it does not provide students with the discipline-specific literacy experiences necessary to succeed in college-level coursework (Armstrong & Stahl, 2017; Bean, Gregory, & Dunkerly-Bean, 2018; Holschuh, 2014; Lea & Street, 1998; Stahl & King, 2018; Wingate, 2006). Holschuh (2014) suggests that aligning developmental education literacy instruction with a disciplinary literacy approach would be beneficial as it could prepare "students for the sophisticated, specialized literacy skills expected at the college level" (p. 93). Other researchers argue that discipline faculty should integrate content and discipline-specific literacy instruction into the content courses (Bean et al., 2018; Gregory, Bol, Bean, & Perez, in press; Gregory & Colclough, in press; Heller, 2010; Wingate & Tribble, 2012).

As community college discipline faculty design curriculum for their courses to address both content and literacy outcomes, the CRLA contends through their position statement that these rights should be at the forefront of their pedagogical decisions. One way to address these rights of postsecondary readers and learners is for discipline faculty (e.g., history, mathematics, biology) to integrate disciplinary literacy instruction within their courses. As discipline faculty are highly trained in their content area and often not trained in literacy, professional development focused on disciplinary literacy could provide the knowledge and experience for community college discipline faculty to make the pedagogical shift. Further, CRLA's postsecondary student rights communicate the need for institutional support for such professional development.

Over the past decade, this phenomenon has been increasingly addressed with adolescent learners in secondary schools. There has been a push for secondary content educators to move

away from solely content area literacy instruction and shift toward a disciplinary literacy approach to help students develop discipline-specific literacy skills (Fang & Coatoam, 2013; Gillis, 2014; Hynd-Shanahan, 2013; Moje, 2008; Shanahan & Shanahan, 2008, 2012). Disciplinary literacy is described by Shanahan and Shanahan (2012) as "an emphasis on the knowledge and abilities possessed by those who create, communicate, and use knowledge within the disciplines" (p. 8). Through disciplinary literacy instruction, students "engage in practices that will help them solve specific problems with disciplinary texts" (Hynd-Shanahan, 2013, p. 94). Further, students navigate the texts of the disciplines as they learn the specific reading, writing, and critical thinking skills specific to that discipline (Dunkerly-Bean & Bean, 2016; Moje, 2015; Shanahan & Shanahan, 2008). Rather than applying general literacy strategies to the disciplines, as in content area literacy, disciplinary literacy pedagogical decisions are guided by the discipline itself (Hynd-Shanahan, 2013). For example, in history courses guiding students in the process of evaluating the truth value of historical records is a disciplinary practice. In addition, providing opportunities for students to engage in, elicit/engineer, examine, and evaluate multiple literacy contexts allows faculty to keep a central focus on inquiry within their disciplinary literacy instruction (Moje, 2015).

While most of the work published has been supportive of this shift toward disciplinary literacy in secondary schools, Heller (2010), in his response to Moje's (2008) initial call for change, challenged the approach at the secondary level. He argued that disciplinary literacy instruction targets skills necessary for university and professional settings and should be left to higher education (Heller, 2010). However, college faculty often do not perceive it to be their role to teach reading and writing skills within their college classroom (Bailey, 2010; Gomez et al., 2015; Gregory & Colclough, in press; Haggis, 2006; Tsui, 2002) and even exhibit resistance

to this practice (Bean, et al., 2018; Gregory et al., in press). Community college faculty often have limited literacy and education training and might not even consider incorporating discipline-specific literacy into their instruction. If they do consider this, they may not have the time, knowledge, or confidence to incorporate disciplinary literacy within their courses (Gomez et al., 2015; Gregory, et al., in press; Gregory & Colclough, in press). Further, high teaching loads limit community college faculty's available time for such activities as professional development, curriculum redesign, and exploration of new instructional techniques (Gregory & Colclough, in press; Romero, 2010).

Research has been conducted on the impact of professional development focused on integrating literacy instruction into the content areas, but this research is mainly at the secondary level (see Cantrell, Burns, & Callaway, 2008; Meyer, 2013, Sangster, Stone, & Anderson, 2013; Sturtevant & Linek, 2003; Thibodeau, 2008). This research shows that professional development can positively impact content teachers' self-efficacy and attitudes regarding disciplinary literacy. For example, Cantrell and colleagues (2008) conducted an ethnography on middle- and high-school content teachers who attended a year-long content literacy professional development project; afterwards, participants reported increased self-efficacy for teaching literacy, and the belief that literacy instruction was an integral component of content area instruction. In another qualitative study, middle and high school teachers participating in a two-year project-based professional development focused on critical literacy and critical pedagogies reported that while they generally had low declarative knowledge of integrating critical literacies within the content areas, they did understand the importance and transformative nature of such an integration (Sangster et al., 2013). Additionally, as a result of participating in quality professional development sessions, content teachers were more willing to take literacy-based

risks in the classroom, were more motivated to implement changes within the curriculum to include literacy instruction, and had higher levels of self-efficacy in regard to literacy instruction (Thibodeau, 2008). These studies show the impact that professional development experiences can have on secondary content teachers' attitudes and self-efficacy with disciplinary literacy within their content courses.

At the higher education level, research has shown that collaborative professional development can have a strong impact on faculty's belief systems (Hutchins & Friedrichsen, 2012), self-efficacy (Margalef Garcia, 2011; Margalef Garcia & Roblin, 2008; Schuck, Aubusson, Kearney, & Burden, 2013), level of collaboration with colleagues (Dickerson, Jarvis, & Levy , 2014; Poyas & Smith, 2007), pedagogical knowledge (Harwood & Clarke, 2006; Norton, Russell, Wisner, & Uriarte, 2011; Rienties, Brouwer, and Lygo-Baker, 2013), willingness to try new teaching strategies and methods in the classroom (Deni & Malakolunthu, 2013; Norton et al., 2011; Schuck et al., 2013), and teacher identity (Deni & Malakolunthu, 2013; Green, Hibbins, Houghton, & Ruutz, 2013). When specific to literacy and community college faculty, Gomez and colleagues (2015) found that math faculty who participated in design-based professional development were more prepared to support students with literacy and language within their math courses. Engaging in design activities allowed faculty to work with their specific courses and assignments to strengthen literacy and language support, implement the activities in their courses, and reflect on the efficacy of their practices. Further, faculty valued engagement in prolonged professional development where they had a voice and the authority to make curricular change to include literacy and language support in their instruction and assignments (Gomez et al., 2015).

The development of students' reading, writing, and critical thinking skills in community college would benefit from interdisciplinary collaboration amongst faculty (Bean et al., 2018; Jacobs, 2007), not just English faculty, as it is rare for sufficient literacy development to occur in one class (e.g., developmental reading course) during one semester. Therefore, it could be beneficial for all faculty to know how to promote and support discipline-specific literacy and critical thinking skills within their discipline courses (Tsui, 2008). Collaborative professional development in the form of learning communities can support faculty's exploration and growth with disciplinary literacy; however, it is essential that the institution provides support for this endeavor (Romero, 2010). Further, understanding faculty's perceived role, self-efficacy, and classroom practices informs professional development personnel as they develop and provide offerings to support faculty in the areas of literacy instruction within the disciplines.

In summary, incorporating disciplinary literacy strategies within secondary content area instruction has shown to benefit students' knowledge of the discipline's discourse and practices. Professional development opportunities support secondary content teachers as they develop their role as a literacy educator and strengthen their self-efficacy and attitudes with disciplinary literacy instruction. Indeed, there is a gap in the research when this focus is shifted to higher education, specifically in the community college setting. Incorporating disciplinary literacy instruction in discipline courses could aid community college faculty in satisfying the postsecondary reader and learner rights, as outlined by Greenbaum and Angus (2018). However, faculty are often resistant or unsure of how to incorporate discipline-specific literacy instruction within their courses. Research is greatly needed to explore community college faculty's beliefs, experiences, and practices in relation to disciplinary literacy instruction and their perception of

their role as a literacy educator in their college-level courses. Further, research on professional development offerings for community college faculty specific to disciplinary literacy and how they impact these constructs would benefit the field. This study focuses on this gap and will address the following research questions:

1. How does participating in a literacy-based professional learning community impact community college discipline faculty's perception of their role as a literacy educator?
2. How does participating in a literacy-based professional learning community impact community college discipline faculty's self-efficacy in regard to integrating discipline-specific literacy instruction into their content courses?
3. How does participating in a literacy-based professional learning community impact community college discipline faculty's practice of incorporating disciplinary literacy instruction into their content courses?

CHAPTER 2

LITERATURE REVIEW

In this chapter, I present a literature review on the two main topics that are relevant to this study as well as an important construct considered during this study. First, I review the research pertinent to this study for both disciplinary literacy and professional development. Next, I outline Bandura's social cognitive theory and faculty self-efficacy in relation to these topics. Finally, I present the purpose for the study.

Disciplinary Literacy

In this section, I outline the history and recent research in the area of disciplinary literacy in both secondary schools and higher education. Understanding the research base of disciplinary literacy in secondary schools grounds and informs the present study set in the community college context. Thus, I begin with an overview of disciplinary literacy. Next, I discuss the research on disciplinary literacy and pedagogy in secondary schools. Finally, I discuss the research on disciplinary literacy and pedagogy in higher education.

Overview

For many years, adolescent literacy experts focused on content area literacy, where literacy experts taught general reading, writing and thinking strategies that students could carry over into their discipline courses (Moore, Readance, & Rickleman, 1983). Examples of such strategies include using compare and contrast charts, flow charts, or other graphic organizers where students can map out the content in order to improve comprehension and retention. These strategies were beneficial for students, especially those who were struggling with reading (Hynd-Shanahan, 2013; National Institute of Child Health and Human Development, 2000). However, there were often not clear connections made to individual disciplines, and students were left to

independently navigate this application of strategies to the content areas. Content teachers already felt pressed for time with their curriculum, and they often viewed incorporating these strategies as extra work for them and their students with minimal benefit (Cantrell et al., 2008; Hynd-Shanahan, 2013).

Recent literature has shifted toward a more discipline-specific method of adolescent literacy instruction. The Common Core State Standards (CCSS) includes specific language that requires teachers to teach the literacy of science, history, and literature, among other subject areas. For example, to addresses vocabulary in History/Social Studies courses, one English/Language Arts standard states, "Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies" (CCSS, 2018). To address critical thinking in Science, another standard states, "Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem" (CCSS, 2018). These examples illustrate the integration of disciplinary literacy instruction within the content areas.

In response to the publication of these standards, literacy researchers worked to better understand what literacy looked like in practice within the specific content areas. Shanahan and Shanahan (2008) investigated how discipline experts interacted with texts and determined that discipline experts read and analyzed texts differently. Rather than focusing on basic (e.g., decoding, high-frequency words) or intermediate (e.g., general comprehension strategies, common word meanings, basic fluency) literacy skills, they concluded that discipline experts engaged in disciplinary literacy, which used more sophisticated and less generalizable literacy skills and practices (see Figure 1). As students progress through elementary school and into middle school, their reading routines and processes become more specialized and less

generalizable to other content areas (Shanahan & Shanahan, 2008). "There are differences in how the disciplines create, disseminate, and evaluate knowledge, and these differences are instantiated in their use of language" (Shanahan & Shanahan, 2008, p. 48). They argue that teachers of literacy and specific disciplines should be aware of the literacy tasks specific to the disciplines and incorporate disciplinary literacy in their instruction.

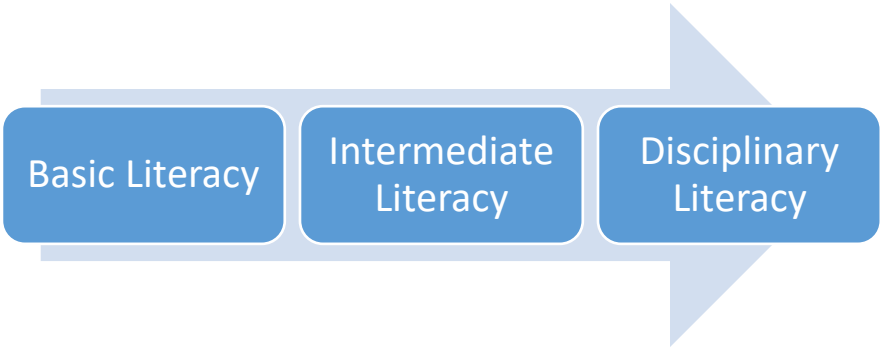


Figure 1: Stages of literacy development.

In the same year, Moje (2008) published her call for change, where she challenged content teachers to integrate disciplinary literacy into content area curriculum and instruction. Moje (2008) argued that incorporating disciplinary literacy instruction would "emphasize what it means to *learn* in the subject areas and what counts as knowledge in the disciplines that undergird those subjects" (p.99). Developing disciplinary literacy instructional programs provided a solution to content teachers' resistance to 'every teacher is a teacher of literacy' (Moje, 2008). Content teachers currently were being asked to teach adolescent literacy practices, but they had limited declarative knowledge of and experience in how to do so (Gillis, 2014). This new approach of building disciplinary literacy instructional programs would allow literacy and content experts to collaborate and combine literacy and disciplinary learning theories (Moje, 2008). This would involve adapting literacy strategies to fit the discipline rather than adopting general literacy strategies (Gillis, 2014). It also required both content and literacy teachers to

understand the discourses and practices specific to the disciplines. For students, this approach is beneficial, as it "builds an understanding of how knowledge is produced in the disciplines, rather than just building knowledge in the disciplines" (Moje, 2008, p. 97). Additionally, it involved setting the expectation for students that content courses would include literacy and critical thinking instruction (Moje, 2008).

As many educators and researchers make the case for disciplinary literacy instruction in secondary schools, others argue that abandoning content area literacy instruction and shifting solely to disciplinary literacy instruction would have a negative impact on struggling readers, whether or not they are diagnosed with disabilities or learning disorders (Faggella-Luby, Graner, Deshler, and Drew, 2012). Faggella-Luby and colleagues (2012) suggest, rather, that these struggling readers will need more scaffolding for basic skills and strategies and will struggle with the higher-level disciplinary literacy skills. Ehren, Murza, and Malani (2012) focused their work on English language learners (ELLs) and stressed the importance of collaboration between speech-language pathologists and secondary content teachers to provide well-rounded literacy instruction that included both basic skill work and disciplinary strategies. Several researchers (de La Paz et al., 2014; Ehren et al., 2012; Shanahan & Shanahan, 2012; Wilson, Smith, & Householder, 2014) found that with proper scaffolding, struggling readers could in fact succeed and advance in a content course that included disciplinary literacy instruction.

Some researchers have identified a 'middle ground' between the two approaches, where both content area literacy and disciplinary literacy are working together rather than against each other. (Dunkerly-Bean & Bean, 2016). Indeed, the typical content area reading strategies are still quite relevant for adolescents. Content teachers can and should still incorporate the reading strategies that help students better comprehend the material (Hynd-Shanahan, 2013). When

deciding on which strategies to use, Hynd-Shanahan (2013) emphasizes that teachers should consider if the strategy effectively helps students to understand the content of the text, if disciplinary experts would consider this an appropriate strategy, and if the strategy helps students to meet the discipline's learning outcomes. For example, biology teachers might utilize diagrams to help students identify parts of a cell, and history teachers might incorporate process or comparison/contrast charts when deciding if the content of a text is consistent with multiple historical sources. When incorporating these strategies, Hynd-Shanahan (2013) emphasizes the importance of "rather than leading with a strategy and trying to impose it on a text, it helps to lead with the text and the disciplinary purpose for reading" (p. 95). This would allow educators to determine which strategies would be most applicable for best comprehending the type of text specific to the discipline.

Disciplinary Literacy and Pedagogical Considerations in Secondary Schools

Planning to incorporate disciplinary literacy in the classroom requires a shift in pedagogical approach, in that educators must draw from both literacy and disciplinary theories and practices. Rather than adapting literacy strategies to the content, teachers should let the content drive the decisions regarding literacy instruction (Hynd-Shanahan, 2013). Teachers make different pedagogical decisions within the classroom when incorporating disciplinary literacy, and it is important they recognize the mechanisms by which students can be successful in such a classroom environment. "The differences among the texts of different disciplines result in unique challenges for readers" (Shanahan & Shanahan, 2008, p.53). The teacher's role is to support students through the navigation of these texts specific to the discipline so they can overcome those challenges. Further, as teachers design curriculum and instruction to support students in disciplinary literacy techniques, it is important to align assessments so that they

require the use of these discipline-specific strategies (Fang & Coatoam, 2013; Monte-Sano, 2008). By helping students understand the ways experts in the field integrate content and literacy as they produce written work, students will be better prepared for these assessments (Monte-Sano, 2008).

Disciplinary texts. In order to best prepare students for the reading, writing, and thinking skills required for the specific disciplines, Shanahan & Shanahan (2008) suggested that secondary content teachers incorporate comprehension strategies and literacy instruction appropriate for the specific texts of the discipline. Further, to incorporate disciplinary literacy within the content courses, secondary teachers of specific disciplines must recognize that the reading, writing and thinking practices necessary to comprehend both texts and the field of that discipline are a form of literacy (Draper & Seibert, 2010). For example, in a mathematics course, teachers might emphasize rereading and close reading as two important strategies to achieve a full understanding of the meaning; in a chemistry course, teachers might teach their students the importance of visualizing the material, noting specific formulas, and utilizing both the text and the representations of the material (e.g., graphs, charts, diagrams, pictures) to fully understand the concepts; in a history course, teacher might emphasize critically analyzing the author, source, perspective, biases, and credibility of the text in order to appropriately interpret the meaning (Shanahan & Shanahan, 2008).

"Scholars in the disciplines themselves are taking up new media and literacy practices" (Moje, 2008, p.96). It is important for discipline teachers to be current in the media and literacy practices of the field itself so they can replicate authentic practices in the classroom. Through the use of discipline-specific sources and tools, students can more effectively engage in the content just as experts in the field do. Students are engaging with a variety of technologies within the

classroom, such as apps (Castek & Beach, 2013), blogs (Colwell, 2012; Wickens, Manderino, & Glover, 2015), and web-based readings (Damico, Baildon, Exter, & Guo, 2009/2010; Manderino, 2012). Castek and Beach (2013) presented several apps that students used in science classes to collect and interpret discipline-specific information. The students then were able to create projects based on this information to showcase their content knowledge in ways specific to the field. Web-based readings helped students to build cultural and contextual knowledge (Damico et al., 2009/2010) as well as connect the process of meaning creation of content texts to sense making that occurs in students' daily lives (Manderino, 2012). According to Wickens and colleagues (2015), "classroom blogs can be a powerful platform to develop disciplinary habits of thinking, including reading and writing about a range of disciplinary texts" (p. 25). Modeling within teacher preparation courses how to use blogs in this way resulted in positive feedback from pre-service teachers as they felt the explicit disciplinary strategies were useful and they were able to brainstorm how they would use them in their own classrooms (Colwell, 2012).

By incorporating a variety of texts and sources within the classroom, teachers provide a classroom environment more closely related to what experts in the field are experiencing today, resulting in a greater appreciation of the importance of discipline-specific literacy strategies (Castek & Beach, 2013; Damico et al., 2009/2010; Fang, 2013/2014; Johnson & Watson, 2011; Paxton, 2007). Additionally, using a variety of sources and texts consonant with what experts in the field are using helps students to build a stronger understanding of discourse within the discipline (Ehren et al., 2012; Fang & Schleppegrell, 2010).

Cognitive and thinking processes. It is important for teachers to recognize and guide students through a variety of thinking processes and cognitive tools (Damico et al., 2009/2010; de La Paz et al., 2014; Girard & Harris, 2012; Johnson & Watson, 2011; Warren, 2012). Texts,

language, and the process of making connections are unique to the different disciplines, and classroom teachers should design instruction that recognizes these differences to help students strengthen their ability to think and process disciplinary knowledge (Johnson & Watson, 2011).

For example, when working with a social studies text in class, teachers can model and guide their students through the process of accessing and engaging their personal, cultural, and contextual knowledge and then make connections between that knowledge and the content within the text (Damico et al., 2009/2010). When teachers purposefully guided the students through reading, writing and thinking processes specific to the discipline, students performed significantly better on writing historical arguments (de La Paz et al., 2014). Additionally, scaffolding students through the cognitive and historical thinking processes by helping them to develop disciplinary strategies and tools, and then encouraging students to use these tools, positively impacted students' ability to think historically (Girard & Harris, 2012).

In an English Language Arts (ELA) course, providing students specific instruction and opportunity to practice rhetorical reading practices helps to develop their disciplinary literacy knowledge (Warren, 2012). By guiding students through the metacognitive process for creating a rhetorical frame for texts, including author's identity, purpose, intended audience, and context, the teacher clarifies the connection to the discipline and how experts in the field use this information. As students construct a representation of the text with similar rhetorical components, they better comprehended the material and understand the discipline-specific components of the text (Warren, 2012).

Disciplinary Literacy and Pedagogical Considerations in Community College

There is a long history documenting how college students are supported in reading and writing through developmental education courses (Holschuh & Paulson, 2013; Stahl & King,

2018). Many students enter college level classes underprepared for the reading, writing, and critical thinking the coursework and discipline demand (Duff, 2010; Hyland, 2006; Lea & Street, 1998; Tsui, 2002). These foundational reading skills are important for student success. For example, skills that are considered foundational for college success include reading complex texts independently, reading complex texts using strategic tools (e.g., notetaking), engaging in multiple readings of a text to ensure comprehension, and synthesizing information across several texts (Springer, Wilson, & Dole, 2015). These generic reading skills are seen as the foundation of disciplinary reading as students are required to read independently and conduct repeated readings to fully understand the discourse of the discipline (Springer et al., 2015).

Heller (2010) argues that disciplinary literacy instruction targets skills necessary for university and professional settings, yet "it has yet to catch fire in the content fields of postsecondary education or in developmental reading circles" (Armstrong & Stahl, 2017, p. 114). Some contend that in order for disciplinary literacy to "catch fire", the status quo of college disciplinary isolation must change (Bean et al., 2018). Further, rather than considering adult literacy instruction as a progression, perhaps effective adult literacy instruction for college students includes a combination of foundational literacy, content area literacy, and disciplinary literacy instruction (see Figure 2).

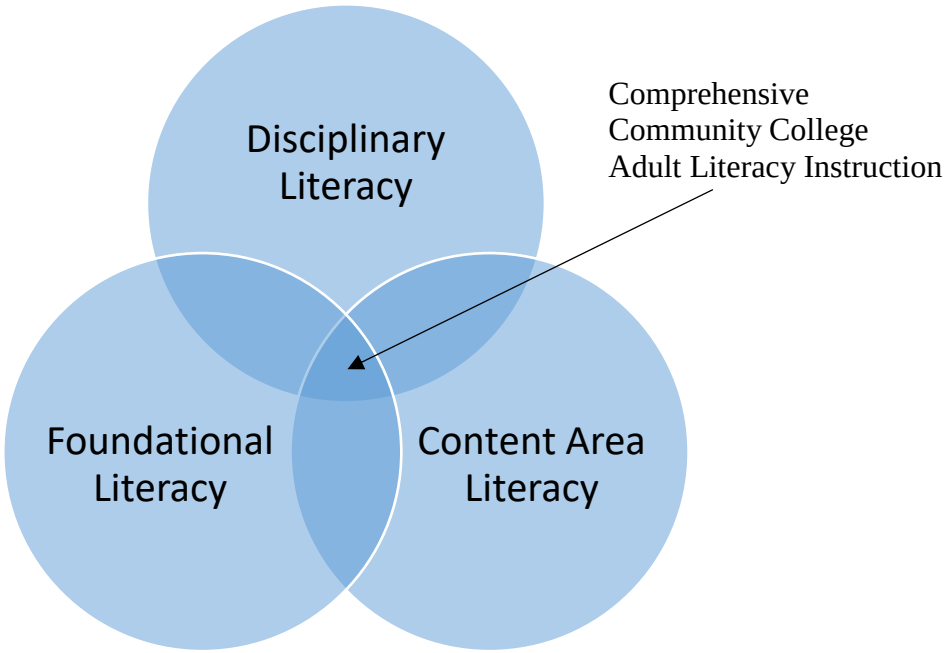


Figure 2: Comprehensive community college adult literacy instruction.

This approach would require Developmental English faculty (foundational literacy), English faculty (content area literacy), and discipline faculty (disciplinary literacy) to not only understand their role in adult literacy learning, but also to work together to support students with their literacy development. When in receipt of sufficient and effective instruction in each of these areas, adult learners would be fully supported with comprehensive adult literacy instruction. Increasing collaboration across disciplines, participating in professional development, and curriculum redesign are all steps that can be taken toward changing this status quo (Bean et al., 2018).

Moje (2015)'s definition of disciplines (e.g., Mathematics, Biology, History), albeit published for secondary educators, might help reduce resistance from community college discipline faculty to incorporate disciplinary literacy instruction in their classrooms: "Disciplines are, in effect, domains or cultures in which certain kinds of texts are read and written for certain

purposes and thus require certain kinds of literacy practice" (p. 255). She argues that teaching disciplinary literacy is more than identifying standards and then teaching those standards; rather, educators should consider "both disciplinary concepts and disciplinary literacy practices" (p. 260). To support secondary teachers as they navigate this pedagogical shift, Moje (2015) developed a heuristic for teaching disciplinary literacy. This heuristic includes the 4Es of disciplinary teaching practices:

- Engage students in everyday practices of the discipline
- Elicit/engineer students' experiences with disciplinary inquiry practices
- Examine the discourse and ways of knowing of the discipline
- Evaluate appropriate use of disciplinary discourses

Moje (2015) explains that this 4Es heuristic organizes good teaching practices from the perspective of specific disciplinary practices. She outlines six disciplinary practices as part of the first E (*engage*): problem framing; working with data; using varied media to consult and produce multiple texts; analyzing, summarizing, and synthesizing findings; examining and evaluating claims; and communicating claims. Using this heuristic, and specifically the *engage* framework, could allow community college faculty to use the more generic reading and writing strategies as complementary practices to the specific disciplinary literacy practices (Dunkerly-Bean & Bean, 2016).

Professional Development

In this section, I discuss the role of professional development within the context of this study. First, I present an overview of professional development in educational settings. Next, I discuss professional learning communities and how they address the foundations of adult learning theory, including the research on literacy-based learning communities in secondary education and higher education. Finally, I present the theoretical underpinnings of the professional learning community curriculum designed for this study.

Overview

Extensive research has been conducted to determine critical components of effective professional development programs in educational settings. At the higher education level, research has shown that collaborative professional development can have a strong impact on faculty's belief systems (Hutchins & Friedrichsen, 2012), self-efficacy (Margalef Garcia, 2011; Margalef Garcia & Roblin, 2008; Schuck et al., 2013), level of collaboration with colleagues (Dickerson et al., 2014; Poyas & Smith, 2007), pedagogical knowledge (Harwood & Clarke, 2006; Norton et al., 2011; Rienties, et al., 2013), willingness to try new teaching strategies and methods in the classroom (Deni & Malakolunthu, 2013; Norton et al., 2011; Schuck et al., 2013), and teacher identity (Deni & Malakolunthu, 2013; Green et al., 2013). The impact of professional development for both teachers and students is the greatest when it includes a student-focused approach (Early & Porritt, 2014). In addition, if teachers are seen as a catalyst for change in their classrooms and as practitioner researchers, they are apt to have higher motivation and learning in professional development sessions (Wells, 2014).

Across educational levels, professional development programs have been found to be most effective when teachers believe in the innovation, feel they have support from administration, sense their expertise and voice are recognized, feel it is worth their time, and develop clear goals for the program (Dadds, 2014; Furco & Moely, 2012; Thibodeau, 2008; Moje, 2008). Furco and Moely (2012) identified four conditions specific to higher education that were "important for securing faculty buy-in and support for an instructional innovation" (p 129):

1. The goals of the innovation must be clearly communicated to faculty members and must be consistent with their values and concerns.
2. Faculty members must have opportunities to gain expertise with the innovation and to explore their questions, without making inordinate demands on their time.

3. Faculty members must perceive an institutional commitment to provide on-going support for the innovation.
4. Faculty members should see rewards for their participation, in terms of their own professional development or through the faculty reward system.

One way to address each of these conditions within professional development is to provide opportunities for professional learning communities that align with the foundations of adult learning theory.

Professional Learning Communities

Professional learning communities where faculty can join together, share ideas, experiment with new strategies, provide feedback, and reflect on implementation can meet Furco and Moely's (2012) conditions of effective professional development and adult learning theory. When specific to disciplinary literacy, this idea of collaboration to strengthen one's knowledge and experience is supported in the research. "Disciplinary literacy instruction likely won't happen without a true collaboration" (Hynd-Shanahan, 2013, p.95). One way to build this knowledge and experience for content teachers at any level is to increase the collaboration between discipline and literacy teachers (Fang, 2014; Fang & Coatoam, 2013; Furco & Moely, 2012; Jacobs, 2007; Thibodeau, 2008). When content teachers and literacy specialists come together, they each bring a wealth of knowledge in their area of specialty. Knowledge of both literacy and disciplinary theories and practice is necessary in order to design and deliver disciplinary literacy instructional programs (Moje, 2008).

Foundations of adult learning theory. It is important for professional development providers, or faculty developers, to understand the various models of adult learning theory and apply these models to professional development offerings (TEAL, 2011). Andragogy, self-directed learning, and transformational learning each provide theoretical foundations for professional development for adult educators.

Andragogy, as defined by Malcolm Knowles (1980), is “the art and science of helping adults learn”. Knowles (1980) lays out several assumptions about adult learners. First, adult learners’ needs and experiences act as the driving force behind their motivation to learn. Second, adult learners come from a life-centered orientation, and instruction should accommodate this and include opportunity for immediate application. Third, the analysis of experience should act as the main resource for adult learners. Fourth, adults prefer to be self-directed, and teachers should act more as a facilitator of mutual inquiry rather than the presenter of knowledge. Finally, as adult learners age, their differences increase. Instruction should allow room for these differences (Knowles, 1980).

Self-directed learning (SDL), as defined by Knowles (1975) is “a process in which individuals take the initiative, without the help of others” to complete the learning process. This process could include the planning, execution, and evaluation of the learning experience (Knowles, 1975). This learning often takes place outside of the classroom as adult learners choose the content, methods, resources, and evaluation of learning (TEAL, 2011). Adults who participate in self-directed learning can immediately incorporate new information into current life experiences. Adult learners with low confidence, motivation, independence, and/or base skills could have difficulty with SDL. However, combining SDL with more traditional types of instruction could alleviate some of these barriers (Brookfield, 1985). When incorporating SDL in a course, one should first identify the skill levels of the adult learners. They should then provide appropriate resources and methods to match the learning goal, and then allow the adult learners to make as many choices as possible within that framework (TEAL, 2011). Providing opportunities to reflect on the process, recognize successes, and strengthening confidence is also important when incorporating SDL in learning environments (TEAL, 2011).

Transformational learning (TL) is "learning that changes the way students think about themselves and their world, and involves a shift of consciousness" (TEAL, 2011). Problem-based approaches can help adult learners to learn through engagement while solving relevant, authentic problems. Discussion-based approaches can help adults to learn others' perspectives and challenge each other's assumptions. Regardless of the approach, faculty developers who want to incorporate TL in their professional development opportunities will need to create a climate conducive to this type of learning. There needs to be a level of trust between the learner and teacher/facilitator, and adult learners need to feel they are in a safe environment. Faculty also need to take the time to understand who their students are and what topics and activities would be of greatest meaning to them as individuals.

Each of these three adult learning theories are important to consider when designing professional development opportunities for adult learners. Specific to this study, faculty developers can address each of these adult learning theories through the offerings of professional learning communities specific to literacy instruction. Research in both secondary education and higher education has shown the effectiveness of such learning communities.

Literacy-based learning communities in secondary education. Many secondary content teachers do not have the literacy and pedagogical background to seamlessly incorporate disciplinary literacy into the classroom. The first step toward developing strong disciplinary literacy educators is to recognize the changing identity of content teachers (Cantrell et al., 2008; Damico et al., 2009/2010; Fang & Coatoam, 2013). As a result of the strong connection between disciplinary literacy and the Common Core State Standards, adopted by the majority of the states in America, secondary content teachers are still considered experts in their discipline and field,

but they are now additionally seen as an avenue toward disciplinary literacy knowledge within that same field (Bennett, 2011-2012; Zygouris-Coe, 2012).

Research has been conducted in middle- and high-schools to show the positive impact of professional development on faculty's self-efficacy of embedding literacy instruction into the disciplines (Cantrell et al., 2008; Furco & Moely, 2012; Gillis, 2014; Meyer, 2013, Sangster et al., 2013; Sturtevant & Linek, 2003; Thibodeau, 2008). After attending a year-long content literacy professional development project, middle- and high-school content teachers felt their self-efficacy was higher for teaching literacy in their classrooms and for their ability to integrate content literacy activities and practices within their content classroom (Cantrell et al., 2008). A two-year project-based professional development focusing on critical literacy and critical pedagogies resulted in faculty gaining a better knowledge of the "transformative nature of critical pedagogical approaches" (Sangster et al., 2013). After this professional development program, the faculty reported higher self-efficacy in developing activities and learning opportunities in the classroom that required critical literacy and thinking skills. In each of these examples, faculty participated in extended professional development where they built relationships with their colleagues and deeply investigated integrating literacy into the content areas.

High school professional development learning communities were found to develop teacher competency, provide peer-networking opportunities, and allow teachers to explore the value of pedagogical innovations (Thibodeau, 2008). As a result of these learning communities, teachers were more willing to take literacy-based risks in the classroom, were more motivated to implement changes within the curriculum to include literacy instruction, and had higher levels of self-efficacy in regard to literacy instruction (Thibodeau, 2008). These studies show the impact

that professional development experiences can have on secondary content teachers' attitudes and self-efficacy with disciplinary literacy within their content courses.

Literacy-based learning communities in higher education. When shifting to higher education, collaborative development between disciplinary specialists, literacy educators, librarians, and student support center staff has shown to broaden everyone's knowledge about the role literacy instruction can play within the content courses (Bergman, 2014; Furco & Moely, 2012; Jacobs, 2005; Jacobs, 2007). Jacobs (2005) stresses the importance of creating spaces for such collaboration so that all stakeholders can work together on neutral ground while sharing the leadership and responsibility for increasing student success. In a professional learning community, the various stakeholders can work together to determine how to embed literacy instruction into the curriculum and provide the faculty adequate training and resources in order to effectively make this curricular change.

One way to address adult learning theories in higher education professional development is with professional learning communities, where research-based strategies and theory could be used to promote faculty's role as a literacy educator within their discipline, effective instructional practices as they relate to discipline-specific literacy, and self-efficacy as it relates to literacy instruction, all of which are common practices in such communities (Wenger, 1998). These collaborative spaces, also sometimes known as faculty learning communities, have many benefits: long-term, ongoing professional development; faculty commitment; community of practice; principles of andragogy; fluid structure; and application to the classroom (Addis et al., 2013; Craft, 2000; Eylon, Berger, & Bagno, 2008; Falk & Drayton, 2009; Merriam, Caffarella, & Baumgartner, 2007). However, there is gap in the research when investigating the impact such learning communities can have on community college discipline's faculty's role perception,

self-efficacy and practice with incorporating disciplinary literacy instruction in their college-level courses.

Professional Learning Community Curriculum

Two main theories guide the curriculum for the disciplinary literacy professional learning community developed in this study. First, the humanist approach, also called scholar academic approach, provides the groundwork for the college curriculum as it outlines the core subjects high school graduates are expected to have mastered upon entering college. Second, the developmentalist approach provides the basis that all faculty are coming to the table with their own set of skills, knowledge, needs, and concerns. The curriculum for the professional learning community in this study addresses the individual faculty's needs as well as provides support for students to master the content associated with the core courses.

Humanist/scholar academic ideology. Throughout the struggle over the American curriculum, the humanist concept of 'subject' maintained its role as a foundation of public school education. While the 'subjects' may have changed slightly over the years, the concept remained firm, and this concept of 'subject' has carried over into the college curriculum. Humanists believed students should learn the basic information and shared knowledge within the academic disciplines in order to become good citizens and culturally literate adults (Kliebard, 2004). Only content that fit these academic disciplines was deemed worthy of instructional time. Scholars, teachers, and students each have specific learning and teaching roles; however, the expectation is that teachers transmit the information to students.

There are many community college faculty who agree with the concept of 'sage on the stage'. They were hired because they are content experts, and they feel it is their role to transfer this disciplinary knowledge to their students (Gregory, et al., in press). They expect their

students to come to their classes with sound literacy strategies in order to successfully navigate their course (Gregory, et al., in press). When this fails to happen, they struggle to support these students because their education and professional training has not necessarily trained them for this endeavor (Gregory & Colclough, in press).

Humanists believed that communication and critical thinking are essential for students to thrive in order to participate effectively in higher education and society in general (Kliebard, 2004). Communication and critical thinking are each present within the disciplinary practices Moje (2015) outlines in her 4Es heuristic, and they are considered disciplinary literacy strategies members of the discipline use. Thus, one way faculty can help support students as they work to master the college disciplines is to support these disciplinary literacy strategies.

Developmentalist/learner centered ideology. The developmentalists believed in a curriculum that aligned with the student's developmental stage, needs, and interests (Kliebard, 2004). The developmentalists' curriculum built in more autonomy for the student. Teachers were able to differentiate instruction, experiment with different instructional methods, build students' levels of motivation, and capitalize on students' areas of interest. While the core concepts were still taught, teachers moved away from direct instruction and the students played a much larger role in the classroom as they constructed knowledge through experience, application, and inquiry.

Along these same lines, the learner centered ideology is the belief that curriculum should be focused on individual student growth and driven by students' interests and desires to learn (Schiro, 2013). Teachers provide individual attention, organize integrated learning experiences, and facilitate students' growth and construction of knowledge. Learner centered educators believed that students' interests should drive the curriculum and learning occurs in a

constructivist manner. As students explore, question, and discover content, teachers can provide integrated learning experiences that meet their needs. Students experience learning and are viewed as active participants in the education process. Evaluation is conducted formatively through student portfolios, alternative assessments, and observation (Schiro, 2013).

In a professional learning community where the faculty are the students, it is essential their areas of interest, need, and developmental stage (in terms of literacy instruction) are met. Professional learning communities put the control in the hands of the participants as they have defined the goals, mission, shared values, and overall plan of study (Dufour, 2004). The faculty developer is now more of a facilitator and guides the group through their personal professional development journey.

Social Cognitive Theory

Social cognitive theory (Bandura, 1986) "contends that individuals act based on their thoughts, goals, beliefs, and values" (Schunk, Meece, & Pintrich, 2014); thus, both learning and performance are influenced by one's level of motivation. One key construct of social cognitive theory is self-efficacy, or one's perceived ability to learn or perform a specific task (Bandura, 1993, 1997). More specifically, instructional self-efficacy refers to an instructor's perceived ability to teach students and help them learn the content (Schunk, 2012). In the present study, instructional self-efficacy encompasses a community college discipline faculty's perceived ability to integrate literacy instruction into the discipline's curriculum and support students with disciplinary literacy.

Bandura (1977) contended that one's level of self-efficacy was a stronger factor of one's learning and performance than one's actual abilities. Further, he argued that individuals with low self-efficacy were less likely to persist when the task at hand became challenging (Bandura,

1977). For example, an educator who felt that he or she was incapable of succeeding at integrating literacy instruction into the discipline even though he or she knew of teaching strategies that could be successful in this area would be less likely to persist or even integrate literacy at all when the lesson became challenging (Tschannen-Moran & Johnson, 2011).

Bandura's Four Sources of Self-Efficacy

Bandura (1977) identified four sources of self-efficacy expectations: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. Each of these sources can positively or negatively impact one's level of self-efficacy. Bandura (1977) presents these four sources of self-efficacy as a "conceptual framework within which to study behavioral changes achieved by different modes of treatment" (p. 195). Understanding these four sources of self-efficacy can allow faculty, administrators, and professional development providers to investigate how providing support with each of the sources can impact community college faculty's instructional self-efficacy.

Performance accomplishments are an influential source of self-efficacy as one's personal experience mastering a task builds belief in one's ability to perform that task again in the future. Likewise, one's failure to master a task can lower beliefs about future performance. Across all levels of education, a teacher's experience integrating literacy into content instruction impacts his or her beliefs about how successful he or she will be in future integrations. If a community college educator has successfully integrated literacy into content instruction in the past, he or she will hold higher levels of self-efficacy expectations. Repeated successful experiences strengthens and builds resiliency for future mastery expectations. On the other hand, if a faculty member has minimum to no past successes and experiences failure with integrating literacy instruction, he or she will hold lower levels of self-efficacy expectations for future integrations.

Vicarious experiences impact one's self-efficacy in that when one observes colleagues or peers' experiences with certain tasks (whether a success or failure), it impacts one's belief in his or her own ability to perform that task. Colleagues, administrators, and experts in their respective fields can model innovative instructional strategies to use within the classroom. Witnessing these models, whether in the classroom or professional development, can impact faculty's own beliefs about incorporating those strategies within their own classrooms.

Verbal persuasion by those one considers influential in the field impacts one's belief about his or her own ability to complete a task and thus is a source of self-efficacy. Community college faculty may find their colleagues, administrators, or experts in the field influential in terms of pedagogy or tasks specific to the field. During interactions, collaborative experiences, and professional development sessions, such influencers may share their innovative ideas for classroom instruction. This can result in strengthening faculty's beliefs about their own ability to implement such strategies in the classroom. On the contrary, should such influencers engage in persuasion to not implement such strategies, faculty may hold lower levels of self-efficacy.

Finally, *emotional arousal*, both positive and negative, can impact one's beliefs and expectations for mastery of a task. Positive emotions, such as high morale and feeling valued in one's role, can lead to higher self-efficacy with implementing new instructional strategies. On the other hand, negative emotions, such as stress and depression, can lead to lower expectations for mastery. For example, community college faculty who feel supported by their administration and are experience job security may hold higher levels of self-efficacy when implementing new instructional strategies. However, faculty who are stressed due to high teaching loads and are concerned about potential layoffs may hold lower expectations for mastery when implementing these new strategies.

Professional Development and Faculty Self-Efficacy with Literacy Instruction

Gregory and colleagues (2019) developed a scale to measure community college faculty's role perception, self-efficacy, and practice with literacy instruction in their discipline courses. They surveyed over 200 community college discipline faculty from three large, multi-campus community colleges and found that the faculty held marginal perceptions of both their role as literacy educators and their levels of self-efficacy for integrating literacy instruction into their discipline courses. Further, there were clear instances where discipline faculty resisted including literacy instruction as part of their role. To respond to Heller's (2010) and Wingate and Tribble's (2012) charge for discipline faculty to incorporating disciplinary literacy into their college-level courses, Gregory and colleagues (2019) argue for more opportunities for faculty to participate in collaborative professional development focused on strengthening their knowledge and self-efficacy of literacy and instructional strategies.

Collaborative professional development in higher education has shown to have a strong impact on faculty's self-efficacy (Margalef Garcia, 2011; Margalef Garcia & Roblin, 2008; Schuck et al., 2013), belief systems (Hutchins & Friedrichsen, 2012), and teacher identity (Deni & Malakolunthu, 2013; Green et al., 2013). More specifically, collaborative professional development has shown to impact each of Bandura's (1977) four sources of self-efficacy. Faculty experienced *performance accomplishments* where they test out new strategies during collaborative professional development and in their classrooms, *vicarious experiences* where they witnessed their peers implementing instructional strategies within their own courses, and *verbal persuasion* where their peers attempt to influence their future instructional decisions. Collaborative professional development also provides an opportunity for positive *emotional arousal*, where faculty get to know their colleagues and emphasize with the challenges they are

experiencing (Keevers et al., 2014). This led to stronger levels of pedagogical knowledge (Harwood & Clarke, 2006; Norton et al., 2011; Rienties, et al., 2013) and a willingness to try new teaching strategies and methods in the classroom (Deni & Malakolunthu, 2013; Norton et al., 2011; Schuck et al., 2013).

There is a dearth of research when exploring the impact of collaborative professional development on faculty's self-efficacy with disciplinary literacy in higher education, and specifically community colleges. Gomez and colleagues (2015) found that math faculty who participated in design-based professional development were more prepared to support students with literacy and language within their math courses. However, this study did not specifically investigate the impact of professional learning communities on faculty's self-efficacy. There is a gap in the research when investigating the impact of professional development on community college faculty's self-efficacy with integrating literacy instruction in their discipline courses.

In summary, community college faculty are often faced with students who are not adequately prepared for the reading, writing, communicating, and critical thinking which their courses require. Integrating disciplinary literacy instruction and practices within the course would provide students the knowledge and experience necessary to understand the discourse and ways of knowing of the discipline. However, faculty in higher education are typically not trained in literacy instruction. Many feel it is not their role to incorporate literacy instruction within their coursework. Additionally, many have lower self-efficacy with disciplinary literacy instruction. Thus, faculty may benefit from collaborative professional development to strengthen their knowledge, role perception, self-efficacy, and practices of disciplinary literacy instruction.

Purpose of study

As this chapter outlines, there is a gap in the research regarding faculty's perceptions, self-efficacy, and practice with disciplinary literacy in the community college setting. More specifically, there is a gap in the research when exploring how providing a literacy-based professional learning community intervention might impact community college discipline faculty's perceptions, self-efficacy, and practice with providing discipline-specific literacy instruction within their course. Thus, the purpose of this study is to investigate the impact participating in a literacy-based learning community has on community college discipline faculty's perceptions of their role as literacy educators, self-efficacy with integrating disciplinary literacy into content instruction, and practice of incorporating disciplinary literacy instruction within their courses. The following research questions will be addressed:

1. How does participating in a literacy-based professional learning community impact community college discipline faculty's perception of their role as a literacy educator?
2. How does participating in a literacy-based professional learning community impact community college discipline faculty's self-efficacy in regard to integrating discipline-specific literacy instruction into their content courses?
3. How does participating in a literacy-based professional learning community impact community college discipline faculty's practice of incorporating disciplinary literacy instruction into their content courses?

CHAPTER 3

METHOD

This qualitative study employed a multi-case study design (Yin, 2018) investigating the impact a disciplinary literacy-based learning community has on community college faculty's role perception, self-efficacy, and practice with incorporating disciplinary literacy into their course instruction.

Context and Participants

This multi-case study was set in a large, multi-campus mid-Atlantic community college. Bayside Community College (BCC; pseudonym) offers programs of instruction in career and technical education, college transfer education, dual enrollment, international study abroad, general education, developmental studies, continuing education, and workforce training. The college employs approximately 300 full-time and 1000 part-time faculty members, and approximately 35,000 students enroll in courses each year. After almost a decade of increased enrollment, the institution was currently experiencing a drastic enrollment decline. This shift in enrollment had many impacts on full- and part-time faculty's work load, job security, and morale. A full description of the institution is outlined in Chapter 4.

I utilized purposeful sampling and invited approximately 50 faculty members to participate in this study. In response to advertisements, personal email and phone invitations, and snowball sampling, a total of ten faculty members (20%) agreed to participate in this study. I formed three learning communities grouped by discipline and campus: two discipline-specific (Humanities and Early Childhood Education), and one mixed, but related, disciplines (STEM: Mathematics, Electrical/Mechatronics, and Diesel Marine Technology). A full description of the learning communities, disciplines, and participants are presented in Chapter 4.

Multi-Case Study Research Design

This qualitative study employed a multi-case study research design (Yin, 2018) investigating the impact a disciplinary literacy-based learning community had on community college faculty's role perception, self-efficacy, and practice with incorporating disciplinary literacy into their course instruction. A case study "is an empirical method that investigates a contemporary phenomenon (the 'case') in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (Yin, 2018, p. 15). The real-world cases I investigated were three professional learning communities of community college discipline faculty, and in order to do so it was essential to learn more about the contextual conditions surrounding the faculty and the learning community (e.g., structure and culture of institution, norms of discipline, and educational beliefs of faculty).

Yin (2018) outlined specific criteria that make a case study design the appropriate choice for a study, and specified that the purpose and research questions should support each of these criteria. Thus, I designed this multi-case study to meet each of Yin's (2018) criteria. First, my research questions focused on "the tracing of operational processes over time, rather than mere frequencies or incidence" (Yin, 2018, p. 10). I was interested in investigating how faculty's perceptions, self-efficacy, and practice developed over the period of the learning community, and the learning community's curriculum was structured in order to support this development. Second, my investigation did not require control over behavioral events (Yin, 2018). I did not attempt to manipulate behaviors; instead, I was most interested in learning how the faculty's beliefs and practices surrounding disciplinary literacy would be impacted by their experience learning about disciplinary literacy and collaborating with their colleagues in the learning

community. Third, the purpose of the study was to investigate a contemporary event, or "a fluid rendition of the recent past and the present, not just the present" (Yin, 2018, p. 10). It was important for me to understand the context of the community college, departments, and disciplines in order to situate the faculty's experiences. Finally, I utilized a case study design because "the case study's unique strength is its ability to deal with a full variety of evidence – documents, artifacts, interviews, and direct observations, as well as participant-observation" (Yin, 2018, p. 10). In order to best understand faculty's experiences within their learning community, it was essential to collect a variety of data: focus group interviews, faculty journal entries, faculty work products, learning community documents, and researcher observations and reflective journal. I took on the role of participant-observer within this study, and I took copious field notes and maintained a personal reflective journal. Collecting data from multiple sources allowed me to triangulate the data in order to best address the research questions.

In order to investigate faculty's perceptions, self-efficacy and practice in multiple disciplines, I chose a multi-case design where each learning community represented one bounded unit, or case. Yin (2018) identified several criteria for choosing a multi-case design over a single-case design, and my study aligned with each of these criteria. First, I was able to group the faculty by discipline or related disciplines. This strengthened the opportunity for discipline-specific collaboration and interaction of the participants. I replicated the learning community curriculum with each of the three groups of faculty. Second, having multiple cases allowed me the opportunity to identify contrasting experiences between the cases. I contrasted experiences between the learning communities as it was important to understand the faculty's perceptions of the relationship between disciplinary literacy and their individual disciplines. Finally, multiple cases allowed for cross-case analysis, where I could determine commonalities across the

discipline groups. Both the differences and the commonalities inform professional development providers and curriculum designers as they work to support discipline faculty.

Components of case study research design. In designing the study, I carefully addressed the five components of case study research design, as outlined by Yin (2018): a case study's questions; its propositions, if any; its cases; the logic linking the data to the propositions; and the criteria for interpreting the findings.

Case study's questions. I carefully crafted my research questions to address the purpose of this study and contribute to the growing body of research on disciplinary literacy in higher education. The literature review, identification of the problem, recognition of the gap in the research, and the purpose of this study are thoroughly outlined in Chapter 2. My research questions are as follows:

1. How does participating in a literacy-based professional learning community intervention impact community college discipline faculty's perception of their role as a literacy educator?
2. How does participating in a literacy-based professional learning community intervention impact community college discipline faculty's self-efficacy in regard to integrating discipline-specific literacy instruction into their content courses?
3. How does participating in a literacy-based professional learning community intervention impact community college discipline faculty's practice of incorporating disciplinary literacy instruction into their content courses?

Each of these questions are 'how' questions, which "are more explanatory and likely to lead to the use of case study [because] such questions deal with the tracing of operational processes over time, rather than mere frequencies or incidence" (Yin, 2018, p. 10). Through this study, I was

looking to unpack and better understand the experiences of the faculty within the context of their institution, department, and discipline. Further, it was important to investigate the role a learning community could play in both the faculty's developing understanding of disciplinary literacy and the relationship of that understanding to their self-efficacy and practice of incorporating disciplinary literacy instruction within their courses.

Study propositions. Propositions "direct attention to something that should be examined within the scope of study" (Yin, 2018, p. 27). Identifying propositions allows researchers to target their investigation and data collection to better address the research questions. Thus, during the design stage of this study, I identified the following study propositions based on the literature review and my experiences as a community college faculty and faculty developer:

1. Faculty professional development must be grounded in adult learning theory.
2. Faculty benefit from collaboration with their colleagues.
3. Faculty appreciate autonomy within a learning community.
4. Faculty benefit from the opportunity to personally reflect on content and experiences.
5. Faculty benefit from feedback from their peers.
6. Discipline faculty have limited, if any, training/education in literacy.
7. Discipline faculty have specific curricular objectives that must be met.
8. Discipline faculty have the authority to design coursework and instruction.

I used these propositions to guide the development of the learning community curriculum, materials, and assignments. They also led me to identify and develop the following data sources: focus group interviews, personal journal entries, and course assignment enhancements.

I revisited these propositions throughout the study, and I reflected on their applicability in my personal reflective journal. Through this process, I confirmed these were indeed appropriate propositions for this study. However, I also identified additional propositions that guided journal entry prompts and future discussions within the learning community sessions:

1. Cross-discipline discussions are valuable for focusing on pedagogy vs. content.
2. Not all faculty have a curriculum and instruction background.

3. Contextual and external experiences influence faculty's participation in the learning community and workload.

I was initially concerned the STEM learning community would not benefit as much as the other two since it included three disciplines across the four faculty. However, as we began the community, the faculty were able to identify numerous commonalities and differences between their disciplines. They spent significant time addressing this in both the discussion and journal entries. Additionally, there were external factors (e.g., announced layoffs) I had not initially identified as potential influencers of the faculty's experience within the learning community. By addressing these in both the discussions and journal entries, faculty were able to identify possible solutions to overcome these barriers either currently or in the future.

The cases. Cases used in case study research should represent "a real-world phenomenon that has some concrete manifestation" (Yin, 2018, p. 31). I used the literature on disciplinary literacy and professional development to inform the research questions, and in turn the definition of the cases. Learning communities were represented in each research question as it was one of the main foci of the study to investigate faculty's experiences within those learning communities surrounding the topic of disciplinary literacy instruction.

The three cases in this study were identified as a result of defining and bounding the cases (Yin, 2018). Thus, the tentative definition of each case was each learning community within which the faculty participated. During the planning process of this study, I followed Yin's (2018) recommendation to consult with a colleague to discuss the research questions and potential definition of the case. I discussed my tentative definition and rationale for how I defined my case with two colleagues, one a university professor experienced in case study design and the other a current faculty developer with experience in case study research. Each agreed with defining each learning community as a case.

After I confirmed the definition of my case, I then clarified the bounding of the case by participants and time. Each case comprised of a group of discipline faculty who participated in the learning community. It was important I keep the faculty separate from the context (other discipline faculty members, department, and institution) in both my data collection and analysis. Additionally, it was important I set specific time boundaries for the case. I identified the estimated beginning and end of the case as the start and end of the learning community. While faculty's development certainly could extend beyond the end of the learning community, this was outside the scope of this particular study. Thus, I bound the case to the five sessions of the learning community which would be held over the course of five to eight weeks. This allowed me to distinguish data sources that were specific to the participants within the cases from data sources specific to the context. Bounding the case by participants and time allowed me to strengthen the relationship between the cases, research questions and propositions (Yin, 2018).

Thus, this study includes three bounded units, or cases. The first case included three Humanities faculty members who taught such courses as Survey of Western Culture, Creative Thinking, or Survey of Twentieth-Century Culture. The second case included four faculty members in related STEM disciplines, more specifically Math (2), Mechatronics/Electrical (1), and Diesel Marine Technology (1). The third case included three Early Childhood Education faculty members who taught foundation, theory, and methods courses for aspiring early childhood educators (birth-3rd grade). A full description of the three cases, disciplines, and participants are outlined in Chapter 4.

Linking data to propositions. The propositions outlined above informed the curriculum of the learning community, the data sources collected in the study, and the data analysis techniques used to analyze the data (see Table 1). When developing the tentative curriculum for

the learning community, it was important I think about the propositions related to faculty's skillset and knowledge, tenets of faculty's participation in learning communities, and methods by which faculty learn and benefit from participation in a learning community. These guided my decisions to include specific preparatory activities, collaborative discussions and activities during the sessions, and individual reflection and curricular activities outside of the learning community. The learning community curriculum and documents, faculty journals, and focus group interviews aligned with the propositions in that they each allowed me to better understand the faculty's development over the course of the learning community in terms of perceptions, self-efficacy, and practice. Each of the data sources provided rich data of the participants' experiences within the learning community.

Table 1

Propositions, Data Sources, and Data Analysis

	Curriculum	Data Sources	Data Analysis
Faculty professional development must be grounded in adult learning theory.	X		
Faculty benefit from collaboration with colleagues.	X	X	X
Faculty appreciate autonomy within a learning community.	X	X	
Faculty benefit from the opportunity to personally reflect on content and experiences.	X	X	X
Faculty benefit from feedback from their peers.	X	X	X
Discipline faculty have limited, if any, training/education in literacy.	X		
Discipline faculty have specific curricular objectives that must be met.	X	X	X
Discipline faculty have the authority to design coursework and instruction.	X	X	
Cross-discipline discussions are valuable for focusing on pedagogy vs. content.	X	X	
Not all faculty have a curriculum and instruction background.	X		

Context and external experiences influence faculty's participation in the learning community and workload.	X	X

Criteria for interpreting the strength of a case study's findings. In order to interpret the strength of the findings of this case study, it was important for me to identify and address rival explanations for my findings (Yin, 2018). At the design stage of the study, anticipating rival explanations informed me in the areas of curriculum design and data collection. By participating in specific discussions and activities within the learning community, as well as including specific questions in the focus group interviews and faculty journal prompts, I was able to collect data that informed my findings and ruled out the rival explanations.

The purpose of this study was to investigate the role participating in a disciplinary literacy-based learning community had on faculty's role perception, self-efficacy, and practice of integrating disciplinary literacy instruction into their coursework. There are potential experiences the faculty could be involved in outside of the learning community that could impact each of these constructs (e.g., other professional development opportunities, academic readings, collaborations with colleagues). Thus, I included a question in both the final focus group interview and the third and fourth journal entries that specifically addressed the role participating in the learning community had on the faculty's development with these constructs.

Data Sources

There are several sources of data for this study: learning community curriculum; initial and final semi-structured focus group interviews; faculty journal entries; course assignments, activities and assessments enhanced throughout the learning community; and observations and reflections as recorded in the researcher reflexive journal.

Learning Community Curriculum

I designed a tentative curriculum prior to the start of the learning communities (see Appendix A). I shared this curriculum with each of the faculty members and requested feedback. The faculty discussed, modified, and agreed upon the curriculum during the first session (see Appendix B for the final curriculum). The final outline of the curriculum for the five-session learning community is outlined in Appendix B and discussed in Chapter 4. Each session addressed a specific set of topics to focus preparation, discussion, and outcomes. Throughout the learning community, participants completed readings, incorporated authentic discipline-specific materials, and maintained a personal reflection journal.

Focus Group Interviews

Faculty participated in two semi-structured focus groups with their specific learning communities. The faculty participated in an initial focus group at the start of their learning community to identify their initial perceptions of their role, practice, and self-efficacy with literacy instruction in their courses. During the final learning community session, the faculty participated in a final focus group to identify their changes, if any, in these constructs, as well as the specific experiences regarding curriculum and assignment redesign for their courses. This allowed for an exploration of the faculty's views over the course of the learning community. All focus group interviews were recorded and transcribed, and the data were stored on a password protected digital drive. See Appendix C for the initial and final focus group interview protocol.

Faculty Reflective Journal Entries

Faculty completed four reflective journal entries throughout the learning community. Prompts and/or thoughts for consideration were provided in an attempt to keep faculty focused on the topic of disciplinary literacy, self-efficacy, and role perception. However, faculty were

not required to write about these topics and were invited to write about whatever topics they wished to. Faculty completed the journal entries digitally and posted them on a shared Google drive. See Appendix D for Journal Entry Prompts/Reflection Questions.

Session Documents

Several session documents were collected throughout the professional learning community. The faculty within each learning community identified a shared mission statement, goals, and values during the first session. During the first two sessions, the faculty identified the literacy skills necessary for students to be successful in their courses as well as the instructional strategies they currently implemented in their courses to address those skills. The faculty organized this information on a poster using different colored sticky notes. During the second session, the faculty outlined their description of a member of the discipline specific to their area. During the third, fourth, and fifth sessions, the faculty worked with their current courses' curricula and assignments and explored how they could be enhanced to incorporate disciplinary literacy instruction and strategies to support students within the discipline. Faculty collaborated with other members of their learning community to brainstorm ideas, ask questions, provide feedback, and give suggestions throughout the enhancement process. The mission statement, goals, shared values, literacy skills and strategies poster, member of the discipline document, and assignment enhancement information (before, during, and after documents) were all posted on a shared Google drive.

Researcher Observations and Reflexive Journal

I took detailed notes throughout each of the learning community sessions to document discussion points, collaborative experiences, and participant ideas and participation. Additionally, I maintained a personal journal and completed entries after each learning

community session. In these entries, I made notes of observational evidence to provide additional information about the context, faculty, and learning community. I identified experiences that showed faculty growth as well as instances that did not. I noted my personal feelings and experiences surrounding the session, participants, and study as a whole. I used the reflexive journal as a place to identify potential biases and then identify strategies to minimize the impact of these biases on the study. I stored this reflective journal on a password protected digital drive.

Data Analysis

I analyzed and manually coded the qualitative data from the learning community curriculum, focus group interviews, journal entries, session documents, and researcher observations reflexive journal. I used a coding process of open and axial coding (Corbin & Strauss, 2008) as I worked through the data. First, through open coding, I noted key words and phrases in the margin of the data sources. Second, I engaged in axial coding to refine the open codes to note relationships between the data points. This process of axial coding allowed me to collapse the open codes into themes and subthemes to address the research questions.

I engaged in the iterative process of constant comparative analysis (Corbin & Strauss, 2008), where I revisited the data multiple times to compare my initial and refined codes across data sources. As I compared the coding of subsequent data sources, I collapsed the open codes based on the themes and subthemes and then created a revised code book. I continued this iterative process until all data sources were coded and I had identified the axial codes for each case.

Open coding, axial coding and constant comparative analysis of the data allowed me to identify initial codes, themes, and subthemes from which to represent the faculty's growth and

development throughout the learning community, the role collaboration played in this process, and their role perception, practice, and self-efficacy with incorporating disciplinary literacy in their course instruction. Upon the conclusion of the data analysis process, I wrote a narrative of the findings, showing the essence of the participants' experiences (Moustakas, 1994) by including participant quotes and thick description.

Validity, Reliability, and Trustworthiness

I engaged in numerous practices to strengthen the validity, reliability, and trustworthiness of this study. Following Yin's (2018) guidelines, I purposefully designed the study to address validity. Validity in qualitative research is "the truthfulness of your findings and conclusions based on maximum opportunity to hear participant voices in a particular context" (Hays & Singh, 2012). Validity can be established by outlining both the strengths of the research study and limitations (Hays & Singh, 2012).

To strengthen construct validity, I used multiple sources of evidence (see section above on data sources) and used member checking for participants to review various parts of the case study report. To enhance internal validity, I completed the following during data analysis: pattern matching, explanation building, address rival explanations, outline limitations, and use logic models. Finally, I used replication logic in terms of the curriculum across the three learning communities to increase external validity. To strengthen reliability, I used a case study protocol, developed a case study database, and maintained a detailed audit trail of the data.

I used several strategies to build trustworthiness during this study. First and foremost, I bracketed my assumptions prior to conducting the study in order to reduce researcher bias. I maintained a reflexive journal to bracket assumptions regarding discipline faculty's experience with incorporating disciplinary literacy in their courses. This allowed me to set aside these

assumptions so I could enter the learning community sessions, focus group interviews and data analysis sessions with no or reduced bias. Further, I had prolonged engagement with some faculty members due to previous professional roles at the community college. Maintaining a reflexive journal allowed me to separate my current experiences from past experiences with the faculty members.

During the data analysis process, I enlisted two colleagues to confirm my coding. One colleague analyzed the data sources for two of the cases and confirmed both my open and axial codes. A second colleague analyzed the data sources for all three cases and confirmed my open and axial codes, as well as the cross-case analysis. Additionally, she read my narrative of the findings for each of the cases and confirmed my narrative accurately reflected the identified codes. These colleagues were experienced researchers with respect to qualitative coding and case study research and provided valuable feedback and confirmation of my codes and findings.

I conducted member checking by including summarizing and clarifying probes during the focus group interviews. I sent my written narrative of both the context chapter and the findings chapter to the participants and requested verification and feedback. I triangulated the data from the focus group interview transcriptions, faculty journal entries, enhanced assignments, and my personal reflexive journal to better understand the phenomena and answer the research questions. I used thick description in the explanation of the research process and data findings. Finally, I kept a detailed audit trail of all materials and documents pertinent to each stage of the study.

In summary, this qualitative study was designed to investigate the impact, if any, a disciplinary literacy-centered professional learning community had on discipline faculty's attitudes about their role as a literacy educator, their self-efficacy with disciplinary literacy

instruction, and their actual practice within the classroom. Through a multi-case study design (Yin, 2018), I investigated three cases, or learning communities, where faculty learned about disciplinary literacy, engaged in collaboration with their colleagues, participated in curriculum revision, and reflected on the process. Open and axial coding, as well as constant comparative analysis, of multiple data sources allowed me to identify themes and subthemes representing the faculty's experiences in the learning communities.

CHAPTER 4

CONTEXT

This chapter outlines the context within which this study took place. I first provide background on the community college. Next, I describe in detail the participants, their disciplines, and their programs. Finally, I outline the curriculum for the five-session learning community.

Institution

This multi-case study was set in a large, multi-campus mid-Atlantic community college. Bayside Community College (BCC; pseudonym) has been in operation for approximately sixty years and provides open-access education and training for a diverse student body. The mission statement of the college is to "provide collegiate education and training to adults of all ages and background, helping them achieve their individual goals and contribute as citizens and workers to the vitality of an increasingly global community" (BCC Faculty Handbook, 2017, p. 1). In order to achieve this mission, the college commits to high-quality, affordable education for all students and provides a comprehensive range of programs and services in order to meet the needs of students who wish to transfer to a four-year institution or enter or advance in the workforce. The college has 46 transfer agreements with institutions across the state and nation, and over 1500 companies and individuals have been served through workforce training and development (BCC Workforce Development, 2018).

The publicly-funded college is part of a 23-college state community college system and serves the region through four campuses and seven regional centers. Each campus "is fully comprehensive, offering a full range of transfer and career and technical education", as well as "specific career and technical programs that are considered a regional resource niche for that

location" (BCC Faculty Handbook, 2017, p. 2). In order to accomplish this, the college offers programs of instruction in career and technical education, college transfer education, dual enrollment, international study abroad, general education, developmental studies, continuing education, and workforce training. The college ranks as the 30th largest producer of associate degrees among two-year institutions across the nation (BCC Quick Facts, 2018). Additionally, the institution is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) and offers twelve nationally accredited degree programs (BCC Fact Book, 2017).

In the Fall 2017 term, the institution employed approximately 300 full-time and 1000 part-time faculty (BCC Fact Book, 2017). Full-time faculty taught 45% of the courses and part-time faculty taught 55% of the courses across the whole college. The full-time faculty were 49% male (89% Caucasian and 11% minority) and 51% female (75% Caucasian and 25% minority) (BCC Fact Book, 2017). These statistics are comparable to the data for higher education faculty across the country (National Center for Education Statistics, 2013b).

BCC is the 14th largest public 2-year community college in the nation, the second largest provider of public education in the state, and has a 22:1 student-to-faculty ratio. During the 2016-2017 academic year, BCC served approximately 35,000 students, and 38% of students in the region who enrolled in higher education attended this community college. The student body consisted of approximately 36% full-time and 64% part-time; 56% college transfer and 31% career/technical; 40% male and 60% female; 48% Caucasian, 32% African American and 21% other minorities; and 50% on financial aid. The average age of students was 27 years old, with 49% in the 18-24 age range. There were approximately 3,700 graduates in 2016-2017 academic year, with 43% of students earning transfer degrees, 27% earning career/technical degrees, and

30% earning certificates (BCC Quick Facts, 2018). The graduation rate was 19% in 2017 (NCES-BCC, 2018), ranking second lowest in the state system (SCHEV, 2018). Approximately 65% of college-transfer graduates continued their education at a four-year institution (BCC Quick Facts, 2018).

After almost a decade of increased enrollment, the institution was currently experiencing a drastic enrollment decline. During the course of the learning communities, the president of the college issued a request for some faculty to accept early retirement in an attempt to reduce or eliminate the need for full-time faculty layoffs. While this was outside the scope of the learning community for this study, this topic surfaced in every session in all three learning communities. Full-time faculty found it especially difficult at times to focus on discussions on disciplinary literacy when under the strain of job insecurity. For example, one full-time Mathematics faculty member who was in the pool of potential layoffs claimed at the beginning of his third session, "How can I think about disciplinary literacy when I may lose my job any day?" (Dennis, Session Discussion Notes). He missed a future session due to an interview for a position in the public schools, one he grudgingly applied for as his passion was teaching community college students.

Adjunct faculty also felt the stress of declining enrollment due to lower numbers of course offerings predicted for future semesters. Full-time faculty have first choice of these offerings, and several adjuncts who participated in this study were concerned they would not have courses to teach in future semesters. For example, one Humanities adjunct faculty member shared during a session, "I love the idea of enhancing an assignment for my course, but I don't know if I'll ever be able to teach that course again due to our current crisis" (Michael, Session Discussion Notes). Despite these institutional challenges, the majority of faculty participated fully in the learning community sessions.

Participants

Approximately 50 full-time and part-time faculty from eight disciplines were invited to participate in this study. I used purposeful sampling in an attempt to achieve my target sample size of 20 faculty members spread across four discipline-specific learning communities. I led a professional development workshop on Disciplinary Literacy for eleven faculty on August 18, 2017. This workshop was held during a larger, college-wide professional development day, and faculty were able to choose which sessions they attended. I followed up with all eleven attendees, and two agreed to participate in the full study. I utilized personal email invitations, phone calls, and snowball sampling to advertise and extend invitations for the learning communities to additional faculty. I also worked with the professional development team at the college to advertise and identify individuals who may be interested in participating. As faculty members agreed to participate, I asked them to invite their colleagues on their campus to join them. Faculty's response, course schedules, and personal preference led them to prefer professional development opportunities at their own campus.

Through all of these methods, a total of ten faculty members (20%) agreed to participate in the study. I grouped them by campus and by discipline. This led to three learning communities on three different campuses: a Humanities learning community, a STEM learning community (Mathematics, Electrical/Mechatronics, and Diesel Marine Technology), and an Early Childhood Education learning community. The participants were 50% full-time, 50% female, and 90% Caucasian. Descriptions of each learning community are provided below.

Humanities and Disciplinary Literacy Learning Community

The Humanities learning community included three faculty members, and was held on one of the four campuses. The community met five times over the course of eight weeks. Two

members attended and fully participated in each session, and one member attended four sessions and participated in discussions only. This section outlines the Humanities courses at the institution and the faculty who participated in the learning community.

Humanities discipline. The Humanities discipline can be defined as "the study of how people process and document the human experience" (Stanford University, 2018). Courses within this discipline focus on the human culture and use methods that include critical thinking, speculation, and making connections between the human race, culture, history, art, music, and politics. The college offers nine 200-level, transferrable courses in the Humanities discipline: Survey of Western Culture I, Survey of Western Culture II, Introduction to African-American Studies, Interdisciplinary Principles of the Humanities I, Creative Thinking, Chronicles of the Sea, Mythology in Literature and the Arts, Greek Mythology, and Survey of Twentieth-Century Culture. These courses act as electives within programs across the college, not as a degree or certificate program itself. Thus, students who enroll in these courses typically are fulfilling the elective requirement of their particular program. The student enrollment in Humanities courses was typically 30 students per section.

Despite being 200-level courses, none of the nine courses have a literacy prerequisite. Thus, students could enroll in any of the Humanities courses without placing into or completing college-level English. Each of the nine courses identify critical thinking as a general education core competency supported by the course, seven courses identify written communication, and four courses identify information literacy. All nine courses are transferrable to four-year institutions. Currently, 17 full-time and 19 part-time faculty teach Humanities courses across the college, and approximately 1500 students enrolled in Humanities courses in the 2016-2017 academic year. All 17 full-time faculty are designated as a faculty member in another discipline

(e.g., English, History) and teach one or more Humanities courses per semester. In order to teach a Humanities course, faculty must have a Master's Degree in Humanities or at least 18 credit hours in the Humanities.

Humanities participants. The Humanities learning community included three part-time faculty members who all taught on one of the college's four campuses. The faculty taught such courses as Survey of Western Culture, Creative Thinking, and Survey of Twentieth-Century Culture. Abigail was a full-time administrative faculty member in faculty professional development at the college and had been teaching Humanities part-time for eight years. She held a Master's of Arts in Humanities and had held positions in the field focusing on life skills, adult education, mediation, and financial literacy. She typically taught one course and 30 students per semester.

Paula was a part-time faculty member who had recently retired after 33 years working in a full-time capacity in Student Activities at the college. She held a Master's of Humanities, and she had taught Humanities courses part-time at the college for over fifteen years. She typically taught 2-3 courses and 60-90 students per semester.

Michael was a part-time faculty member teaching both Humanities and History courses at the college, as well as at a nearby four-year university. He held a Master's of Arts in History and had been teaching Humanities courses part-time at BCC for two years. Overall, he has taught as an adjunct for six years, with four years at this institution. He typically taught five to seven courses and 150-210 students a semester across multiple institutions.

STEM and Disciplinary Literacy Learning Community

The STEM learning community included four faculty members, and was held on one of the four campuses. The faculty represented the disciplines of Mathematics, Electrical and

Mechatronics, and Diesel Marine Technology. The community met five times over the course of six weeks. Three members attended and fully participated in each session, and one member attended four sessions and participated in discussions only. This section is organized by discipline and outlines the related courses at the institution and the faculty who participated in the learning community.

Mathematics. The Mathematics courses at the college include developmental mathematics (e.g., Algebra Basics, Rational Expressions and Equations), twelve 100-level courses (e.g., Fundamentals of Mathematics, Precalculus, Calculus with Analytic Geometry), and five 200-level courses (e.g., Probability and Statistics, Vector Calculus). While there were mathematics prerequisites for each of these courses, there were no literacy requirements for entry into any of these courses. Most programs across the college include at least one required Mathematics course, but there is not a specific Mathematics degree or certificate program. Thus, students who enroll in these courses typically are fulfilling the Mathematics requirement of their particular program. Each of the courses identify quantitative reasoning as a general education core competency supported by the course; none of the courses identify critical thinking, written communication, or information literacy. The student enrollment in Mathematics courses typically ranged from 15-30 students per section, depending on the level. For example, Developmental Mathematics courses typically had lower enrollment caps.

All but two of the 100-level courses, and all 200-level courses are transferrable to four-year institutions. Currently, 30 full-time and 50 part-time faculty teach Mathematics courses across the college, and approximately 5000 students enrolled in Mathematics courses in the 2016-2017 academic year. In order to teach a Mathematics course, faculty must have a Master's Degree with at least 18 credit hours in the field of Mathematics.

Two of the members of the STEM learning community were full-time Mathematics faculty members. Mitchell held a Bachelor's of Science in Physics and a Master's of Science in Applied Mathematics. He had taught part-time for three years and full-time for one year at another community college, and he was currently in his sixth year teaching full-time at this institution. He typically taught 5-6 courses and 100-150 students a semester in the areas of developmental and college-level mathematics.

Dennis held a Master's in Applied Mathematics. He taught High School Mathematics for 22 years, and he was currently in his ninth year teaching at this institution and seventh year full-time. He typically taught 5-6 courses and 100-150 students a semester in the areas of developmental and college-level mathematics.

Diesel Marine Technology. The community college offers an Associate of Applied Science in Diesel Technology and two Career Studies Certificates in the field of Diesel Marine Technology: Diesel Marine Technician and Diesel Engine Technician. The program advertises hands-on, experienced-based classes taught by faculty with knowledge and experience in the field. The Diesel Technology program is accredited by the National Automotive Technicians Education Foundation (NATEF) and is designed to prepare students for employment in the diesel industry as technicians in the areas of service, maintenance, and repair. Additionally, the program prepares students to complete certification exams.

The courses in the program consist of five 100-level courses (e.g., Introduction to Diesel Technology, Basic Diesel Engine Systems) and five 200-level courses (e.g., Advanced Diesel Engine Systems Cooperative Education in Diesel Technology). Additionally, students may take courses in the areas of Maritime Technology and Automotive. While the certificate programs only include courses in these three disciplines, the A.A.S degree requires English, Mathematics,

program electives, and Social Science electives. The courses in the program identify critical thinking, written communication, information literacy, and quantitative reasoning as general education core competencies supported by the courses. While there were some Diesel Marine Technology prerequisites for some of these courses, there were no literacy requirements for entry into any of these courses. The student enrollment in Diesel Marine Technology courses was typically 10-15 students per section.

Currently, 2 full-time and 2 part-time faculty teach Diesel Marine Technology courses at the college, and approximately 80 students enrolled in Diesel Marine Technology courses in the 2016-2017 academic year. In order to teach a Diesel Marine Technology course, faculty must have an A.A.S degree in Automotive or Diesel Technology with at least two years' experience in their field of expertise.

One member of the STEM learning community was a full-time Diesel Marine Technology faculty member. Alexander held a Bachelor's of Science in Computer Science, a Master's of Education in Curriculum and Instruction, an Education Specialist degree in Curriculum and Instruction, and he was currently pursuing a Doctor of Education in Curriculum and Instruction. After 22 years in the military, he began teaching at the college. He taught part-time for one year and was currently in his eighth year teaching full-time. He also held a program head role for his discipline. Alexander typically taught 4-5 courses and 50-75 students a semester.

Mechatronics. The community college offers an Associate of Applied Science and a Career Studies Certificate. The program advertises hands-on classes that provide students with a comprehensive set of skills applicable to the field. The courses within the program consist of Mechanics and Electrical courses.

The Mechanical courses in the program consist of nine 100-level courses (e.g., Introduction to Mechatronics, Mechanical Maintenance) and three 200-level courses (e.g., Fluid Power – Pneumatic Systems, Fluid). The Electrical courses in the program consist of fourteen 100-level courses (e.g., A.C. and D.C. Circuit Fundamentals, Electric Motor Control) and nine 200-level courses (e.g., Digital Systems, Programmable Logic Controller Systems I). While the certificate programs only include courses in these three disciplines, the A.A.S degree requires English, Mathematics, program electives, and Social Science electives. The courses in the program identify critical thinking, information literacy, and quantitative reasoning as general education core competencies supported by the courses. While there were some Electrical prerequisites for some of these courses, there were no literacy requirements for entry into any of these courses. The student enrollment in Mechatronics/Electrical courses was typically 20 students per section.

Currently, two full-time and 11 part-time faculty teach Electrical and Mechatronics courses at the college, and approximately 232 students enrolled in Mechatronics courses in the 2016-2017 academic year. In order to teach a Mechatronics course, faculty must have at minimum an Associate's or Bachelor's degree in a related field and at least two years of industrial or professional occupation experience in the field.

One member of the STEM learning community was a full-time Mechatronics faculty member. Jackson held an Associates of Applied Science degree in Electromechanical Controls, Bachelors of Arts in Sociology, and a Master's of Education degree. Additionally, he held a Masters Electrician License. He worked for 25 years in the field as a Master Electrician, Instrumentation Specialist, and Facilities Technician. He taught part-time for 15 years as an electrical instructor and three years full-time at the secondary level as a Technology Education

teacher. He was currently in his seventh year teaching full-time at this institution, and he also held a program head role. Jackson typically taught 5-6 courses and 100-120 students a semester.

Early Childhood Education and Disciplinary Literacy Learning Community

The Early Childhood Education learning community included three faculty members, and was held on one of the four campuses. The community met once a week for five weeks, and all three members attended and fully participated in each session. This section outlines the Early Childhood Education program at the institution and the faculty who participated in the learning community.

Early childhood education program. The Early Childhood Development program has a mission to "prepare students in the care, supervision, and education of young children from birth to age eight" (BCC Early Childhood Education Programs, 2017). The college offers one Early Childhood Development Associate of Applied Science (A.A.S.) degree and four Career Studies Certificates: Child Development, Educational Support Specialist, Preschool (CDA equivalent), and Early Childhood Instruction. The program advertises hands-on classes taught by faculty with a student-centered pedagogy, and every class includes required observation hours where students are placed in school settings. As part of the curriculum for the coursework throughout the program, students are expected to understand and apply their knowledge of the Milestones of Child Development (VDSS, 2013), the state's guidelines for early childhood learning and development. The courses in the program consisted of seven 100-level and seven 200-level Child Development Courses, as well as nine 200-level Education courses (of which only one course was required for the A.A.S. degree) (BCC Early Childhood Education Programs, 2017). The student enrollment in Early Childhood Education courses was typically 20 students per section.

The college is region hub for a state initiative program that focuses on quality early care and education for the children and families of the state. The program and faculty were preparing for a site visit from NAEYC (National Association for the Education of Young Children), which entailed collecting programmatic materials, documents, and data to show compliance with the standards. Currently, three full-time and 20 part-time faculty taught in the program across the college, and approximately 400 students were enrolled in the program (BCC NAECY Report, 2017). In order to teach an Early Childhood Education course, faculty must have a Master's Degree with at least 18 credit hours in the field of Early Childhood Education or a related field.

The A.A.S. degree focuses on the fundamentals of child development and educational training in order to prepare students to work in preschools, child care centers, Head Start programs, private schools, public schools, and before-and-after school programs. The program also provides the foundational knowledge necessary to transfer to a four-year institution and earn a Bachelor's degree in Early Childhood Education (non-licensure) or Early Childhood Education (PreK-3) with a teaching license. The program includes a minimum of 62 credits, including six 100-level Child Development courses, five 200-level Child Development courses, and one 200-level Education course. The remaining courses include the 1-credit College Success Skills course and then general education courses such as English, Psychology, Mathematics, History, and Biology. While students are required to complete both levels of college composition (which require placement into college-level English), the only literacy prerequisite for the eleven Child Development courses is placement into the first level of developmental English. There is a suggested curriculum order for students to follow where college composition is in the first semester. However, students could theoretically complete all of the child development courses first before satisfying the literacy requirements of the program.

The Career Studies Certificates in Child Development and Early Childhood Instruction focus on particular aspects of early childhood and prepares students to work with young children in school, childcare, and agency settings. The Child Development Certificate includes 12 credits of coursework that educate students on the basic knowledge required to work with children. The four 100-level courses within the certificate meet the requirements for students to start the credentialing process for their Child Development Associate (CDA). The students are not required to take College Success Skills, there are no literacy courses in the program, and students must place into the first level of developmental English as a prerequisite for the three Child Development courses.

The Early Childhood Instruction Certificate includes coursework that trains students in the care, supervision, and education of children from birth to age 12. The 31 credits include five 100-level and two 200-level Child Development courses, College Success Skills, and three general education courses (Health, English, and Psychology). There is a requirement of the first level of college composition, and students must place into the first level of developmental English as a prerequisite for the seven Child Development Courses. Certificate-holders can work in a variety of public and private child care and preschool programs. Similar to the A.A.S. degree, students could theoretically choose to complete their College Composition course at the end of their program.

Several general education course competencies are supported by the Child Development and Education courses. Critical Thinking is identified in two 100-level and two 200-level Child Development Courses and all six 200-level Education courses. Information Literacy is identified in one 100-level and two 200-level Child Development Courses and all four 200-level Education courses. Written Communication is identified in no 100-level and three 200-level Child

Development Courses and all six 200-level Education courses. Additionally, Oral Communication is identified in one 100-level Child Development Course.

Early childhood education participants. The Early Childhood Education learning community included three faculty members, and was held on the largest of the four campuses. Meredith was a full-time faculty and program head for the Early Childhood Education program at that campus. She held a Master's of Education and a Doctor of Education in Educational Psychology. She had taught in higher education for 15 years in both full- and part-time capacities. She had taught at this institution for six years, with one year as an adjunct and five years as a full-time faculty and program head, all in the Early Childhood Developmental program. She typically taught five or six courses per semester.

Amber was a part-time faculty member in the Early Childhood Development program at the institution. She held a Master's of Early Childhood Education Curriculum and Development, and had been in the early childhood field for 15 years. She had taught part-time at the community college level for 11 years, with the past five years at this institution. She typically taught two or three courses per semester.

Jackie was a part-time faculty member in the Early Childhood Development program at the institution. She held a Master's of Education with a concentration in Early Childhood Education, and had been in the early childhood field for over 30 years. She had taught part-time at the community college level for 11 years, with the past five years at this institution. She typically taught two or three courses per semester.

Learning Community Curriculum

In alliance with the tenets of a learning community (Dufour, 2004), the schedule and curriculum was agreed upon by the members of the learning community during the first session.

This learning community's focus was disciplinary literacy in higher education content courses, and I outlined a potential curriculum with topics, session goals, readings, and reflection questions (see Appendix A). I shared this with the participants prior to the first session with the full expectation that the members would make adjustments, suggestions, and deletions to the curriculum during the first session. This did in fact occur, and the final disciplinary literacy learning community curriculum is outlined in Appendix B.

The members of the learning community agreed upon the following goals during the initial meeting:

- Identify the key components of disciplinary literacy
- Explore the differences between general and disciplinary literacy strategies
- Identify the key disciplinary literacy abilities required in their specific field
- Identify the various stakeholders for collaboration across the college
- Explore enhancements to current curriculum, activities, and assignments to include disciplinary literacy instruction and support
- Identify specific areas of professional development needed to support disciplinary literacy instruction within their courses
- Reflect on current teaching practices in regard to disciplinary literacy

In order to accomplish these goals, each of the five sessions had a specific topic to focus their preparation, discussion, and outcomes. Members of the learning community completed two introductory readings, maintained a personal journal (see Appendix D for suggested prompts), participated in group discussions, and enhanced a current assignment/activity used within one of their courses. The five sessions occurred over a five- to eight-week time frame, depending on the community. The members planned to implement the disciplinary literacy instructional strategies they learned into their courses the following semester.

Prior to the first session, I shared a tentative curriculum for a six-session learning community (see Appendix A) via Google Drive, and I asked the participants to review the schedule and bring feedback to the first session. During the first session, we talked about the

curriculum and communally decided to shorten the learning community to five sessions and merged several of the topics. Additionally, the faculty honestly shared they would not have the time nor the interest to complete all of the readings. They preferred to use their time enhancing their assignments. After a full discussion, they agreed to complete two readings to provide a foundation for learning communities and disciplinary literacy. The final curriculum for the five sessions are outlined in Appendix B and below.

Session 1

The initial session focused on three main topics: introductions of participants, introduction to the study, and the initial focus group interview. The introductions of participants looked a little different in each learning community, so I have provided individual descriptions below. However, the introduction to the study and the questions in the initial focus group interview (see Appendix C) were the same for each learning community.

Early Childhood Education. The three members of the Early Childhood Education learning community already knew each other and had worked collaboratively on previous activities (e.g., committees, program meetings). Meredith was the program head for Early Childhood Education and worked with the other two members (as well as other adjunct faculty) to discuss programmatic issues and curriculum. However, they had not worked collaboratively on literacy-specific initiatives.

While formal introductions were not necessary, we did spend time specifically talking about why each participant agreed to participate in the learning community. The Early Childhood Education faculty were collectively concerned about the literacy skills of their students and their ability to perform discipline specific tasks throughout the semester (e.g., writing lesson plans, completing thorough and reflective observation logs, and making

connections between students' developmental stages and pedagogical decisions). While they had worked together within their department and periodically discussed these struggles, they had not collectively discussed solutions to these issues. They agreed that this learning community would be a way to collaborate with colleagues within their discipline, affirm the struggles they were each experiencing, identify strategies to support their students throughout the program, and provide more consistency throughout the program.

Humanities. The three members of the Humanities learning community already knew each other and had interacted either during division meetings or committee meetings. Additionally, Abigail was an administrative faculty in the professional development center on campus, and Paula and Michael had worked with her during various professional development sessions. However, none of those collaborations were focused on literacy.

While formal introductions were not necessary, we did spend time specifically talking about why each member agreed to participate in the learning community. The Humanities faculty were collectively concerned about the literacy skills of their students and their ability to perform discipline specific tasks throughout the semester (e.g., critical thinking, writing, oral communication). Being that they were all adjunct faculty and there was no full-time Humanities faculty at their campus, they agreed that this learning community would be a way to collaborate with colleagues within their discipline, all have an equal role without worry of losing face, and learn new strategies to support their students within their courses.

STEM. Of the four participants, only the two mathematics faculty had previously worked together, so we spent more time on introductions, background of experience and role at the college, and basic descriptions of programs and degrees. Even though they were in the same department, the two math faculty only interacted during division meetings and social

conversations. They had not spent time working collaboratively on curriculum design or redesign. The Electrical/Mechatronics and Diesel Marine faculty had not collaborated with any of their colleagues within their discipline in this manner either. The four faculty agreed that while they had not considered such a topic before, this learning community would be a powerful way to discuss the role literacy played within their courses as well as strategies they could incorporate into their class.

Session 2

To prepare for the second session, each participant completed three tasks. First, they read Richard Dufour's (2004) *What is a PLC?* and Elizabeth Moje's (2015) *Doing and Teaching Disciplinary Literacy*. This laid the groundwork for our discussions in this session as well as throughout the learning community. Second, each participant completed the first journal entry, which was focused on their personal goals, courses and assignments they may want to consider focusing on during the learning community, and personal backgrounds in education and literacy. Third, the participants reviewed their course outlines and syllabi and chose one or two to bring to the learning community session.

We started the second session with an overview of the structure of learning communities. The participants worked together to outline what a learning community looked like, how it was structured, and what the role was of each participant. The participants collectively identified their purpose, mission, and goals for the five session learning community. We referred back to the mission and goals throughout the learning community as we completed various tasks and discussions.

The participants then worked together to identify literacy tasks they expected of their students as well as strategies that addressed these tasks that they incorporated into their course

instruction. They noted each task and strategy on a sticky note and posted them on a discipline-specific poster board. Since the Early Childhood Education and Humanities learning communities were each comprised of faculty in one discipline, they completed this task as a group. The STEM learning community was comprised of faculty from three disciplines, so they completed the task in three groups. After they created three posters, they then compared their tasks and strategies to find commonalities.

I provided a brief description of content area literacy versus disciplinary literacy, and we discussed at length Moje's (2015) 4Es heuristic with disciplinary practices (see chapter 2 for a more in-depth description). In this heuristic, Moje (2015) outlines the four disciplinary teaching practices (engaging, eliciting/engineering, examining, and evaluating) as well as the six disciplinary practices that comprise the engaging portion of the framework (problem framing; working with data; using varied media to consult and produce multiple texts; analyzing, summarizing, and synthesizing findings; examining and evaluating claims; and communicating claims). Unpacking this heuristic required the faculty to consider both disciplinary content and disciplinary literacy practices. The participants discussed what this might look like within their specific disciplines. Using their posters, they then identified whether each task was a general literacy or discipline-specific literacy task. This was eye opening to the faculty in each of the learning communities as they had not previously separated the literacy tasks in this manner.

We wrapped up the session by discussing the courses and assignments the faculty were thinking about using for the application portion of the learning community. Each faculty member shared a course or two they wanted to focus on, and they confirmed that the course did include the specific tasks they had outlined on their poster.

Session 3

To prepare for the third session, the faculty members completed two tasks. First, they completed a second journal entry focused on the 'ways of knowing' within their discipline, the content the students experienced in the class, and the thinking processes required for students to be successful in the class. Faculty discussed this in the realms of reading, writing, and thinking. Additionally, they discussed their personal strengths as an expert in the field and as a faculty member in the discipline. Second, they reviewed Moje's (2015) article and heuristic. Third, they reviewed assignments and activities within their courses and brought two or three examples that required discipline-specific literacy skills.

We spent a fair amount of time in this third session unpacking and applying Moje's (2015) 4E heuristic. The participants identified practices within their disciplines that aligned with the disciplinary practices she laid out in the heuristic. They referred to their posters to align the specific tasks they expected of their students with these disciplinary practices. The participants also discussed the four disciplinary teaching practices (engaging, eliciting/engineering, examining, and evaluating) in the heuristic and made connections to their own instructional strategies they used within their courses.

After a discussion on the culture and membership of a discipline, the participants worked collaboratively to define what it means to be a member of their particular discipline by outlining a list of traits, behaviors, and knowledge. The participants revisited this list in each of the remaining two sessions and made minor edits and additions as they continued to develop their personal knowledge of disciplinary literacy.

Finally, the participants identified their assignment or activity that they wanted to work with throughout the remainder of the learning community. They identified the discipline-

specific literacy skills required to successfully complete the assignment or activity. They brainstormed and solicited feedback from their peers regarding their initial thoughts about enhancements for this assignment or activity.

Session 4

To prepare for the fourth session, participants completed four activities. First, the faculty posted the original assignment or activity they chose to work with on the Google Drive. Second, they drafted their enhancements for the assignment or activity they chose to work with in this learning community. Third, they completed their third journal entry focused on the activity or assignment they chose to work with, the enhancements they made, and the experiences they had during this process. Finally, they identified and brought the assessment component of the assignment or activity to the session.

The first half of this session was focused on the enhancements of the assignments and activities. The participants discussed their enhancements, successes, struggles, and questions. For example, several faculty articulated the ways in which their limited knowledge base in literacy theory and pedagogy impeded their ability to seamlessly integrate disciplinary literacy support within their assignments. This was a new feeling for many of them as they were accustomed to using their deep knowledge of their content to drive their pedagogical decisions. Instead, they found they now needed to build knowledge of literacy and the role it played within their discipline. The faculty leaned upon their colleagues, and they solicited from and provided feedback for their peers as they worked through the process of enhancing the assignment or activity. They related their enhancements both to the disciplinary practices and disciplinary teaching practices in Moje's (2015) heuristic of teaching disciplinary literacy as well as to their posters from the previous sessions.

The second half of the session was focused on the assessment component of the assignment or activity. The participants shared their current assessment and identified whether they were confident in its ability to measure the disciplinary literacy practices. They brainstormed about ways to enhance the assessment in order to incorporate disciplinary literacy. They discussed both formative and/or summative assessment options and weighed the role each could play within the particular assignment or activity. Finally, they identified a plan for how they would enhance the assessment.

Session 5

To prepare for the final session, the participants completed four tasks. First, they completed the enhancements for the assignment or activity (if additional enhancements were identified in the previous session) and the assessment. Second, they posted the initial, working, and final versions of the assignment or activity and the assessment on Google Drive. Third, they completed the fourth and final journal entry focused on the enhancement process of their assignment or activity and assessment, their current understanding of disciplinary literacy within their field, and their experiences throughout the learning community. Finally, they brought ideas for curriculum change within their courses and/or program to the session.

During the session, the participants revisited their mission statement, goals, definition of a member of the discipline, and their tasks and strategies posters. They shared their final assignment or activity as well as the assessment. They identified future enhancements they wanted to make with other assignments, activities, or assessments in their courses. They each identified an action plan for how they would work in the future to integrate literacy instruction within their courses.

The participants also discussed how they could possibly collaborate with other colleagues at the institution in the area of disciplinary literacy. They anticipated potential roadblocks they might experience (e.g., time, administrative support) as well as potential solutions to overcome those roadblocks (e.g., grant-funded professional development, expanding collaboration to spread the workload). Finally, they identified the resources they would need in order to support such a collaboration. The fifth session concluded with the final focus group interview.

In summary, this chapter described the full context of the study. First, I presented background information and demographics on the institution where all three learning communities were held. Second, I described the participants, their disciplines, and their programs. Finally, I outlined the curriculum followed during the five sessions of the learning community.

CHAPTER 5

FINDINGS

This study was designed to investigate the impact, if any, a disciplinary literacy learning community had on discipline faculty's attitudes about their role as a literacy educator, their practice with disciplinary literacy in their courses, and their self-efficacy with disciplinary literacy instruction. Three learning communities, each comprising a case and centered on a specific discipline, were held with discipline faculty at a large community college. The faculty participated in five learning community sessions, learned about Moje's (2015) 4Es framework of teaching disciplinary literacy, enhanced an assignment to include a focus on disciplinary literacy, and completed four journal entries.

This chapter outlines the findings for each of the three cases. The findings are described in light of the research questions:

1. How does participating in a literacy-based professional learning community impact community college discipline faculty's perception of their role as a literacy educator?
2. How does participating in a literacy-based professional learning community impact community college discipline faculty's self-efficacy in regard to integrating discipline-specific literacy instruction into their content courses?
3. How does participating in a literacy-based professional learning community impact community college discipline faculty's practice of incorporating disciplinary literacy instruction into their content courses?

The three cases are ordered Humanities, STEM, and Early Childhood Education as this order shows a possible progression of knowledge and practice acquisition with disciplinary literacy. The cross-case analysis is presented in the discussion in Chapter 6 to show commonalities and

differences across the three cases.

Humanities: Being Mindful of Disciplinary Literacy

In this section, I present the experiences of the three Humanities faculty throughout their learning community, their understanding of the role literacy plays within their discipline, their perceptions of their role as a literacy educator, their practices with literacy instruction within their courses, and their level of self-efficacy with incorporating disciplinary literacy into their instruction. Additionally, I present any changes experienced by the participants as they learned about disciplinary literacy, unpacked Moje's (2015) 4Es framework, and enhanced current coursework to include disciplinary literacy.

Introduction of Learning Community and the Humanities Discipline

Three Humanities part-time faculty volunteered to participate in this learning community focused on disciplinary literacy within the Humanities discipline. See Chapter 4 for a full description of the Humanities discipline, program, and faculty. They had not previously collaborated on such an activity, and it was important to build a sense of community among the participants (Dufour, 2004). Thus, the first session was focused on getting to know each other, developing a joint mission statement, and identifying shared values. During the second session, the participants identified what it meant to be a member of the Humanities discipline. These actions allowed the participants to better understand their individual and collective intentions and expectations.

Participants. Three adjunct faculty participated in the Humanities learning community: Abigail, Paula, and Michael, none of whom had any formal training in literacy. They currently taught the following 200-level Humanities courses: Survey of Western Culture I and II, Survey of Twentieth-Century Culture, and Creative Thinking. Abigail and Michael attended each of the

five learning community sessions and completed all tasks (e.g., readings, journals, assignment enhancement). They were very forward and participatory throughout the sessions. Although Paula seemed willing and excited to be part of the learning community, she only attended three of the sessions and did not complete any of the journal entries or assignment enhancement. However, she did provide valuable insight during the discussions in the session she attended.

Mission statement. During the first session, the participants collaboratively defined their mission statement for the learning community. Throughout the sessions, they aimed to "explore the possible uses of disciplinary literacy within instruction in order to help our students succeed in comprehending and applying concepts within the Humanities". As they had limited background in literacy instruction, they were mostly interested in learning about how it could align with their current instruction. Each participant showed interest in exploring the role disciplinary literacy could play in their instruction and their students' success.

Shared values. The participants were acquaintances, but they had not collaborated previously in the area of Humanities course design or redesign, instructional strategies, assignments, or even to share the struggles they experienced in their teaching and classrooms. To lay the groundwork for strong collaboration during the learning community, we agreed it was important to identify common values held by all participants. They discussed at length their personal, classroom, and literacy values, and identified these values as follows:

Humanities Shared Values

Personal Values:
- We are each lifelong learners.
- We value collaboration in teaching and learning.
- We are curious and want to know more.

Classroom Values:
- We value the diversity in our students and their experiences.
- Diversity plays an important role within the classroom.

- It is important that we engage in clear communication (expressive and receptive).

Literacy Values:

- There is a practical role literacy plays within my class and in college.
- We are unsure about the role disciplinary literacy plays in our classrooms.

It was through this discussion that the faculty first verbalized their uncertainty about the multiple roles literacy played within their classroom. They recognized students needed to have practical, foundational literacy skills and be able to read and write well in order to be successful in their courses. However, they admitted to not understanding what made disciplinary literacy different than the practical literacy they were accustomed to addressing in their classroom.

Member of the discipline. As we discussed the concepts of practical (basic) and disciplinary literacy, we agreed it was important to define what it meant to be a member of the Humanities discipline. The faculty provided the following examples as individuals who would be considered experts in the Humanities field: museum curators, professional performers, satirists, authors, poets, and aficionados. These individuals used the skills and practices specific to the Humanities discipline in their role in society on a daily basis.

After working through their thoughts collaboratively, the participants developed the following definition: "A member of the Humanities discipline understands the importance of Humanities and the role that it plays within the larger context in society". When thinking about their students, the faculty wanted them to "understand and communicate the significance of the relationship of cultural products (art, literature) within cultural context (political, social, economic, historical, philosophical – all social sciences)". They focused extensively on students' ability to write and speak about this relationship, and they shared their struggles with some students' limited ability to do so.

As we dug deeper, the faculty extended their definition to include the concept that students needed to be able to "appreciate and integrate the Humanities in various facets of life (conversation, movies, etc.) and constantly connect what they are consuming to other things they are consuming, or to your lived experiences". Essentially, they wanted their students to engage in all aspects of Humanities in order to make connections, think critically, and draw logical conclusions. When discussing Moje's (2015) 4Es framework, the faculty agreed that all of the previously listed tasks aligned directly with the disciplinary practices (problem framing, working with data, using varied media to consult and produce multiple texts, analyzing, summarizing, and synthesizing findings, examining and evaluating claims, and communicating claims). This was a defining moment for the faculty as this is when they started to recognize that their students were struggling with these practices, and they recognized that they did not know how to modify their instruction to address each of the disciplinary practices.

Initial Perceptions of Literacy and the Humanities Discipline

During the first two sessions, the participants and I spent the majority of the time identifying their initial perceptions of literacy within their discipline. They examined their courses from the perspective of a literacy educator, curriculum developer, student, and administrator. While this was challenging at times, the experience allowed the participants to better understand the perceptions they held before joining the learning community. Further, it allowed them to identify these perceptions prior to making any enhancements to their practice.

Perception of role as a literacy educator. During the first learning community session, we discussed at length the definition of literacy. Initially, this was difficult for the faculty. "I'm not even sure I can define what it means to be literate in Humanities specifically" (Abigail, Journal 1). While they typically felt that literacy was reading and writing, I pushed them to

expand their thinking about literacy to also include critical thinking and communicating, two skills they repeatedly expressed as critical in order to be successful in their classes. Initially this was a bit challenging for them as they kept identifying foundational literacy skills, but over the session and throughout the learning community, they began to shift their view to a broader perspective of literacy, as Abigail expressed during the first focus group interview.

> Well, I initially think, literacy means reading, so in college you know how to read, okay? So, I don't really need to teach you anything. But then when I think about literacy from the broader perspective, I recognize, well, actually I kind of am teaching literacy because I'm always teaching about writing and communicating. And I am teaching about a different way of comprehending what you're reading, so I'm feeling like that's associated with literacy. That's not how I would have defined it before, though, but hearing the definition of literacy makes me think about it a little differently. And, it also makes me think, 'oh, crap, that's a lot of stuff to teach'.

This quote is a representation of how the participants began to shift their thinking about literacy within their Humanities courses by redefining their previous definitions of literacy within a college classroom.

In the initial focus group interview in the first session, I engaged the faculty in a discussion about whose role it was to teach literacy in a college environment. Paula shared, "Well, I guess we should be, but I don't think we focus on that. I think when they come in we assume they have those basic skills already. And so, I don't think we've…I've…thought about that much" (Focus Group 1). They expressed a need for direction, instruction, and support, and even felt they needed to be told to do it and specifically how to do it, as articulated by Abigail during the initial focus group:

> I don't know a professor who has never uttered, 'Oh these kids are not prepared'. But I've also heard high school teachers say, 'It's the elementary teachers' fault.' And I've heard the elementary teachers say, 'The parents need to do it.' So at some point if we all are supposed to be literacy instructors, I guess I've got to be told. And I've got to be told how to do it. We already recognize that philosophically we all need to do it, and we also recognize there is this big need.

Each participant agreed with Abigail in that it was part of their role to teach literacy within the Humanities, but they did not know what that specifically looked like or how to design and implement literacy instruction.

Without literacy being brought to the forefront of discussion, they did not feel as though it was something they were used to addressing in the classroom. "I'm removed from literacy – I don't think about it because it's not something I have anything to do with, until the aftermath" (Abigail, Focus Group 1). Michael argued that in order to really teach disciplinary literacy within the Humanities courses, preparation was a key factor. "I think it has to do with where you received your degree" (Michael, Focus Group 1). He felt that not all faculty held the background necessary to teach literacy and many did not have the pedagogical background. His conclusion was that one's ability to teach literacy within the discipline was based on the program you graduated from and the experiences you had with your undergraduate and graduate professors.

> I feel like maybe at times the teachers were trying to teach us kind of the literacy side of things but maybe not excelling as much because maybe they felt they like didn't need to. And at first going into it I wasn't sure if I needed to but then I realized quickly that it had to be done because sometimes it just depends on who's coming in and where they are coming from. At the same time, if they have that literacy background, even from the high school they normally read and write and we have to catch them up at times and I feel like we need to do that. (Michael, Focus Group 1)

Michael clarified that while having that pedagogical background resulted from both instruction on how to teach as well as to modeling from professors in degree programs, it was also a necessary skill for college professors to have.

> But with the literacy side of things, no matter where you're going to be educating in some way or another. So I think part of the hope, depending on where you graduate from, is to have that ability to do it, maybe? (Michael, Focus Group 1).

Literacy skills within the Humanities discipline. As they continued to discuss the definition of literacy as well as their role with teaching literacy in Humanities courses, they

looked at the specific role reading, writing, thinking, and communicating played within the Humanities discipline. All three participants agreed that there were specific literacy skills needed to succeed in the Humanities classroom. They were highly engaged in the literacy skills activity, where they noted all of the literacy-related skills students needed to succeed in their courses (see yellow sticky notes in Figure 3). They also identified the strategies they currently used within their classroom to support literacy (see blue sticky notes in Figure 3). At this stage, they simply listed all of the skills and strategies.

Figure 3: Humanities literacy skills and strategies.

After they identified the literacy skills students needed and instructional strategies they implemented within their courses, I asked them to group similar skills together. They grouped these skills into four categories: critical thinking, writing, reading/vocabulary, and research/information literacy.

Critical thinking. Critical thinking was identified by the participants as the most important literacy skill for participation and success in the discipline, as well as one of the most

difficult in which students successfully engaged. In every discussion, activity, lesson, assignment, etc., the faculty expected their students to engage in high levels of critical thinking. For examples, students were expected to evaluate texts (artwork, primary sources, etc.), compare and contrast these texts and/or different times throughout society, and draw conclusions based on their knowledge and experiences. The faculty recognized that foundational literacy skills were needed in order to engage in higher level critical thinking, but they struggled with identifying how to provide adequate support for their students to navigate this path.

Writing. The participants each expected their students to write papers in the classroom, but their expectations varied. Michael purposefully set his expectations low at the beginning of the semester (1-2 pages, somewhat organized) so he could gauge where his students were and differentiate as needed. Abigail purposefully set her expectations high (5-8 pages, well organized in content and thought process) and found herself spending a lot of time supporting her students with their writing. Paula did not articulate her expectations beyond that the paper had to make sense. She did clarify that she did not assign many writing activities in her courses. As these are 200-level courses, the participants struggled with how much support to give with writing as they felt students should have strengthened those skills prior to their class. Further, they grappled with the relationship between writing and other literacy skills, as evidenced by Michael's comment during the initial focus group:

> I think to add to that is the writing component where a lot of times we look at literacy based on the reading idea, but the writing kind of falls into it because they typically have to come back and read what they wrote. It's one of those really core competencies in getting the critical thinking together, which is a big thing in Humanities.

They recognized that students needed all of these literacy skills in order to engage in the higher level critical thinking they deemed so important in their Humanities courses.

Reading and vocabulary. When our discussion of literacy first began, reading was the first literacy skill mentioned. However, it seemed to be the most daunting for the participants to incorporate into their instruction. They each recognized that comprehension of the materials (e.g., textbook, primary sources) was essential to succeed in the Humanities classroom. Michael implemented early activities within his courses to identify the levels of primary and secondary sources the students were successfully able to read and answer a set of questions about. He then slowly built up the difficulty of the materials as the semester went on, but he admitted that he did not give specific reading comprehension strategy support within his classes.

Abigail did not differentiate the sources, but she did suggest that her students' struggles with the terminology specific to the field were directly related to their comprehension of the materials. The participants agreed that vocabulary played an important role in the Humanities classroom, and they expected their students to be able to read, write, speak, and think using the discipline-specific vocabulary. They noted a large number of students did not use discipline-specific vocabulary, and they found it challenging to know how to best teach and support students with developing this knowledge.

Research and information literacy. Finally, the participants expected their students to engage in high quality research practices and utilize strong information literacy skills. The faculty discussed how quickly their students deferred to Google to find the answer or opt to use Wikipedia as a credible source. They found that rather than reading the material and thinking critically about its content and credibility, their students were often looking for the quick answer so they could move on to the next task. They knew their students needed to have strong information literacy and research skills in order to be a member of the Humanities discipline and

to be successful in their courses, and they recognized the need to support their students in this area.

Expectations of students' literacy abilities. The participants held varying expectations of their students' abilities coming into their Humanities courses. There was no literacy prerequisite for the course, and even if students took a Developmental English course previously or concurrently, the faculty did not think it would adequately prepare them for the higher level, discipline-specific literacy skills needed in the Humanities courses. For example, they recognized that students would receive instruction and support with basic reading and writing within a Developmental English course, but they also recognized there would be limited, if any, opportunity for their students to develop the application to the Humanities discipline and the ability to think critically while comparing and contrasting sources across culture and society.

Abigail held high expectations of her students coming into her classes (e.g., 5-8 pages, well-structured paper). She held her students to that high expectation, but she claimed that she was often discouraged by their lack of college-level writing ability. She also expected them to be able to read and comprehend the textbook and all materials on Blackboard, and she expected them to apply that knowledge to course activities. It was those skills she expected them to come into her class with so she could then guide them to extend their skills to the higher levels needed in her course. She identified critical thinking as a specific skill necessary to succeed in Humanities, and she recognized her role in leading students through the development of their critical thinking during class discussion, activities, and assignments. However, she noted several times that their lower levels of foundational literacy impeded her ability to guide them to those higher levels.

Michael, on the other hand, held lower expectations of his students coming into his courses (e.g., 1-2 pages, fairly well-structured paper). He claimed he held higher expectations earlier in his career, but from his experiences of incoming students with a wide range of abilities, he found that he taught a better course when he started with lower expectations. He administered several formative assessments over the first two weeks of class in order to determine where his students scored in terms of ability to read and comprehend primary and secondary sources. Then he differentiated his activities to help support and scaffold his students as they developed their reading and comprehension skills. He identified this practice as helpful for his students, but he also identified it as a time-consuming practice that was difficult to maintain over his high course load. He was discouraged that he had to even implement this strategy, but he found that if he did not, he was even more discouraged with the students' low levels of achievement. With his high course load and large number of students, he recognized that some students could easily slip through the cracks during these early assessments.

Paula identified her initial expectations of her students as being able to write and read at a college level, although she did not discuss specifically what that would look like at a college level. She explained in the initial focus group interview:

> I expect them to be able to read and comprehend. None of the textbooks I use are extremely difficult to understand, so I expect them to be able to read the text and understand it, the concepts. I expect them to be able to write a – I don't worry about grammar too much, but I expect them to be able to put a sentence together, and you know, have it make sense. I'm more worried about content.

Paula's situation was a bit unique in that most of her students were dual enrollment students (high school students who had completed their high school requirements and were taking courses for college credit). She found she was teaching high school seniors who still had many skills to develop. She chose to focus her grading only on the content and not on the grammar, structure,

and organization, as those items should be supported through other avenues for literacy support in high school, college and elsewhere. "I don't want them to worry about grammar. I want them to be able to tell me about the content more so than their writing ability" (Paula, Focus Group 1). She also shared that she did not include many written assignments because of the varying level of incoming work, her lack of confidence in grading grammar, and the time it took to grade all of the papers. Thus, she focused most of her assessments on class discussions and multiple-choice tests which her students could retake as often as they wanted.

Obstacles to literacy instruction within the Humanities discipline. The participants identified many institutional and student obstacles that either prevented them from incorporating disciplinary literacy within their classroom or they perceived would prevent them as they moved forward. They agreed there was minimal support from their institution. The college did not disseminate literacy education information. Further, they felt their deans and program heads did not 'tell' them to implement instruction focused on literacy within their discipline. While each of the participants were self-starters, they found that not having strong mentors made their roles as an adjunct very difficult. There were not any full-time Humanities faculty at the institution, and the full-time faculty who taught Humanities were mainly English or History faculty members. The majority of the Humanities courses were taught by adjuncts, many of whom taught at multiple institutions and did not interact often with each other, full-time faculty, or administration. Academic freedom allows faculty to choose what to incorporate in their classrooms, and without the knowledge of how to teach literacy, faculty might not even know to include it. There was no specific training offered or required, and there was minimal support (time, money, requirements) for faculty learning communities to investigate literacy on their own. Without the institutional support, the adjunct faculty in this learning community felt that it

would be too hard to enact change to add the disciplinary literacy requirement to the courses. They knew there was a way for the institution to better support the faculty, but without a policy or directive from administration, Abigail retained little hope, as expressed during the first focus group: “There is definitely a role that the institution could play in disseminating literacy education information, providing training, and having learning communities like this one, but who would tell me to do it?” All three adjunct Humanities faculty members lamented over the dichotomy of their desire for more support from their colleagues and administration and their feeling of frustration at not being able to express this desire effectively to administration.

The faculty also identified several student obstacles they faced when considering implementing literacy instruction into their courses. The biggest obstacle faculty identified was the students’ lack of preparation for a 200-level course. They agreed that many students needed to strengthen their foundational literacy skills prior to coming into their course, making activities that required disciplinary literacy much more challenging for them. While the college has Developmental English courses for students to strengthen these basic skills, they did not feel developmental coursework necessarily prepared them for the literacy required within the Humanities discipline. Further, students could enroll in Humanities courses without having taken Developmental English or College Composition. Without this prerequisite in place, they felt they had to either support the students’ development of foundational literacy skills or ignore their lack of skills and focus on grading for content and not writing, for example.

Avenues for student support with literacy. The faculty talked about several places where students went for support with literacy. For both their online and face-to-face courses, they honestly shared they did not know where their students received support. The students rarely came to them for help, they did not know who was taking (or had taken) Developmental

English or English Composition and how much growth was exhibited during the course, and they were not sure how many campus and online resources students were actually using. They were not aware of a way that the college kept records of any of these support options, and the faculty had never received information as faculty about the usage.

The participants identified the Learning Assistance Center (LAC) on campus as a student support option that focuses on the basic structure of writing. They agreed that this was a helpful support option for students, but they also agreed that the support would not be very beneficial with the content or disciplinary literacy skills. Their students needed assistance with foundational literacy skills, but their students rarely went, even if they were offered extra credit. The faculty were not sure of the quality and qualifications of the tutors, and sometimes even experienced student work having more errors on it after having gone to the LAC for assistance. They did not collaborate with the LAC to discuss the support given or how they could help with the Humanities content/disciplinary literacy. When asked if they felt this would help their students, they agreed it would. However, they were quick to add that their limited time and lack of knowledge about the LAC often prevented them from taking this step.

In terms of research, formatting, and information literacy, Abigail shared that she encouraged her students to use Purdue OWL and library resources on campus or online. For content knowledge, they each expected their students to use the textbook and resources they provided, but they did not monitor their use to know exactly how much support they were for the students. They agreed their textbook was not hard, but they did occasionally have some students say that it was difficult. When asked, they were not able to identify the grade level at which their textbooks were written. They did not offer any additional support options for improving student comprehension of the textbook.

They witnessed their students rushing to Google or Wikipedia for support and quick answers in all areas of their course. Although they agreed this might be okay for some basic foundational knowledge, they strongly discouraged their students to use either as a consistently reliable source. However, they did not have additional sources beyond the course textbook to offer their students.

Literacy instructional strategies utilized within the Humanities discipline. During the second learning community session, the participants analyzed their sticky notes and matched up the strategies they were using in their classes with the skills needed in order to be successful in their classes (see Figure 4).

Figure 4: Humanities grouped literacy skills and strategies

Once they matched the skills with the strategies in the classroom, they began to think about how they currently supported disciplinary literacy in their Humanities courses, as well where there were missed opportunities to support their students. They regrouped their skills/strategies sticky notes and determined where possible holes were in their instruction or what specific skills

perhaps were not being supported in their classroom. This was a valuable activity for the participants, as articulated by Abigail in her fourth journal entry:

> When it came time to pair tasks and strategies together, it was clear that some tasks were not supported with strategies. This activity helped illuminate gaps in my teaching practice. I'm grateful for that because now I can begin to fill them!

Most of the literacy support the participants were currently providing their students was in line with foundational literacy strategies. The participants grouped the skills and strategies into four main areas: critical thinking, writing, reading/vocabulary, and research/information literacy.

Critical thinking. As the participants grouped the skills and strategies, they found that the majority of the instructional support they gave to their students were in the area of critical thinking: evaluate, analyze, and apply. They supported their students in those higher level skills but did not typically provide support for the foundational literacy skills (reading, vocabulary, writing) needed in order to complete those higher level skills successfully. They argued that their objectives for their courses, as well as the large amount of content to cover, prevented them from providing that foundational literacy support. Further, they felt that in general, students should have all of those foundational literacy skills coming into their 200-level courses. They recognized that this was not the case for many of their students, and they struggled to find the middle ground of how to maintain college-level expectations for their coursework while best supporting their students in order for them to be successful in their classes.

For example, they each expected their students to analyze a given work within the cultural context, identify the significance of the work, and present their analysis in written or verbal form, all disciplinary practices identified in Moje's (2015) 4Es framework. This might be in the form of a written paper or prepared verbal presentation. In order to do this, students needed to be able to adequately read the text and course materials, use current technology for

research, and write an organized and well-developed paper or presentation. They shared that their students struggled with these foundational literacy skills, thus impeding their ability to complete the course-specific task using higher level, disciplinary literacy skills and practices. This led to an internal conflict on how much to expect of their students and how best to support their students throughout the course.

Paula provided opportunities for group activities where students collaborated and drew group conclusions. She discussed how she wanted them to be able to work together, discuss concepts, and draw conclusions. By working together, she felt this would force the students to take a stance and then work to defend that stance. However, she found that students were quick to allow one 'leader' to identify their conclusion and the others would agree. She admitted her frustration with this resulted in her moving on to a new lesson rather than modeling how to constructively discuss different opinions and drawing a conclusion.

Writing. Abigail provided scaffolding over the course of the semester so students wrote pieces and built up to the final paper. Most of her feedback related to the structure of the paper, organization, and grammar, but this also gave her an opportunity to provide support for students with critical thinking, synthesis of content, and proper use of vocabulary. She found this was a lot of work for her, but her students had better papers in the end because of it. For all of her assessments, she used rubrics.

Michael conducted assessments at the beginning of the semester in order to identify where his students were literacy-wise (mainly reading and writing). He then tailored his activities and assessments to meet them where they were and then slowly raised the level/difficulty throughout the semester. He admitted that this took a lot of time, and he had to find a common level at which to teach all his students. This meant that some students still

struggled and some found it too easy. He also found that this was extremely difficult in his online classes when he had less contact with the students. He had tried several strategies to streamline this process but was still determining the most effective way to support his students.

Reading and vocabulary. For example, in her online course, Abigail provided videos that synthesized the material from the text, elaborated on the terminology needed for the module, and modeled proper use of the content. She found that providing information in multiple ways allowed students to access the material in a way that best suited them, although she admitted that she had not implemented any assessment within her course to see if any or all of those methods were successful.

Paula focused her vocabulary support on pronunciation of terms and identification of meanings. She worked to raise the students' confidence and willingness to take initiatives by showing them where they could find the information about the specific terms. However, she shared that her students rarely took this initiative and she needed to spend time in class on how to pronounce and define the terms for the particular unit.

Research and information literacy. Abigail included an extra module in her online course that focused on information literacy, providing students practice with finding OER, conducting research, and recognizing best practices with information literacy. She posted tips and strategies for her students in an attempt to strengthen their knowledge and experience with OER. In a response to his students' eagerness to resort to using Google or Wikipedia to find sources, Michael spent class time modeling proper identification of credible sources. Additionally, he showed his students how all sources should be thoroughly checked. For example, he altered content on a specific topic on Wikipedia before class and then asked his students to research that topic. He found that most of his students used Wikipedia to provide the

answers, and they were shocked when they found out the information was incorrect. He shared his desire to create a more formal lesson on research strategies and information literacy, but he had not had the time to do this as of yet.

Self-efficacy with literacy instruction in the Humanities. Paula did not hold high self-efficacy in terms of her ability to implement literacy support in her classroom. She spoke several times of her own weaknesses (communication, writing, grammar) and admitted that as a result she did not hold her students to high standards in those areas.

> Writing would be my weakness, I would have to say. Maybe that's why I don't grade their grammar. Because it does take me awhile, and I'm not real up-to-date with certain technology, and I don't make them – when they do write their papers – I don't make them cite formally. I make them put it in the text where they got it. I know that's probably not proper, or the right way to do it (Paula, Focus Group 1).

In terms of critical thinking, she felt she gave her students opportunities to practice, but she was not sure how she could help them if they did not succeed. She shared that she did not model the thinking processes, and further, she did not walk around the classroom to listen in and interact with students while they were participating in group discussions.

Abigail, a very confident person in general, said that while she was not exactly sure what disciplinary literacy was, so therefore she was not sure how to do it, she was confident she could do it if she knew.

> I don't know that I know all…I mean I feel confident that I do it, but I don't feel confident that I have the formal language or the training or the tools to do it. Like if you showed me, 'This is how you do it', then yeah, I could do that. I've never been shown specifically how it should be done (Abigail, Focus Group 1).

She also alluded to the fact that she had never been shown to do it, and if she was shown, she would be able to do it. Due to time constraints and the varying abilities of her students, she was not sure exactly where the best place would be to start learning how to teach literacy within her Humanities courses.

Michael was also a very confident person, and he agreed with Abigail that he could do it if he was properly trained.

> I feel like I can do it. I feel that the weird thing that we miss probably as all of us being faculty is that they don't teach you how to teach. You are kind of thrown to the wolves when you graduate and clearly you must know what you're doing, 'cause you're here…I hope (Michael, Focus Group 1).

Michael was overwhelmed with his high teaching load of both Humanities and History courses at two institutions (seven courses total). While he was confident he could teach literacy if he knew how, he was not sure when he would find the time to make the curricular changes in order to be successful. He claimed there was a lack of support in place to help him build his self-efficacy with teaching (both literacy-specific and general pedagogy).

> I feel like I do a good job, but I could always do better. And obviously not being taught, we kind of agree that not being taught how to do it maybe makes me think, 'Am I doing this the wrong way?' I don't know (Michael, Focus Group 1).

This frustrated him as he prided himself in his ability to teach, and he truly wanted to strengthen his teaching and support of his students. However, with the lack of a full-time Humanities faculty member/mentor and limited professional development opportunities in this area, he recognized he would not have the time to spend on developing this on his own.

Enhanced Assignments/Activities

One of the big tasks to complete during the learning community was to enhance a current assignment or activity to include disciplinary literacy instruction and support. After spending the first two sessions on learning more about disciplinary literacy and unpacking Moje's (2015) 4E heuristic, they each agreed they held high expectations in the disciplinary teaching practices of *eliciting/engineering*, *examining* and *evaluating* within the Humanities. However, they struggled with how to reach these levels of 4Es when their students were having such difficulty with *engaging* with the content. After much discussion, they recognized that while they expected

their students to possess each of the specific disciplinary practices (problem framing, working with data, using varied media to consult and produce multiple texts, analyzing, summarizing, and synthesizing findings, examining and evaluating claims, and communicating claims), they did not did not spend much time within class supporting their students in this area. They wanted their students to be able to think critically and perform higher level tasks, but they had not laid the groundwork for the various components of engagement that needed to be mastered first. Further, they were not sure how to support their students in these areas. Thus, each of the participants chose one assignment or activity to enhance based on the disciplinary practices they were not currently supporting adequately per their own evaluation in the sticky note activity (see Figure 4).

Paula: Problem framing. The first disciplinary practice in Moje's (2015) 4E heuristic is *problem framing*. Paula repeatedly shared her frustration with her students' ability to complete specific critical thinking tasks within her class, and she attributed this to their lack of connection to the material and her struggle with how to best communicate the critical thinking processes. She had always provided the purpose, questions, and task list for her students. However, she recognized that these questions were not always 'real world' questions. As "this was an essential starting point for disciplinary work" (Moje, 2015, p. 263), she determined it would be more effective for her students to generate their own questions to guide their inquiry. She did not feel comfortable modeling the process of generating questions for inquiry in front of her students, but she did feel she could video herself modeling the process and then share the video with her students. Abigail and Michael supported Paula in that this was a great starting point for her, and they both offered to help her with the technology component. Even so, she shared her concerns with effectively communicating the process for her students, and she delayed starting on the

process. Despite the fact that Paula did not complete this enhancement, she did recognize the importance of her students taking an active role in *problem framing* during the early stages of inquiry.

Abigail: Working with data. The second disciplinary practice in Moje's (2015) 4E heuristic is *working with data*. When looking specifically at the Humanities discipline, the faculty agreed that data were the primary sources (poetry, music, art, etc.), specific terminology, and important individuals. They expected their students to be able to analyze sources, learn and use appropriate terminology, and make connections between sources, individuals, and society. However, they did not include instruction and practice on how to apply their knowledge in a manner consistent with the field. Abigail recognized that before students could compare two sources, an activity that would occur during the *Examining* and *Evaluating* stages, they would need to better understand the specific aspects of that source, the terminology associated with the source, and the role different individuals played with and around that source.

Thus, Abigail decided to focus her enhancement activity on vocabulary support, development, and reinforcement. She worked with her foundations module in one of her online courses. She decided to cut the module in half, reorder it, and simplify the content so students could focus only on the Humanities terminology. She rerecorded her introduction video to clean it up and make sure to use more of the terminology in her own communication. "I was more mindful to integrate the lingo of Humanities to mirror the expectation I had of my students" (Abigail, Session Discussion Notes). She then hyperlinked the terms in her samples so that there were direct examples of cultural products. Finally, she embedded flashcards using Quizlet so her students could practice defining and applying the terminology. The feedback from the other

participants was positive, and Abigail shared her renewed confidence about supporting her students with specific Humanities terminology.

Michael: Examine and evaluate claims. Another example of a disciplinary practice during the *engage* stage is to *examine and evaluate claims*. Michael expected his students to engage in this skill during a summative movie critique paper he assigned due toward the end of his course. Students were to choose and watch a movie, write a full summary, and identify and explain two accuracies and two inaccuracies within that movie. The students were expected to *use varied media* (movie, primary sources, secondary sources, textbook, etc.) to support their critical analysis as they *analyzed, summarized, and synthesized findings*, each important disciplinary practices. Michael was pleased with this assignment because it required higher level critical thinking (*eliciting/engineering, examining* and *evaluating*) and would be a task members of the discipline would perform. However, he was finding that students were struggling with both using multiple media and effectively analyzing, summarizing, and synthesizing those media in order to identify their claims. As we discussed why this might be occurring, Michael realized he expected his students to be able to examine, evaluate, and communicate their claims but he did not provide support with the disciplinary practices necessary to be successful.

Thus, for his enhancement project, Michael decided to develop a small group activity for his students to complete in class before they began the independent movie assignment activity. This activity would provide his students the practice working with and analyzing varied media in order to identify their claims. He prepared a bundle of short, 4-5 minute clips for the students to watch in small groups. They would need to collaboratively determine the connection between the clips (e.g., French Revolution) and write a brief summary. In their summary, they would need to identify what similar themes were present in each of the clips (e.g., focus on peasants). Then

they would need to determine if the representation of the theme was legitimate or not. Using a variety of resources from class, they would need to then collaboratively identify one accuracy and one inaccuracy and provide thorough support of their claims. Finally, the students would present their claims and evidence to the class. Since all of the students were presenting on the same clips, the students would have the opportunity to hear a variety of claims. Michael was very excited about this activity and felt that the extra class time spent on the activity would be well worth it for his students to gain experience and knowledge about specific disciplinary practices within the Humanities.

In each of these examples, the participants showed beginning stages of shifting their pedagogical mindset from foundational literacy to disciplinary literacy support within their classrooms. Through discussion, collaboration, and redesigning assignments/activities, the participants each made connections between the disciplinary literacy practices expected in their disciplines and the components of their coursework. Further, they showed growth in confidence as they planned for and implemented specific instructional strategies to support disciplinary literacy in the Humanities classroom.

Post Perceptions of Disciplinary Literacy and the Humanities Discipline

After completing the process of discussing the role of literacy within Humanities courses, enhancing an assignment to strengthen the students' skills with disciplinary practices, collecting feedback from peers, and reflecting upon the process through a journal entry, the participants and I spent the last session reflecting on possible changes in their perceptions. In this section, I outline the participants' perceptions of their role as a literacy educator, their practice with implementing disciplinary literacy instruction, and their self-efficacy with disciplinary literacy in the Humanities discipline at the end of the learning community.

Perceptions of role as literacy educator. Paula stopped attending and participating after the third (of five) learning community session. She communicated via email that this change in attendance to multiple health issues, and she shared that she would still complete all of the work associated with the learning community. However, she did not complete any journal entries or the assignment enhancement activity, and she chose not to participate in the final focus group interview. While this may be related to her perception of her role as a literacy educator, willingness to change practice to support disciplinary literacy, or self-efficacy with disciplinary literacy, there were no data to specifically support this claim.

At the end of the learning community, Michael and Abigail both claimed that disciplinary literacy was their responsibility as a discipline scholar. "Disciplinary literacy is important, and it is my responsibility as a discipline scholar…and it is something that is definitely learnable at any level" (Abigail, Focus Group 2). They both had acknowledged their role at the beginning of the learning community, but they said they could see more clearly their role now after having spent time investigating disciplinary literacy and applying it directly to their courses in the Humanities.

> I have a greater level of awareness of the need for and my role in fostering disciplinary literacy skills. I had previously thought of myself as a content teacher more than anything else, and now I recognize and support skills students need and I can help with in my class (Abigail, Journal 4).

They were more confident in their understanding of disciplinary literacy as deeper, more complex literacy skills specific to the discipline and those who were members of the discipline. They recognized that they still needed to know more about it, but they clearly thought about it more as they planned for, implemented, and reflected upon their practice.

> When I'm redesigning an assignment, or I'm designing a new assignment, or I'm introducing new materials for them to read or watch, or I'm asking them to do an activity that has a literacy component, I'm going to think now about whether I have provided the support for it. That's going to be a little checklist that I have all the time now (Abigail, Focus Group 2).

They recognized that they were just beginning to develop their understanding of disciplinary literacy.

> My perception has changed some. I feel that this learning community has kind of been a stepping point for me – just because now I'm paying attention to every single class, and I'm constantly trying to fix things and see where I can support disciplinary literacy (Michael, Focus Group 2).

In order to develop this even more, they wanted to engage with other colleagues/faculty to collaboratively identify additional methods to integrate disciplinary literacy into their daily instruction.

Disciplinary literacy instruction within the Humanities discipline. The participants identified several things they wanted to do after this learning community to continue working and developing their knowledge of disciplinary literacy within their Humanities courses. While they worked with one assignment in one class for this learning community, they wanted to extend their knowledge to all of their classes. They recognized this would take time and work, but they saw the benefits of addressing disciplinary literacy even if they started small. "For the students, no matter if they are a 100- or a 400-level student, there is a way to get at discipline specific literacy skills, and even if it is just at 'engaging', then that has to start somewhere" (Abigail, Focus Group 2). By extending their work from one assignment to the whole set of Humanities courses, they would be able to address all aspects of the Humanities discipline.

When investigating the basics, Abigail shared that she would go to YouTube and Google so she could learn foundational knowledge. This would give her a place to start and know how and where to look for more advanced support and resources. In order to build upon this basic level of knowledge, the faculty agreed additional professional development opportunities would support them as they learned more and dug deeper into both disciplinary literacy and the content

of their courses. They valued their time in the learning community thus far, and both Michael and Abigail agreed additional learning communities with more of their colleagues would serve this need. They repeatedly discussed their desire to collaborate with other faculty who taught Humanities, especially with the faculty who were full-time. They articulated this collaboration would allow them to learn from their peers and mentors and together investigate ways to strengthen their teaching.

Additionally, they agreed experts in the fields of Literacy and Humanities could provide valuable professional resources that would be of value in the course design and redesign process. Having more full-time Humanities faculty (even one per campus) would provide leadership and guidance for the adjuncts. Without that leadership, they agreed that they often felt alone in planning their courses.

Michael and Abigail were strong supporters of professional development efforts at the college, and they participated in campus and college-wide professional development activities. They agreed that they would continue to do this in the future. Additionally, they would have a new perspective on these sessions and stay mindful of the role literacy played. Michael shared that he would continue to 'adopt and adapt' practices of others and be more mindful about adapting practices to include literacy.

Finally, Michael and Abigail agreed they would be more mindful and reflective of their practice in the classroom specific to disciplinary literacy. As they tried new strategies, they would reflect on the lesson and how it impacted their students' experience with literacy in the discipline. This trial and error approach reflected their confidence in trying something completely new in their classrooms.

Self-efficacy with disciplinary literacy in the Humanities discipline. Both Abigail and Michael expressed that their self-efficacy regarding disciplinary literacy in the classroom increased, mainly in the area of understanding the role disciplinary literacy played within their courses. However, they expressed that their growth over the six weeks was just the beginning, and they still needed more support to develop their trade and feel confident and independent with the practice.

> I think I definitely know more of what it is, and I was correct – I am capable of doing it. I'm confident that I will follow through with doing more. But I also recognize that there is a lot more to learn. I want to go broader and do more assignments, go deeper and say, 'well, this assignment goes to the *engaging* level,' but how can I get them maybe to another activity, to another layer (Abigail, Focus Group 2).

They knew there was still room for improvement and that disciplinary literacy was a skill they could learn to teach and teach well. They acknowledged a greater understanding of disciplinary literacy and how it relates to Humanities courses. Since neither of them had taught the class with the enhanced assignment yet (on deck for the next semester), they felt they would know more after implementing their new practice in the classroom to see if it worked and they felt good about it.

Both Michael and Abigail made direct connections between their practice and self-efficacy. Since they were not trained specifically in literacy, they recognized that learning a skill and putting it into practice would lead to greater confidence in their abilities. Thus, in order to strengthen their practice, and thus their self-efficacy, with integrating disciplinary literacy in their courses, the participants identified several things that would need to be in place. The largest factor was time. Abigail held a full-time position at the college and taught one course as an adjunct each semester. Michael taught seven courses per semester across two institutions. Paula taught 2-3 dual enrollment courses per semester and was mainly located within the high

schools. Even though they each agreed disciplinary literacy was an important concept to investigate and put into practice, they shared their concern for having the time to make the curriculum changes on their own, whether they collaborated or completed the work on their own. Additionally, they worried that scheduling conflicts would prohibit them from having strong collaborations with their colleagues.

Each of the participants were part-time faculty, and they repeatedly discussed their desire for more collaboration with part- and full-time faculty within the Humanities discipline as well as other discipline and departments across the college. They expressed frustration regarding many faculty's lack of willingness to participate in professional development, try new strategies in the classroom, and collaborate with their colleagues. They desired a higher level of support for adjunct faculty, to include pedagogical support, discipline- and course-specific support, and general 'know-how' support. Having more interaction with other staff across the college, such as English faculty and librarians, could be beneficial to building knowledge and self-efficacy with disciplinary literacy.

One solution to time constraints, level of faculty collaboration, and adjunct support was tapping into resources already in place at the college. However, the participants spoke repeatedly about the lack of institutional and collegial support, and they recognized that this support was crucial if they were to make changes to curriculum and courses across the discipline to include and address disciplinary literacy objectives. This support could come in the form of faculty professional development, administrative leadership, or financial incentives. The faculty professional development program and staff could organize the learning communities, maintain communication, and organize the structure for shared materials and resources. Administrative leadership could manage a more consistent schedule of who teaches Humanities courses across

the four campuses, allowing faculty to better know who their colleagues are and what opportunities are in place for collaboration. Additionally, administrators could guide faculty toward higher levels of consistency with expectations, teaching effectiveness, and evaluation of disciplinary literacy in Humanities courses. Finally, the participants agreed that funding for grants, stipends, materials, and food would not only be an incentive for faculty to participate in the learning communities, but it would also show the faculty that the administration was in support of their efforts to integrate disciplinary literacy in their curriculum and instruction.

The college was going through a difficult period with low enrollment, budget cuts, and elimination of positions. At the time of the study, each participant was concerned whether or not they would have any courses to teach in future semesters. They knew they invested a lot of time and energy into their course design and delivery, and they were confident in their ability to teach an effective Humanities course. However, with the possibility of not having a position in future semesters, they felt undervalued and recognized that it negatively impacted their self-efficacy.

Impact of Learning Community on Participant's Experiences

All participants shared throughout the learning community that they would not have investigated disciplinary literacy on their own as there just was not time and the concept was so foreign to them. They identified four main benefits of their experience in the learning community. First, they valued the collaboration they experienced during the learning community. Discussing courses, content, and student needs with another Humanities faculty member who understood the curriculum and program was beneficial. This was not something that occurred often in their department; in fact, as adjuncts, they rarely saw each other or any other Humanities faculty.

> The collaboration in this learning community pushes me to alter my pedagogy to better cater to literacy within the classroom. While I feel that I am doing a good job currently,

> there is always room for improvement and this learning community helps tremendously (Michael, Journal 3).

The discussions made them more aware of disciplinary literacy and how it was different from foundational literacy within the context of their Humanities courses. By working alongside another adjunct Humanities faculty member, they saw that they were not alone in their struggles, and it was helpful looking forward in that they had someone they could reach out to whom they trusted.

> I feel less isolated now that we've come together as a Humanities community. Before the learning community, we all taught on our own and never interacted. We're all adjunct and our schedules don't cross, plus there isn't a 'reason' to interact. Now, we have a strong, more established teaching relationship so I feel like I can reach out to them more readily. Also, I don't feel so alone in teaching Humanities (Abigail, Journal 3).

They each valued the structure of the extended professional development opportunity. As busy faculty members, they did not have time to organize their own learning community, the readings, the assignments, etc. And, they felt they would not have journaled on their own had it not been a requirement of the learning community (a task they agreed was beneficial to the process as it allowed them to individually reflect). Having an extended professional development experience allowed them to process the changes in their thinking and practice and how to incorporate them into their future courses. The reflection allowed them to think about what they learned/discussed. The extended time allowed them to think about it while teaching and then come back to discuss their ideas.

The faculty appreciated the relevance of both the learning community's content and participants. The faculty each taught in the same discipline, and they held shared values in terms of teaching and learning. The participants trusted each other, requested critical feedback on their pedagogical decisions, and were each willing to be open and honest throughout their discussions and journal entries. They valued this opportunity to be open about the content, their abilities,

their discomforts, and their concerns. Throughout the learning community, they developed deeper collegial relationships and talked about collaborating in future semesters.

The faculty each noted their appreciation for the structure of the learning community. They were initially concerned about the time they had to complete the readings, journal entries, meeting participation, and assignment enhancement. However, they found that having a facilitator who organized the learning community, sent reminders, and kept everyone on task was helpful and made it less work for them. They agreed that spacing out the sessions by about a week allowed them to reflect on the content and make connections to their classroom experience, but it was important not to have too much time between sessions so they would forget the material or feel disjointed.

STEM: Disciplinary Literacy as a Driving Force

In this section, I present the experiences of four STEM faculty throughout their five-session learning community, where they learned about disciplinary literacy, unpacked Moje's (2015) 4Es framework, and enhanced current coursework to include disciplinary literacy. I describe the faculty's understanding of the role literacy plays within their disciplines, perceptions of their role as a literacy educator, specific practices they engaged in regarding literacy instruction, and level of self-efficacy with implementing disciplinary literacy in their course instruction. Additionally, I present the changes, if any, in these areas experienced by the participants.

Introduction of Learning Community and the STEM Disciplines

Four full-time faculty volunteered to participate in this learning community focused on disciplinary literacy within the STEM disciplines. Two participants were Mathematics faculty, one participant taught Mechatronics and Electrical, and one participant taught Diesel Marine

Technology. See Chapter 4 for a full description of each faculty member, their disciplines, and the related programs. All four faculty were full-time and taught on the same campus, yet only the two Mathematics faculty knew each other previously. Although all of the disciplines fell under the larger heading of STEM, the faculty were not very familiar with the intricacies of the other represented disciplines.

None of the faculty had collaborated in such a learning community before. Thus, it was important to build a sense of community among the participants (Dufour, 2004). The first session was focused on getting to know each other and each other's disciplines, developing a joint mission statement and goals, and identifying shared values. During the second session, the participants identified their perceptions of what it meant to be a member of the discipline. Through these activities, the faculty had the opportunity to get to know each other, learn more about the other disciplines, and identify their individual and collective intentions and expectations for the learning community.

Participants. Four full-time faculty participated in the STEM learning community: Alexander, Jackson, Mitchell, and Dennis. Alexander, a Diesel Marine Technology faculty member, was currently studying in a curriculum and instruction doctoral program. While he had not taken courses specific to literacy, he felt confident in his understanding of teaching and learning. Alexander attended all five sessions and completed all tasks (e.g., readings, journals, assignment enhancement). Jackson, a Mechatronics and Electrical faculty member, claimed to have no formal background in literacy or curriculum development. Jackson attended all but the last session due to a scheduling conflict. However, he did complete all tasks, including a written response to the final focus group interview. Mitchell, a Mathematics faculty member, shared that he was "somewhat familiar with the learning theory behind the importance of reading in the

content areas" (Journal 1), but he was interested in developing a much deeper understanding during this learning community. Mitchell attended all five sessions and completed all tasks. Dennis, a Mathematics faculty member, previously taught high school math classes and shared that he had limited, if any, experience with teaching literacy. Dennis attended three sessions and completed one journal entry. He shared that his minimal participation was not due to lack of interest, but he had family health issues and job interviews that conflicted with the learning community's schedule. At the time of the learning community, the college announced potential layoffs in several fields, one of which was Mathematics, and Dennis had applied for high school teaching positions.

Mission statement and goals. During the first session, all participants collaboratively defined their mission statement for the learning community. Throughout the sessions, they aimed "to investigate ways in which we can provide a learning environment that bolsters student disciplinary literacy skills in the classroom." Through this mission statement, the faculty showed their understanding that literacy was an important skill for their students to strengthen within their disciplines. They identified their focus to be not one determining whether or not to address literacy in their classrooms, but rather on how to specifically implement instruction that addressed those skills. As the participants discussed their mission statement, they agreed upon four specific goals to guide their experiences in the learning community:

1. Differentiate between general and disciplinary literacy
2. Identify teaching strategies for incorporating literacy into the classroom
3. Apply best practices for literacy into the design or revision of at least one learning activity in our specific disciplines
4. Develop a plan for implementation of the activity, measures of success, and reflection

A precursor to many discussions during the learning community, these goals could also be considered steps for how the faculty thought they could accomplish their mission. In several

instances, the faculty discussed concepts in terms of steps and processes, both as a representation of their own organizational preference and as an indication of the content they covered in their courses.

Shared values. It is important to identify shared values at the start of a learning community to determine a common perspective from which the participants are approaching the topic (Dufour, 2004). This is especially important when participants do not have previous working relationships with each other as it allows them the opportunity to gain knowledge and appreciation for each other's previous experiences. The faculty discussed at length their perspectives on professional development, the role of a community college educator, and literacy. They identified the following three shared values to represent their perspectives:

1. The Learning Community is an opportunity for growth, where open communication (i.e. everyone has a voice and feedback is non-judgmental) and collaboration are critical.
2. As educators, our ultimate goal is student success.
3. Reading, writing, communication, and critical thinking are important in all disciplines.

The participants spoke often of respect of fellow educators and the success of their students. In the current climate at the college, there were many instances where faculty across the college articulated they were feeling disrespected by the administration. The participants were adamant that their experience in this learning community would be positive and one grounded in respect for each other. The faculty also addressed the main purpose of their role at the college was student success. The faculty expressed their love for their respective discipline as well as their passion for working with students. They recognized that one avenue toward increasing student success was to better support their students with literacy within their discipline.

Member of the discipline. During the second learning community session, the participants discussed at length what it meant to be a member of the discipline. This concept, as

presented by Moje (2015) in their reading for the session, resonated with them for different reasons. Mitchell and Dennis, both Mathematics faculty, explained their students lacked a desire to be a member of the Mathematics discipline. They recognized that many of their students would not pursue careers as a mathematician, but they argued that many careers involved mathematics or involved working with mathematics professionals. Jackson and Alexander, faculty in career and trade fields, knew that upon graduation, their students would immediately enter the field. They recognized their students did not appreciate the importance of exhibiting behaviors and communication similar to a professional in their respective field, and they argued that their students needed to understand what it meant to truly be a member of the discipline in order to be successful in their career. After a lengthy discussion, the four faculty identified the following list of characteristics and actions for members of the discipline:

- Speak the language of the discipline
- Gain the content knowledge
- Complete certifications where applicable
- Recognition from peers within discipline
- Successfully collaborating within discipline
- Proficiency with related tools and applications
- Participating in inquiry
- Understanding the role the discipline plays in larger culture, society
- Engaging in the discipline's community on many levels
    - Social - enjoyment, desire to share discipline with others
    - Academic - journals (read and publish)
    - Practical - engage in practical application, problem solving
- Move beyond lower levels of Bloom's Taxonomy to the higher levels (apply, synthesize, evaluate, create)
- Share knowledge with others - disciplinary citizenship
- Invite others to participate in the discipline
- Draw upon previous experiences
- Truly understand why the discipline matters

This was a powerful exercise for the faculty. While they truly believed the items on this list were reflective of a member of the discipline, they recognized they had never thought about it in this manner. By defining the characteristics and actions of a member of the discipline, the

faculty expressed a deeper understanding of how the course objectives related to the field. At the conclusion of the exercise, the faculty shared that this list would help them refocus their approach to teaching within their disciplines.

Initial Perceptions of Literacy and the STEM Disciplines

Throughout the first two sessions, the participants discussed at length and journaled about their initial perceptions of literacy within their disciplines. They examined the specific role of literacy within their disciplines and courses from the perspective of both a faculty member and the student. During these discussions, they repeatedly referred back to their "Member of the Discipline" document and made connections between literacy and their respective fields.

Perception of role as a literacy educator. During the first learning community session, and in the first journal entry, the participants had the opportunity to discuss and reflect upon their perceptions of their own role as a literacy educator. There was a consensus among the participants that they should be literacy educators within their specific disciplines. "We're all a teacher of literacy because one of the things that matters is we have to make sure that you use it properly, regardless of whether it's diesel, electrical, or mathematics" (Alexander, Focus Group 1). However, the faculty also agreed they did not incorporate literacy in their instruction as much as they should. "I think we should be [literacy educators]. I'm not sure if we measure up to that as much as we should" (Dennis, Focus Group 1). While they agreed literacy greatly impacted disciplinary learning in their courses, they were not sure exactly what that would look like from a faculty perspective and how to implement instruction specific to literacy. Further, there was a sense of guilt by some of the faculty that they were not incorporating more literacy instruction.

> Perhaps a lot of the weakness in mathematics and a lot of students' anxiety about mathematics is probably because the literacy piece is not emphasized as it should have

> been. There are a lot of connections that weren't made that could have been made. And you know I'm just as guilty of not emphasizing the connections as the last person (Dennis, Focus Group 1).

This quote represents Dennis's internal conflict about his current level of literacy instruction within his courses and how this impacted his students. This conflict resonated with each of the four faculty as something they all experienced, and they agreed it was the impetus for volunteering to participate in the learning community.

Literacy skills within the STEM disciplines. Despite their uncertainty in terms of how to support their students with literacy skills within their courses, there was unanimous agreement that literacy impacts disciplinary learning, as articulated by Mitchell in the first focus group.

> I can't imagine the learning process not relying on [reading, writing, critical thinking, and communicating], right? And so anytime we're learning something, we're doing those things and so in a way it's an application of using the skills of literacy. And therefore you're improving upon that, or if you are weak in those areas, you are learning how to do those things better. So you're learning literacy when you're learning everything else.

Mitchell's comment led to a discussion about the vast amount of literacy required within the disciplines. The faculty participated in an activity where they identified the specific literacy skills their students would need to master in order to successfully complete their courses (see light blue sticky notes in Figure 5). The faculty separated into their specific disciplines to complete this activity. After they listed all of the literacy skills, I asked them to separate whether the skills were discipline specific or general literacy skills. Additionally, they identified the strategies they currently used within their classrooms to address those skills (see dark blue sticky notes in Figure 5).

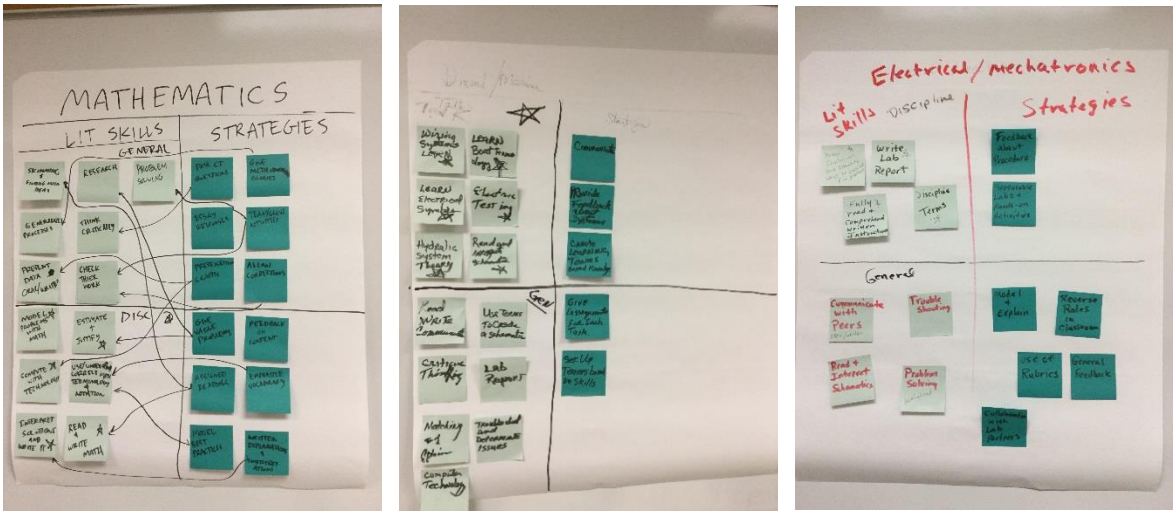


Figure 5: STEM literacy skills and strategies

Although the faculty taught different disciplines, there were commonalities across the disciplines in terms of the categories of literacy skills they expected their students to possess and/or develop during their courses. The faculty identified five categories of literacy skills: terminology, reading, writing, communicating, and critical thinking.

Terminology. Due to the nature of their courses, the faculty agreed that the discipline-specific terminology was essential for the students to master in order to become a member of the discipline. However, they found this to be very difficult for their students as many had extremely limited background knowledge and familiarity with the terms and concepts. "I have found in the discipline world I have to approach it just like if I was a student learning a foreign language" (Jackson, Focus Group 1). By recognizing this lack of knowledge and experience with the terms, much like in a foreign language, Jackson shared his intentionality in addressing terminology in all facets of his courses.

The faculty identified three tasks they expected their students to be successful with regarding terminology. First, their students needed to comprehend the terminology both when reading and listening.

> It's important that they have a connection between what this is, what it means, what this is, what it means, what this is, what this means, and a lot of times that connection is broken. They can't find it because they don't know what it means, that's what impedes their success (Dennis Focus Group 1).

This meant that the students needed to have a sound understanding of the meaning of the terms. This strong knowledge of the terms was the foundation for making deeper connections later on in the course.

Second, the faculty wanted their students to recognize situations where the specific terms were applicable. Rather than just regurgitating definitions, they wanted their students to apply their knowledge of the terms to specific contexts, as explained by Dennis in the first focus group.

> Sometimes they'll know the word 'standard deviation', but they don't know what it means. It's one thing to, you know, blabber back what I tell them it is, but to take a situation, pull something out of the newspaper, and what does it mean in this context? And that's where they have trouble with just going from the recited definition to actually applying it to that situation.

The ability to make these connections and apply their knowledge of the terms to different contexts showed a depth of knowledge about the discipline. This was an important step toward becoming a member of the discipline.

Third, the faculty wanted their students to interpret discipline-specific work and use proper terminology as they drew conclusions.

> A lot of the terminology that we work with that is what we teach. I don't want them just to tell me that this is a controller, you know, just tell me one thing about that. I want them to explain what's inside, what's going on in a vessel, you know, what is it? What are we talking about? I want them to be able to repeat what I said, however, understand what it means" (Alexander Focus Group 1).

Being able to speak the discipline is essential in each of the STEM fields represented in this learning community, and being able to fluently communicate using appropriate terminology was essential in order to be successful in the field.

Reading. The faculty discussed the variety of materials they expected their students to read (e.g., manuals, sets of directions, specific processes, schematics). They recognized that these were not typical types of reading materials that students would find in many of their college courses. However, these types of materials comprised the texts specific to their disciplines and fields. In math courses, for example, the faculty wanted their students to "read and understand math terminology, notation, graphs, and textbook readings" (Mitchell, Journal 1). Further, Alexander shared in the first focus group that he wanted his Diesel Marine Technology students to not only comprehend the materials but also to know how to use them as a valuable resource when researching the discipline.

> We always talk about manuals, about information you can find, information you can find on a particular piece of equipment, I always use that. That to me I need to make sure that I give them that and they cannot just regurgitate.

Finally, the faculty wanted their students to synthesize the material they were reading so that they could then draw conclusions and engage with the content.

Writing. Each of the faculty expected their students to engage in writing the discipline to some degree. For example, students might need to write an explanation for a specific procedure in a Diesel Marine Technology course, as explained by Alexander in the first focus group:

> I have had them write, do a writing assignment, I mean which is not bad, even though we're doing a technical side of things, you tell me exactly what this, what's the reason for this, why do we have this component, the capacitor, why do we have this condenser system, what, why is it there? And I've had them do that as well.

Jackson expected his Electrical and Mechatronics students to show growth in the depth of their written explanations of their diagnosis of a problem in lab reports over the course of the

semester. Mitchell expected his students to complete "written assignments that provide good opportunities for testing new ideas" and "effectively communicate their questions and answers in written communication" (Journal 1). Each of the faculty discussed lab reports where students had to write about the steps they took through a problem/solution activity. "Assignments that require this are still very effective at measuring the amount of knowledge or skills they have acquired" (Mitchell, Journal 1). They agreed that writing provided an opportunity for their students to show a depth of understanding and problem solving through their writing.

Communicating. The faculty repeatedly discussed the importance of speaking the field. Alexander and Jackson, both in career and technical fields, expressed that it was essential students were able to speak the discipline as their students would be entering the work force directly after they completed the certificate or associate's program. Their students would be technicians in the field and would be diagnosing and solving specific problems.

> In our particular field, we working with customers on a continuous basis. They do the work on the solar system, or whatever it might be. They have to explain it to the customer. The customer has to understand what is going on. You have to be able to communicate with that individual and so I am teaching them to work on understanding, learning, use the proper terms, proper terminology, one of the things that's a lot that we have to kind of push on them or you know, make sure that they understand that (Alexander Focus Group 1).

If their students were not able to speak the discipline, their clients would not have confidence in their ability to perform the task.

Second, it was important for students to be able to communicate with peers, both in the classroom and in the field.

> I always compare it with a doctor. I say, if you go to a doctor and you tell them this is my symptoms and he just looks at you and says, 'you're sick', you're not going to be real thrilled with that. You'd want him to be more specific. I say it's the same thing in the trade, you know. If a customer asks you what's going on, if you just go, 'it's broke', they're not going to have much confidence in your work. so, you need to be exactly

> right, you need to know terminology. You would hope a doctor is going to tell you, you have a touch of the flu, or something like that (Jackson, Focus Group 1).

Being able to speak the discipline was essential when collaborating with peers in order to problem solve. Students need to be able to communicate within the class about the discipline, and this was an authentic activity they would need to replicate as an expert in the field. They need to effectively communicate their questions and answers in written and oral communication.

Critical Thinking. The previous four literacy skills (terminology, reading, writing, and communicating) laid the groundwork for the final literacy skill necessary in the STEM disciplines: critical thinking. "Critical thinking is a level we really want to bring our students to. We don't want people just regurgitating information" (Jackson, Focus Group 1). The faculty unanimously agreed that literacy was the foundation of critical thinking, a concept they felt some of their peers at the college did not agree with.

> A lot of folks think that critical thinking is not part of teaching, which it is. I believe that critical thinking is because when I give you a problem that you have to repair or a problem that you're working on, your critical thinking goes into effect" (Alexander, Focus Group 1).

This was troublesome for the faculty, as they agreed their students needed to experience critical thinking activities in each of their classes at the college.

In their own courses, the faculty expected their students to engage in several critical thinking activities. First, they expected their students to interpret and synthesize the information they were reading. "They need to think critically about the processes used and the concepts that relate the knowledge" (Mitchell, Journal 1). Many of the activities in the STEM discipline required students to follow a specific procedure or set of directions. While the steps were often provided, the faculty expected their students to exhibit critical thinking in their understanding and execution of the steps. "That's what I want to see, we've got to use that step by step in a

procedure" (Jackson, Focus Group 1). Jackson wanted his students to recognize why each of the steps were important in order to reach the final outcome.

Problem solving and troubleshooting were crucial skills in the area of critical thinking. Both Alexander and Jackson discussed how their students needed to troubleshoot on a daily basis, both in their class and when they entered the field. "Students need to complete a troubleshooting issue by using their critical thinking skills" (Alexander, Journal 1).

Interpreting answers and results was an important critical thinking skills required by each of the faculty. For example, Dennis wanted his students to know how to interpret results in order to draw conclusions. "Students need to look at analysis and use the results to make conclusions about hypothesis. They also need to know how to interpret things such as confidence intervals" (Dennis, Journal 1). Mitchell wanted his math students to understand what the answer to a math problem meant in the larger context.

> I put a lot of emphasis on interpreting answers. So we'll get answers that are just numbers, and I want them to put that in context of the problem. And they do a lot of examples, but it's a matter of getting them to eventually be able to do that on their own. The example is going to be some other context, so they ultimately need to generalize what is in this interpretation and be able to write those so that it stands alone. It seems like so many of the written responses are incomplete. They're answers to a question that, like if you didn't read the question, you wouldn't know what it meant. And I would like for their writing, their written work, to be stronger so that somebody could just read it and understand what is going on (Mitchell, Focus Group 1).

This emphasis on writing was important to develop members of the discipline, whether or not the students were planning to major in Mathematics.

Obstacles to literacy instruction within the STEM disciplines. The faculty discussed two main obstacles they faced when trying to incorporate literacy instruction in their courses: student protests and faculty time constraints. Each of the faculty expressed how their students exhibited clear resistance to reading, writing, and critical thinking within their courses. "It's

amazing how many students protest if you include those terms in a math class. A lot of students think that those terms don't belong in a math class, you know" (Dennis, Focus Group 1). Mitchell had similar experiences despite his positive experiences with using them as an assessment. "I find that students do not like to read or write in my courses. They will do the minimum when forced to do either" (Mitchell, Journal 1). It proved to be a constant struggle for faculty to push their students to write in a course students perceived as a non-writing discipline.

This concept of completing the minimum amount of work when required to read or write was alarming to the faculty.

> They don't want to read mathematics. They don't want to write about it. They just want to write down the answer and be done. So they protest when you try to include those elements in there, because they're not used to it" (Dennis, Focus Group 1).

Further, the faculty shared how students often look for the quick and easy way to complete an assignment. "One of the first things students ask is, 'oh are we going to get a formula sheet?' I notice they want the easy way. Let's just check the box" (Jackson, Focus Group 1). This was a challenge for Jackson as he worked to increase the depth of writing over the course of the semester.

The faculty also repeatedly expressed the time constraints they faced when trying to teach just their discipline's content, let alone literacy. Many of their courses were taught in 8-week blocks and there was a lot of curriculum to cover, which they admitted took precedence over literacy. "But again, we have 8 weeks. Sometimes we run out of time. You want to make sure you cover all of your curriculum" (Alexander, Focus Group 1). Adding or integrating literacy into the curriculum seemed to be overwhelming for the faculty, especially when it was not already in the current course materials, as shown in this conversation during the first focus group.

> Mitchell: We rely so much on a preassigned textbook and a set of materials. If [literacy] is not in there, it's a lot of work to create that, and it's hard to justify cutting things out. It has this momentum, right? This is the way things are, right? And if I want to make changes, then I have to cut things out.
> Kristen: Or try to figure out how to integrate that into a current lesson so it's not creating a whole new lesson.
> Mitchell: Yeah, but that's still a lot of work.

In general, they felt there was not enough time to teach literacy and they were unwilling to give up any time with their curriculum to teach literacy. This concept repeatedly came up in conversation, and the faculty agreed that learning strategies to integrate literacy was one of the main reasons they chose to participate in the learning community.

Avenues for student support with literacy. When discussing possible venues where students could receive support with literacy, the faculty's initial responses showed a lack of awareness of options. "I don't know too much about their support outside of class" (Dennis, Focus Group 1). They shared that they knew of places to go for content support, but not for specific literacy support, leaving them to think that perhaps there were not any options. However, through a continued conversation, the faculty were able to identify several places where the students might receive support with literacy.

The faculty identified the Learning Assistance Center (LAC) on each of the four campuses, but they were not confident their students actually went. "They could go to the Learning Assistance Center, but I don't think they go anywhere" (Mitchell, Focus Group 1). Further, they were not sure of the quality of literacy support students would receive specific to the disciplines, as shown in this conversation during the first focus group.

> Dennis: I know mine try to go there. Some of them I heard back that they get kind of frustrated.
> Kristen: If they went there for help with working through the process of solving problems in your class assignments, do you feel the help they get would help them through that process of problem solving?
> Dennis: It can, but I'm not sure that it does, but it can. It just depends.

> Kristen: On who they meet with?
> Dennis: Yeah.

This lack of confidence in the LAC led the faculty to cease recommending it as a support option for their students.

The Mathematics faculty identified several online resources where they felt their students may go to for support. The online platforms for the homework assignments provided immediate feedback and outlined the problem solving process. It showed the students what they were doing well on, and what they needed to improve upon. While it was an option for feedback, the faculty recognized that it was not always accurate.

> Some of the online platforms we use for homework now do give feedback. It attempts to figure out what - what was wrong in their approach and it will try to address the errors in their approach. I mean, it's okay, sometimes it nails it and sometimes it doesn't (Dennis, Focus Group 1).

However, they were not sure how much disciplinary literacy was actually addressed beyond the math content.

Mitchell had experienced his Generation Z students going to YouTube for more information.

> I think a lot of the younger students, especially Gen Z, are going to go to YouTube to learn something they don't know. I think that's counterproductive to literacy. I mean they might get better at listening, but in general they're just avoiding doing the reading that was assigned in the class. They're just looking for the easiest answer, maybe. The one that requires the least amount of work. (Mitchell, Focus Group 1)

However, he felt that this was counterproductive to literacy growth as his students were avoiding reading the materials he had provided and were looking for the quick answer. He recognized one possible benefit of this was that students might possibly increase their listening comprehension skills.

All four faculty recognized that they themselves were a great resource for the students, but their large numbers of students each semester made one-on-one support difficult to provide. They tried to provide as much information and resources in the course as possible so the students would have access to what they needed.

> I try to provide as much as I can in the course so they don't have to go to other resources outside the course. I try to make the readings as bitesize as I can. I try every once in a while to leave a little something so they kind of have to read and can't watch a video to figure it out. But it's kind of hard to tell what they're doing when they're not in class (Mitchell, Focus Group 1).

Even with incorporating these strategies, Mitchell still found that his students required one-on-one assistance to master the content.

Finally, the faculty discussed the Developmental English classes offered at the college, and they agreed these courses were designed to support students with general literacy skills. However, they were honest in that they did not actually know what was taught in these courses. "I don't really know what our Developmental English includes" (Mitchell, Focus Group 1). Beyond the content of the courses, the faculty did not know who had taken the courses previously, who was currently taking them, or even who should be taking them. "I'm sure they have, I don't know, I don't find out about that. I guess some of them do" (Dennis, Focus Group 1). For students who were taking (or who had taken) Developmental English courses, the faculty were not confident the students would be able to make the connections between their work in those classes and the work in their discipline courses. "I don't see how a student could see a connection between the two if we don't see a connection between the two" (Dennis, Focus Group 1). The faculty recognized that there was a clear communication gap between content faculty and developmental English faculty. "I should probably have more contact with the English department to better serve the students with literacy problems" (Mitchell, Journal 1). However,

the faculty recognized that their time constraints prevented them from taking this step to improve communication between the departments.

Further, College Composition was not required, and Developmental English was not a prerequisite, for all courses or programs at the college. The faculty experienced this with their own students, and often students got caught in the middle when they changed from a certificate program (with no literacy requirements) to associates degree (with a literacy requirement).

> That's actually a challenge because I know what happens in our programs is a student can come in under the certificate program and it doesn't require any English or Math or anything like that. And then they decide, 'Ooh, I think I'll get my Associates degree.' But they are still putting the English class and all that – they're putting that on the back burner. And so they come into our classes and they still have those deficiencies in a lot of ways. And that is a big challenge for us. And I think that's where that comes from. And all of a sudden you see them a semester or two before graduation and then they're taking the English class and they're taking the Math class, and you're like, 'Wow, if you had taken those classes before, you wouldn't have struggles so much in ACDC Fundamentals and some of these other classes' (Jackson, Focus Group 1).

Jackson defended the various individuals who properly counseled students and put the responsibility back on the students.

> I think most of them get proper counseling from our counselors here and a lot of them who come into our program and I sit with them, and stuff like that, but you hit it before, they want to shy away from the Math and they want to shy away from the English because I just want to get my hands on something electrical. And that's how they start out. I just want the certificate. But then later on they realize I need more than the certificate. But by then they're already in the program. It's kind of hard for me to stop them midway and say, now you need to go and take English and you need to take Math, but I call it the back door method. They can kind of go in the back door when they came in just to take a couple wiring classes and now all of a student their sitting in our classes and they don't have that literacy that they should have (Jackson, Focus Group 1).

The faculty agreed they constantly struggled with how to overcome the resistance by students to enroll in English courses. While the faculty recognized the importance of these courses to help prepare the students for the discipline courses, the students were not enrolling in the courses until it was too late. The faculty brainstormed about ways to overcome this and agreed it would

require greater communication between discipline faculty, English faculty, counselors, and the admissions office.

Literacy instructional strategies utilized within the STEM disciplines. Although the faculty expressed a clear sense of discouragement with their students' literacy abilities within their classes, as well as mixed feelings about how well they were supported, each faculty member shared clear instructional strategies they implemented that supported their students with literacy within their courses (see dark blue sticky notes in Figure 5). The faculty grouped their support per the five main literacy skills they had identified previously: terminology, reading, writing, communicating, and critical thinking.

Terminology. The faculty recognized that terminology was a key component to success in reading, writing, communicating, and critically thinking within their courses. Mitchell included a vocabulary section within each unit of his Mathematics courses that he expected his students to work through. Further, he expected his students to understand and apply the terms in their work during the unit and beyond. He recognized that without an assessment directly linked to the vocabulary activities, he was not able to measure how m any of his students actually mastered the content. Despite this, Mitchell intentionally made a point to "model effective use of the vocabulary as well as provide feedback to encourage their use of it" (Journal 2).

Jackson provided instruction and support with terminology during class discussions. "I explain to them the difference between slang and the proper terms used in the discipline" (Journal 2). Similar to Mitchell, Jackson did not incorporate assessments specific to terminology, but he did encourage proper use of terminology throughout his class sessions and assignments.

Reading. Alexander and Jackson recognized that the texts specific to their fields were not the typical college texts, and they focused a lot of time in class on the structure of these texts. For example, the texts of their disciplines included manuals and diagnostic programs. Alexander and Jackson both spoke of spending class time to discuss how to break down a specific procedure, how to follow the steps to complete a proper diagnosis, and how to use a manual to properly resolve an issue using a certain tool. They both agreed that spending the time in class on strategies to comprehend their discipline-specific texts greatly benefited their students in being able to better comprehend both the content and purpose of these types of texts.

For instance, Alexander modeled in his Diesel Marine Technology courses how to use the manual to better understand and properly use a digital multimeter with a boat's electrical system. The manual included specific steps to follow when taking measurements, and he emphasized the importance of accurate measurements in order to properly diagnose the issue. Alexander contended that without understanding how to read a manual, students would potentially struggle with understanding a diagnostic tool as well as the diagnostic procedure.

Writing. The faculty found that despite the effectiveness of using writing as an assessment tool, students showed clear resistance to writing within their disciplines, as shared by Mitchell in the first focus group.

> I find that students do not like to read or write in my courses. They will do the minimum when forced to do either. Assignments that require this are still very effective at measuring the amount of knowledge or skills they have acquired.

This presented challenges for the faculty as they were not versed in writing instruction, and thus there were variations in how much writing was expected. For example, Alexander shared in the first focus group that he allowed his students to communicate ideas orally rather than in a written manner.

> I don't have them do a lot of writing, as far as that goes. They do a lot of answering the questions, figuring out the equipment, so they have to - the ultimate goal is for them to go out there and show me. I do have a sheet of - a worksheet that they work on and they go out there to the lab and fill out that information.

In his field, he recognized that members of the discipline would need to be able to communicate ideas and that perhaps writing them down was not always necessary.

Jackson and Mitchell both continued to push for writing requirements in their courses. Jackson providing scaffolding for his students' writing experiences over the course of the semester as he was most interested in seeing progressing with the depth of written explanations.

> What I like to do is measure if they're making progress. I'll give a lab and I like to put a lot of open ended questions in the lab. For instance, I'll show them - I'll let them measure, I won't use an electrical term, but I'll have them measure a coil, a good coil. They might get 30 ohms out of the coil. And I'll tell them, that's what a good coil looks like. We can put faults in our equipment, and they'll put the same ohm meter or continuity test across a bad coil. I'll have the question, well, what is your conclusion? At first they'll start out with something like, 'It's broke'. Well, that's fine at the beginning. But then as we progress through the course and we go through different ways and I try to explain to them, you need to be more specific. Now tell me exactly what you observed, like you're a detective. You want to look at everything. What I like is that I give them the same type of labs, we'll word it a little differently but it's pretty much the same lab. Then I start seeing things like, 'The coil is burned open'. And that to me is a big accomplishment for the student. I compare it to the, you know, 'Remember when you first came in here you just told me 'It was broke' or 'It wasn't working'? Now you're telling me specifically what's the matter with it. I say, that's a big improvement (Jackson, Focus Group 1).

Jackson found that recognizing this growth and success motivated his students to work harder in future assignments. Additionally, he found that students began to emulate his push for more depth and encouraged classmates during group work to go into more detail in their writing.

Mitchell provided continuous feedback for his students' written work through the strategy of modeling. He also found that his students wrote minimal explanations in the beginning of the semester. He provided models of strong written work and then provided

students opportunities to collaborate and determine the features of the model that were strong, as he explained in the first focus group.

> With the early models, I try to really pick them apart, and say, what is it that makes this a good example of work? What does it have to include? Why is this what I'm looking for? And then bringing up student work and saying, is this good, is this missing something?

After working through these models, Mitchell allowed his students to revise their written work and resubmit. He expected them to use his feedback and strengthen their writing. For longer written assignments, he provided specific expectations for both content and format.

> On things where I want a longer essay, I give them an outline. I say, this is what needs to be in this argument, or this essay. Sometimes they send back a numbered list or a bulleted list instead of weaving it in in a nice paragraph. But it still has everything...I try to be as structured as I can. I tried one time writing out a nice model for every one of them, and they would literally copy and paste and just change the numbers on it. So I took those numbers out. You've got to eventually have them be on their own, maybe just give an outline.

Mitchell recognized that writing was a process, and he wanted his students to grow over the course of the semester with the hope of eventually becoming independent writers of mathematics.

Communicating. Each of the faculty recognized the importance of them modeling communicating the discipline. "This is kind of basic, but I model responses a lot" (Dennis, Focus Group 1). This could mean using proper terminology, going into depth with explanations, or simply effectively communicating the discipline. The faculty recognized their platform to represent and model the discipline, and they each intentionally performed this strategy during class. "One of the things that matters is we have to make sure that we use it properly. We all have to make sure we're properly putting information across the individuals" (Alexander, Focus Group 1). Each of the faculty also agreed they could each improve more in this area.

Critical thinking. The most important literacy skill Jackson wanted his students to master was the ability to critically think about an issue, diagnose the problem, and then determine a solution. This was a crucial practice members of the field exhibited on a daily basis, and he wanted his students to graduate from the college ready to be successful in the field. In his Electrical courses, he provided many opportunities for his students to experience this practice in authentic settings. He designed many lab experiences for his students to work on throughout the semester, and he designed them so they got progressively more in depth. He noticed, however, that many students were hesitant to take risks in these labs, and when they made mistakes in their diagnoses, especially if in the real world it would have resulted in an explosion, they were even more hesitant to make full diagnoses. Jackson's solution was to stress to his students that this was a safe environment to learn, take risks, learn from each other, and ultimately become a member of the discipline.

> In addition, I think it's important to support the student in a way that they know - and I remind them all the time, we're in a learning environment. So it's okay to mess up. If they hook up a transformer and we have fuses in there, and the fuse blows, sometimes they'll freak out and it kind of blows their confidence a little bit. But you know, if you say, 'Hey, it's okay'. We're in a learning environment. That's why you're here. And then I have them fix it, the problems and stuff like that. And then I go through and ask, 'why did that happen?' Sometimes I'll even have another student go up in front and explain it. That way they're looking at their peers, you know, and I guess it just brings that learning environment together. But I always have to remind them, we're in a learning environment, it's okay. I'll even bring it to a real world experience. That's what happens out in the real world too. Fuses blow. Things get hooked up wrong, and it's okay. I notice that kind of puts that stress level down a little bit (Jackson, Focus Group 1).

Jackson found that repeatedly reassuring his students that they were operating in a safe environment had an impact on his students and they slowly came out of their shells and began to take more risks throughout the semester. He recognized that having this opportunity would greatly benefit them in the field.

Alexander also placed a great emphasis on critical thinking in his Diesel Marine Technology courses. Alexander incorporated a troubleshooting tree in his classes as that was a tool used specifically in the field of Diesel Marine Technology. "A troubleshooting tree is used by experts in the field. It will show what the problem is in the system" (Alexander, Journal 2). As the students worked through different diagnosis labs with diesel engines, they used their understanding of the troubleshooting tree as a diagnostic tool, and then engaged in critical thinking to properly diagnose the problem with the engine. They then worked collaboratively to identify solutions to repair the engine. Alexander knew there were practices performed by members of the discipline, and he wanted his students to have these authentic experiences. Strengthening critical thinking was a process, and Alexander recognized his role in guiding his students to develop the skill and apply it to the field.

Self-efficacy with literacy instruction in the STEM disciplines. The faculty recognized that part of their role as an educator was to support their students with disciplinary literacy, but their lack of experience often impeded their ability to do so. When asked about their self-efficacy with literacy instruction, the faculty immediately assigned themselves scores.

Dennis was quick to note his low level of self-efficacy, and gave himself a score of 2.5 out of 5. "I don't practice that enough. I guess I'm a bit ignorant of some of those strategies. If I had a bigger toolbox and knew how to do that, I would practice and be more confident" (Dennis, Focus Group 1). Dennis recognized that being part of this learning community was a starting point to develop that toolbox of strategies. He currently had minimal reading and writing requirements in his courses. "I require them to summarize results in complete sentences, but I do not heavily focus on the writing. Unfortunately, I do not have any required reading. I currently do not support literacy growth more than that" (Dennis, Journal 1). He wanted to

change his approach to focus more on problem solving and application, but he admitted, “I don’t know what to do if they can’t do literacy. I don’t have much of a safety net when they screw up” (Dennis, Focus Group 1). Dennis suggested that perhaps collaborating with his colleagues within and outside of his discipline might help to increase communication and increase his self-efficacy.

Alexander felt his self-efficacy with literacy instruction was fairly strong, scoring himself a 4 out of 5. He attributed his confidence to his experience and education but recognized there was always more room to grow. “I’m learning, I’ve been learning for the last few years about curriculum and instruction and all this reprogramming, redoing different lessons to be sure I’m meeting the needs of the students and also communicating with them” (Alexander, Focus Group 1). He based his confidence on his ability to communicate the discipline both in the field and to his students. He was proud of his ability to support his students and make sure they were succeeding in his classes. “I let them know if they need assistance, I’m here to help. Let me know what’s wrong, how can I help you to get up to speed. This is my second home away from home at the school” (Alexander, Focus Group 1). He recognized that there was still more room to grow, and he saw both his colleagues and students as avenues for identification of areas in which to grow. “I’m always working on learning. I want to learn. As I’m sitting in the classroom and teaching, I’m always watching to see their verbal and nonverbal communication. How can I improve my presentation to the students?” (Alexander, Focus Group 1). It was this desire to learn and grow professionally that inspired Alexander to join the learning community and collaborate with his peers.

Mitchell struggled with how to identify his level of self-efficacy, but in the end he scored himself as a 3 of 5 based on his students’ work.

> I'd have to base it on the quality of work that's coming back to me, which is occasionally a presentation where they'd be speaking. But most of the time it's written work or prepared graphs, things like that. And I'm usually able to get pretty quality work from my students, so I'll take credit for that (Mitchell, Focus Group 1).

However, as we discussed this in more depth, Mitchell attributed his confidence to his education and experience, as well as his willingness to learn and stay current in the field of Mathematics. He recognized that in order to increase his self-efficacy with literacy education, he "should probably have more contact with the English department to better serve the students with literacy problems" (Mitchell, Journal 1).

Jackson agreed with the others that there was room to improve, and he scored himself a 3 out of 5. "I feel like sometimes I do my best and sometimes it just - they're not hearing it. So I guess I would need to try to work on ways to get the point across" (Focus Group 1). He struggled with the varying levels of students he had from semester to semester and knowing exactly how to differentiate.

> I find that class dynamics change all the time. I can have a class and they're all sharp and they're all right one with it, and others I have to pull it back a little bit because I realize that they are not at that level yet. That's a challenge (Jackson, Focus Group 1).

When journaling about how he could improve his ability to support his students' literacy growth, he shared, "I should probably also tap into resources of literacy experts as well" (Journal 1). Participating in this learning community was his first step in this direction.

Enhanced Assignments/Activities

Aligned with the faculty's goal to "apply best practices for literacy into the design or revision of at least one learning activity in our specific disciplines", the faculty enhanced a current assignment or activity to include disciplinary literacy instruction and support. After reading about and discussing Moje's (2015) 4E framework during the first two sessions, the faculty decided to focus on integrating specific instruction on the

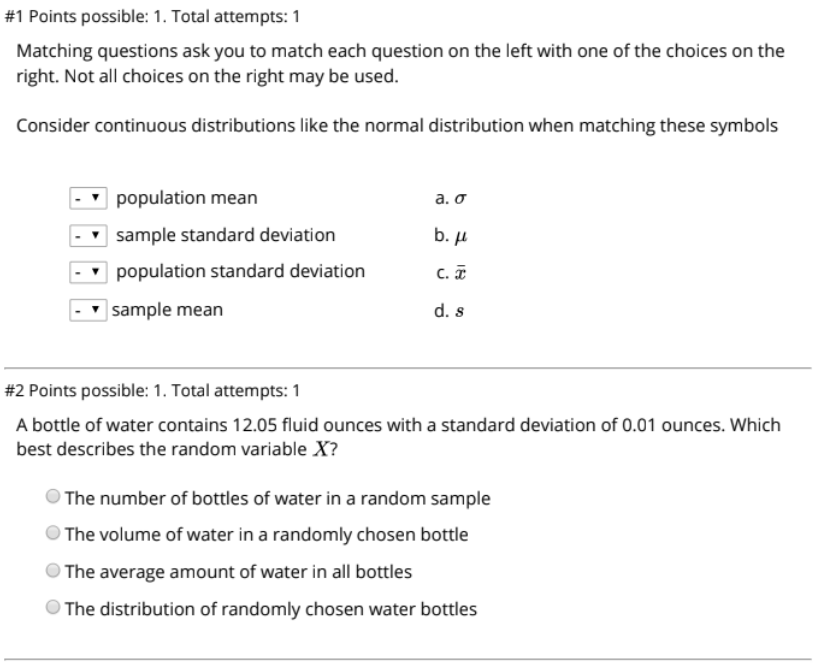
disciplinary practices (problem framing, working with data, using varied media to consult and produce multiple texts, analyzing, summarizing, and synthesizing findings, examining and evaluating claims, and communicating claims). They agreed that these practices were essential for their students to master in order to develop deeper discipline-specific critical thinking. They also agreed that they did not currently spend much time on supporting their students' development of these practices. Thus, each of the participants chose one assignment or activity to enhance based on the disciplinary practices they were not currently supporting adequately per their own evaluation in the sticky note activity (see Figure 5).

Mitchell: Terminology. Mitchell identified a need to support his students with all six of the disciplinary practices outlined by Moje (2015). However, he felt so strongly that a sound knowledge of math language and terminology was the foundation for all six of the disciplinary practices that he chose to focus his assignment enhancement on mathematical terminology. Mitchell agreed with his peers in that his students needed to comprehend the terminology, apply their knowledge of terminology to specific contexts, interpret data and claims using disciplinary terminology, and communicate in a variety of ways using appropriate terminology. Without this strong base of knowledge and application, Mitchell felt his students would have great difficulty becoming a successful member of the Mathematics discipline.

In each of his Mathematics courses, Mitchell included a vocabulary section for his students to work through. He attached a vocabulary sheet with words and definitions, and he expected his students to open the document, learn the terms and their meanings, and apply their knowledge to the activities within the module and the course. While he did use the terms during his instruction, he recognized that he did not provide any directions on Blackboard to encourage

the students to open the document and engage with the words, and he did not include any type of assessment for the students to test their knowledge.

Mitchell decided to make the terminology portion of the module an interactive experience for the students. First, he revised the document to include an example of application of each of the terms specific to the math discipline. He chose to keep everything in written format for this enhancement, but he shared his plan to use a video clip or sound recording of himself in future enhancements. Second, he added a required assignment where the students focused on the terminology and application of the terms. In this assignment, students would learn the words in context and then apply their knowledge to disciplinary situations. Mitchell created a variety of questions for student to work through and show their knowledge and application of the terms (see Figure 6 for sample questions). In order to complete the assignment, students would need to access the terminology document, engage with the terms, and provide responses. Finally, Mitchell included an opportunity for students to provide feedback on the assignment and request additional help with terminology if needed.



#1 Points possible: 1. Total attempts: 1

Matching questions ask you to match each question on the left with one of the choices on the right. Not all choices on the right may be used.

Consider continuous distributions like the normal distribution when matching these symbols

- ▾ population mean	a. σ
- ▾ sample standard deviation	b. μ
- ▾ population standard deviation	c. $\bar{x}$
- ▾ sample mean	d. s

#2 Points possible: 1. Total attempts: 1

A bottle of water contains 12.05 fluid ounces with a standard deviation of 0.01 ounces. Which best describes the random variable X?

- The number of bottles of water in a random sample
- The volume of water in a randomly chosen bottle
- The average amount of water in all bottles
- The distribution of randomly chosen water bottles

Figure 6: Mitchell's enhanced Mathematics terminology activity.

Upon completion of these revisions for the first module, Mitchell considered including a similar assignment in each module to increase engagement with math terminology and to provide uniformity throughout the semester. He planned to use the students' feedback and assessment data to see how the enhancement impacted student knowledge and application of the terminology specific to the course and discipline.

Jackson: Speaking the discipline. Like Mitchell, Jackson also chose to focus his enhancement on terminology as he believed it was the core of each of Moje's (2015) disciplinary practices. However, he approached it from the angle of enhancing communication of the discipline both to his students and by his students. He wanted to strengthen how he modeled communication of a member of the discipline as well as how his students communicated during discipline-specific activities. Jackson was finding that his students were not using the terms specific to the Mechatronics and Electrical fields in their verbal or written responses. The majority of the activities in his courses were in the form of labs, where students had the

opportunity to work collaboratively and independently on authentic experiments designed to replicate specific practices within the field. The students collaborated verbally as they worked through the labs and then independently wrote up the lab reports. While Jackson was confident he verbally communicated his expectations for his students to use the terminology of the discipline, he found that his students were not consistently doing so.

Initially, Jackson considered adding an activity similar to Mitchell's, where students would engage with the terminology and complete an additional assignment to apply their knowledge of the terminology. Jackson shared that he was hesitant to do as it might remove the practice with terminology from the lab experiences, which is really where Jackson wanted to see his students communicating the discipline. After much discussion with his colleagues, Jackson decided to focus on enhancing both his lab manual, which outlined the process for the students to follow, and the lab report assignment, which the students completed and turned in.

Jackson focused his enhancements on how he communicated his expectations to his students in these documents and made three main revisions to each: add the specific objective for the lab, including the expectation for proper use of terminology; provide a full list of terminology and definitions at the top of the documents; and provide a checklist at the end of the documents where students could confirm that they effectively communicated the discipline in both their verbal and written communications. Jackson planned to implement these enhancements on the next lab activity, which was to take place shortly after the conclusion of the learning community. After the students completed the lab, Jackson planned to use both his students' performance on the lab and a verbal discussion with his students to collect feedback on how effective the enhancements were. Finally, Jackson planned to use this feedback to guide similar enhancements to the remaining labs throughout the semester.

Dennis: Critical thinking. Dennis chose to focus his assignment enhancement on the disciplinary practice of *analyzing, summarizing, and synthesizing findings*. He found that many of his Statistics students were successful with completing the computations but struggled with taking the next step to determining the actual meaning of their results. He wanted his students to engage in higher levels of critical thinking where they made direct applications to the field. In discussing his desire for his students to strengthen their ability to interpret and apply the results, he admitted that he did not provide support for his students to grow in this area. He began brainstorming with his colleagues about different strategies he could incorporate to support his students in this area, and he agreed to return the next meeting with a handful of options to discuss. However, due to a personal conflict, Dennis was unable to attend the next session and did not complete the enhancement activity.

Alexander: Critical thinking. Alexander chose to focus his assignment enhancement on critical thinking, and he chose to address it in respect to the individual student. Many of the activities in Alexander's Diesel Marine Technology courses required students to work collaboratively as they completed troubleshooting tasks. These troubleshooting tasks required students to collaborate all six disciplinary practices: problem framing, working with data, using varied media to consult and produce multiple texts, analyzing, summarizing, and synthesizing findings, examining and evaluating claims, and communicating claims. These authentic troubleshooting tasks were very beneficial for many students as they engaged in firsthand practice of tasks similar to members of the discipline. Students worked collaboratively on each step of the process. For example, they collaboratively reviewed their resources (e.g., manuals, troubleshooting flow chart), analyzed the engine, summarized and synthesized their findings, examined and evaluated their diagnosis, and wrote a joint solution to the problem. While many

students took initiative with each of these practices, some students chose not to share conflicting diagnoses and instead agreed with the group. Alexander witnessed this during their collaboration in class and saw a direct translation to their performance on the individual assessments. These students were unable to complete individual assessments at the same level of quality as the group activities. Thus, he chose to focus his enhancement on providing more opportunities for students to individually complete the six disciplinary practices.

Alexander first wanted to make sure all students had a firm grasp of the terminology required for the specific troubleshooting tasks, so he provided a list of terms to practice and told his students he would add the terms to the end of the unit test. Second, he changed the format of the troubleshooting tasks. While students previously had completed all aspects of the labs collaboratively, Alexander decided to have each student complete each step individually before collaborating. While the specific tasks were identical to what was outlined above, the main difference was that students gained practice completing these tasks and participate in disciplinary practices on their own. Alexander felt this individual practice would benefit his students in both performance and confidence as they entered the field.

Alexander had the opportunity to implement these changes in a lab the day before the last learning community session, and he was excited to share the experience with the group. At first, his students resisted having to complete the work on their own. However, he was able to walk around the room as they completed their work to support and encourage the students as needed. Alexander noted the how this lab experience was different than previous labs. Previously, his students would discuss the lab with each other and then submit a collaborative assignment. Now, he had the opportunity to have discipline-specific conversations with the students where he could model communicating the discipline, push his students to think deeper about the content,

and identify students who needed additional support with the process. Alexander felt the enhancements were a success and provided a stronger opportunity for his students to engage with disciplinary practices, and he was anticipating higher marks on the end of unit assessment.

In each of these enhancements, the faculty showed intentionality in their decisions to address disciplinary literacy through disciplinary practices. Previously, the faculty either expected their students to enter their class with the literacy skills necessary for disciplinary work or expected their students to develop their literacy skills naturally during an authentic activity. The enhancements the faculty made on their activities showed intentionality of supporting students with the literacy skills in order for them to successfully participate in an authentic activity. Further, they each recognized they were growing their toolbox of instructional strategies to support their students with disciplinary literacy.

Post Perceptions of Disciplinary Literacy and the STEM Disciplines

Over the course of the learning community, the faculty discussed the role of literacy within STEM courses, enhanced an assignment to strengthen the students' skills with disciplinary practices, collected feedback from peers, and reflected upon the process through a journal entry. In the last journal entry and during the last session, the participants and I reflected on possible changes in their perceptions. In this section, I outline the participants' perceptions of their role as a literacy educator, their practice with implementing disciplinary literacy instruction, and their self-efficacy with disciplinary literacy in the STEM disciplines at the end of the learning community.

Perceptions of role as literacy educator. Each of the faculty expressed they had a clearer understanding of general literacy and disciplinary literacy, as well as how each played a role in their classes. While at the beginning of the learning community the faculty's perception

of literacy was solely basic reading and writing skills, they developed their understanding to see that "disciplinary literacy was specific to a particular subject" (Alexander, Focus Group 2). Further, they deepened their understanding of the larger role literacy played within their discipline, as articulated by Mitchell during the second focus group interview.

> I think coming into this set of meetings, this learning community, I thought of it as the language of the discipline, but I think it's broadened into thinking of it like an identity, a way of being that means you're a part of that discipline. Which of course includes speaking the language, but it includes the other facets that we laid out in the member of the discipline document that definitely broadened my perception of what it means. Basically you identify with being a member of that discipline or you would identify someone as being a member of that discipline, and I think that's directly related to their disciplinary literacy.

Mitchell demonstrated his growth in understanding the role that disciplinary literacy played in one's identity within that discipline. He explained how he felt more responsibility to address disciplinary literacy in his courses as he wanted to strengthen his students' mathematical identity, whether they were going into a mathematical field or a field that worked directly with members of the mathematical discipline.

At the beginning of the learning community, the faculty agreed they had a clear role to support their students with literacy in their classrooms, but they were not sure how to specifically do that in their courses. As they collaborated over the course of the learning community, they shared a growing sense of responsibility to incorporate intentional literacy activities as well as to model communicating the discipline. "I view myself as being on the front lines of setting the example and making students more aware of the importance of literacy in all aspects of learning" (Jackson, Focus Group 2). This statement represents how the faculty had strengthened their perception of their role as an educator who was responsible for both the content and the literacy associated with the field.

Mitchell extended this conversation to investigating the relationship between content and literacy within his Mathematics courses.

> I think literacy is more of a driving force. Where I used to think of, you would teach a class like math, and you would hope that going through the stuff that they would pick up the language as they moved along. Then I realized that a lot of the ones who aren't succeeding are the ones who don't have that literacy. Now I see that maybe by pushing the literacy, you can actually get them to become a member of that discipline. You can get them to learn the things, so instead of expecting the literacy to be an effect, it's more of a cause (Mitchell, Focus Group 2).

This was a powerful discussion as the faculty started to view the role literacy could play within their courses. Rather than viewing literacy specific to their disciplines as something the students would "pick up" while learning the content, Mitchell articulated that focusing on disciplinary literacy as a "driving force" within his course would not only help his students master the content but would also strengthen their membership within the discipline.

Further, Alexander argued that it was the responsibility of all faculty to incorporate disciplinary literacy within their instruction. "There's a relationship; [the courses] are all related. Everything comes together. It's not necessarily pointed to one person or another, we're all a community that's working on making sure that they learn" (Alexander, Focus Group 2). This sense of responsibility resonated with each of the faculty. They understood the need for all faculty within their program to recognize that literacy was part of their role as an educator in order to best support the students.

Disciplinary literacy instruction within the STEM disciplines. The faculty agreed that completing the skills and strategies poster activity helped them to not only see how much literacy instruction they already incorporated into their coursework, but also they were able to identify the gaps where they could better support their students with disciplinary literacy. They recognized that enhancing their instruction started with them, and it was important to monitor

their students' achievement specific to disciplinary literacy. "I am paying closer attention to what the students are understanding or not understanding. Also, I am looking at the different quizzes that I give for understanding" (Alexander, Journal 3). This reflective practice was important to determine areas to strengthen their inclusion of disciplinary literacy. For example, Mitchell shared that he was "thinking a lot about literacy lately - the role reading plays in my discipline as well as the learning process in general. I have started to investigate my gaps in knowledge with respect to writing" (Journal 3). Mitchell planned to read more and collaborate with his peers to investigate ways to strengthen his expectations and support for disciplinary writing in his Mathematics courses.

The faculty spoke often of building an instructional toolbox, and by the end of the learning community they agreed they had a start to this toolbox. They agreed that there were several things they wanted to do after this learning community to continue working and developing their knowledge of disciplinary literacy within their courses. For example, Alexander determined that he "needed to adjust the way students collaborate in groups to increase communication between students, therefore increasing their knowledge by discussing the topics they are learning" (Journal 4). Mitchell wanted to strengthen his support of both reading and writing mathematics, and he recognized that this might mean a major course redesign. "This makes me think about the flow of the course differently" (Journal 4). He was concerned, however, about not having enough time and shared his desire to collaborate with other Mathematics faculty in order to complete this redesign.

In order to accomplish these, and other, enhancements within their courses, the faculty agreed that they were in need of additional professional development. This learning community was the start of their investigation of disciplinary literacy, a concept they admitted to not having

considered previously. They valued the opportunity to collaborate with their colleagues, and they were concerned that without dedicated leadership in professional development, they would not have the time to initiate a learning community. Beyond other faculty in their own disciplines, the participants wanted to collaborate with English and Developmental English faculty to learn more about literacy, the content of their courses, and how they could work together to strengthen the students' experience.

The faculty brainstormed solutions to overcoming their time barrier, and Mitchell suggested stipends or course release time to participate in learning communities. He felt that realistically, faculty would not be willing or able to participate without such a stipend or course release.

> If I were in a position of power, I would totally make release time an option. You would need to set up the right proposal, get a group of people, and have a learning community. Then you would have to show others what you accomplished. And I know that in other education systems they do that, you know, they have less course load and they spend that extra time in the learning community, and they have much better results (Mitchell, Focus Group 2).

Mitchell proposed that after participating in a semester-long learning community, those involved should present to their peers at the annual professional development day at the college. This presentation would not only allow them to share their experience with other faculty, but it might also generate interest for future participation.

Self-efficacy with disciplinary literacy in the STEM disciplines. The faculty agreed that at the conclusion of the learning community, they were more confident in both their understanding of basic vs. disciplinary literacy skills and their ability to integrate literacy instruction into their courses. Further, they were more motivated to take this knowledge and put it into action in their course instruction, something that they recognized they needed to improve upon.

> Sometimes I am so into wanting to get things done, I just kind of – here is the topic, here are the subjects, and I'm teaching and I'm going over it, you know, repeating everything that I want the students learn. However, I take it for granted and I should probably try to improve the connection to literacy (Alexander, Focus Group 2).

While they again discussed their lack of extra time to make such changes, they now felt they held greater confidence in how to make the changes. They were reassured by their experiences enhancing their assignments as well as their growing toolbox of strategies.

Mitchell shared that while he felt confident in his teaching overall, his experience in this learning community helped him to refocus his instruction within his courses.

> I think this learning community is a really good reminder of the importance of literacy. It's all interconnected in every aspect of the course. The reading, writing, critical thinking, and you just need to be recognize it and be aware of that when doing the course design to make sure that everything is working together and you know, reinforcing it (Mitchell, Focus Group 2).

Mitchell now viewed disciplinary literacy as a "driving force" in his curriculum, where he needed to consider the connection between literacy and math while designing the course. He shared how his experience in the learning community strengthened his confidence in his understanding of how literacy was connected to the Mathematics content as well as how to translate that into designing his course.

Finally, Jackson shared that his experience in the learning community helped to strengthen his self-efficacy with his instruction and assignments. "I review my assignments from a students' perspective instead of an instructor. This has helped me focus on what areas need clarification. This awareness has also increased my confidence in that I am giving the students a well refined product" (Jackson, Focus Group 2).

Jackson's schedule was extremely busy; he was the program head for his department, participated in many activities between the college and community to promote his program, taught an overload (18-21 credits a semester), and monitored all of the adjuncts in his

department. While the task of enhancing an assignment was overwhelming at the beginning of the learning community due to his busy schedule, Jackson was pleased with his end product and shared that this success raised his self-efficacy. He agreed with Mitchell in that disciplinary literacy was a driving force to help his students become members of the discipline, and he planned to "incorporate the same type of literacy structure to other assignments" (Jackson, Focus Group 2).

Again and again, the faculty addressed the issue of time. They were all full-time faculty, and they found that their amount of responsibilities were increasing each year. With the current climate at the college, they witnessed reductions in their current support systems. The two Mathematics faculty, Mitchell and Dennis, were concerned whether they would have a position in the upcoming year after recent layoff announcements. Although Alexander and Jackson were confident their positions were secure, they recognized that budget cuts would translate to less adjuncts, lower levels of administrative support, and additional responsibilities in an already full plate. The faculty were honest about these concerns, and they worried that this would impeded their ability to continue strengthening their instructional self-efficacy as they would not have the time and ability to hold future learning communities to collaborate with their peers on a topic they deemed important to the success of their students.

Impact of the Learning Community on Participants' Experiences

All four faculty members shared throughout the learning community sessions and in their journal entries that the learning community had a positive impact on their mindset and teaching. While they were adamant that their schedule was busy and they did not have much 'extra' time to participate in such professional development opportunities, they articulated they were grateful for the opportunity to meet fellow colleagues and collaborate on an issue that would positively

impact their teaching and their students' success in their courses. The faculty identified four main ways the learning community positively impacted them.

First, they shared that the learning community forced them to think about something outside of their typical collegial conversations: literacy. Some faculty, like Alexander, had thought about literacy before but had not taken any action as of yet. "I had been thinking about that for a while, but I pinpointed it when we started talking about it" (Alexander, Focus Group 2). The conversations in the learning community shaped the faculty's mental view of disciplinary literacy, and helped to pinpoint their previous thoughts to a point where they had focused views of literacy.

> I think it's helped shape my mental view of disciplinary literacy. And how that affects my view of like my course design and then how the you know, each component in the course design has sort of a purpose, and really there should be some tie in with one of the literacy aspects for almost anything. I don't know, it's tough to put it into words. But basically it's affected my mental process for course design, and reminding me of the importance of disciplinary literacy within that design (Mitchell Focus Group 2).

Having a single focus (literacy) but within the context of their specific disciplines allowed the faculty to strengthen their knowledge of disciplinary literacy. "I have increased awareness of the need for literacy in all aspects of my discipline; written and hands-on components" (Jackson Focus Group 2). Each of the faculty were confident that they would be able to continue building upon this increased awareness upon the completion of the learning community.

Second, the faculty felt the discussions and questions during the learning community were a powerful way to engage in critical thinking, a skill they deemed essential in each of their disciplines.

> I think questions and answers are like the best way to do critical thinking, and I tried really hard to get my - not get too much of a tangent - but for my students to have that process where they ask themselves those questions. But you've done that. So the questions in the journal entries, the questions in these interviews and these discussions,

> that's caused me to think about these things. And it's that thinking that has done it (Mitchell, Focus Group 2).

The faculty felt challenged to think deeper and go outside their comfort zones. "The facilitator's and other members' input has helped enormously as we bounced ideas and examples off of each other and challenged us to go further in our thought process than we may have on our own" (Jackson, Focus Group 2). Further, they recognized that the discussions forced them to focus on concepts that perhaps they were not addressing.

> Looking back on this experience, I see that the group discussions have motivated me to think more about ideas that I find so unquestionably important that they ironically become tacit and forgotten. So the importance of the learning community is evident in the thinking that it arouses (Mitchell, Journal 4).

Recognizing their busy schedules throughout the learning community, each of the faculty members shared their agreement with Jackson's statement in that they would not have investigated disciplinary literacy had it not been for this (or a similar) professional development opportunity.

Third, the collaboration component was valuable for each of the faculty members. Only two of the faculty in the learning community had known each other previously, and none of the faculty had collaborated with each other in this manner. Participating in collaboration within this learning community increased their knowledge through discussion with their peers. "The collaboration that I've experienced in this learning community so far has increased my knowledge in overall communication with my peers and with my students" (Alexander, Journal 3). Considering most of their collegial and pedagogical conversations were with faculty from their own disciplines, the faculty agreed hearing other perspectives was valuable. "I have valued others comments and suggestions – many of which are from a slightly different perspective and/or discipline" (Jackson, Journal 3). Having an interdisciplinary group generalized the

discussion a bit and made it easier to connect to concepts of disciplinary literacy and then apply it to their disciplines.

> Because that viewing things from a generalized point of view is easier to connect with articles like that, and I do better from that sort of, what is it, like a deductive reasoning, right? so we have a general model and from that I can apply it to my class. And we did really both kinds of reasoning, right? We each had to say, how do I do it in math, then we generalized and how do we do it in any discipline, and then we can take that back and thinking about how it applied to our specific discipline. And so going back and forth from the general to the specific, I don't know if it would have happened as much if we stayed talking about math. It challenged me, so as with any challenge, I think it was definitely beneficial, the learning experience (Mitchell, Focus Group 2).

Finally, applying their new knowledge directly to their specific courses was valuable. After identifying the specific needs for literacy within their discipline and the instructional strategies they were implementing, they were able to determine the gaps in their instruction. Following their goals for the learning community, they investigated specific strategies to fill these gaps and implemented these strategies directly into a current course assignment. The faculty recognized this was only one assignment and planned to continue to enhance additional assignments throughout their courses. "I'm going to continue working on tweaking not only one course, but multiple courses. Every course I teach, and I teach quite a few courses" (Alexander, Focus Group 2). Each of the faculty had a start to a toolbox of instructional strategies to implement disciplinary literacy throughout the rest of the course and their other courses.

Early Childhood Education: Disciplinary Literacy as a Catalyst for Programmatic Change

In this section, I present the experiences of three Early Childhood Education faculty throughout their learning community, their understanding of the role literacy plays within their discipline, their perceptions of their role as a literacy educator, their practices with literacy instruction within their courses, and their level of self-efficacy with incorporating disciplinary literacy into their instruction. Additionally, I present any changes experienced by the

participants as they learned about disciplinary literacy, unpacked Moje's (2015) 4Es framework, and enhanced current coursework to include disciplinary literacy.

Introduction of Learning Community and the Early Childhood Education Discipline

Three Early Childhood Education faculty volunteered to participate in this learning community focused on disciplinary literacy within the Early Childhood Education discipline. See Chapter 4 for a full description of the Early Childhood Education discipline, program, and faculty. The three faculty included the full-time program head and two adjunct faculty. While the two adjunct faculty had worked closely with the program head in the past, the three had not collaborated long term on a specific topic. Thus, it was important to take specific steps to build community among the participants (Dufour, 2004). The first session was spent on learning more about each other's background and interests, developing a joint mission statement, and identifying shared values. The participants identified what it meant to be a member of the Early Childhood Education discipline during the second session. These activities prepared the faculty to better understand their individual and collective intentions and expectations for the learning community.

Participants. Three faculty, one full-time and two adjunct, participated in the Early Childhood Education learning community: Meredith, Amber, and Jackie. Due to the nature of their discipline, all three faculty had an advanced degree in early education. While their education and experience included literacy instruction, none of the faculty had a degree specifically in literacy. All three faculty attended each of the five learning community sessions and completed all tasks (e.g., readings, journals, assignment enhancement). They were very forward and participatory throughout the sessions, and repeatedly shared their excitement to be part of the learning community.

Mission statement. During the first session, the participants collaboratively defined their mission statement for the learning community. Their mission was to "determine how best to support our students' current general literacy skills that can be extended to disciplinary literacy skills". Each participant had experience with literacy as a teacher and teacher educator, and they agreed they each had a fairly strong understanding of the role literacy played within their field. However, they aimed to better understand the differences between general and disciplinary literacy, as well as how they could best support their students with each.

Shared values. The participants were colleagues and had collaborated on several initiatives as part of the Early Childhood Education program. However, they had not collaborated specifically in the area of course design or redesign, instructional strategies, or assignments specific to the literacy needs of their students. As program head, Meredith had worked with other full-time faculty and administrators across the college with both course and program design and redesign, but she had not worked specifically with her Early Childhood Education adjunct faculty in these areas. To prepare for collaboration during the learning community, the faculty discussed at length their shared values in terms of instruction, student success, and literacy. They identified the following shared values:

- Authentic activities are important in instructional practice.
- We expect that students have content knowledge when completing each course.
- We hope for student success.
- Professional development informs practice.
- We place emphasis on developmentally appropriate practices.
- Disciplinary literacy skills are crucial to future success of students in the Early Childhood Education field.

It was during this discussion that the faculty first emphasized the importance of their students developing skills and practices appropriate for the field. The faculty felt great responsibility for preparing their students for the workforce, both in terms of the preservice teachers and the

students they would one day be teaching. They were very passionate about the field of Early Childhood Education, proud of the Early Childhood Education program at their campus, and proud of the reputation they had built with the Early Childhood Education community.

Member of the discipline. In each session, the faculty addressed what it meant to be a member of the discipline, even before I formally introduced the task of defining a member of the discipline. They wrote about it individually in their journals, and together they identified the following list of traits that a member of the discipline would hold:

- Professional knowledge and skills
  - Knowledge of birth through age 8 developmental milestones and NAEYC standards
  - Solid philosophy of early childhood education
  - Toolbox of strategies
  - Ability to adapt lessons
  - Understanding of developmentally appropriate assessment practices (observation)
  - Use of appropriate tools to assess children
- Professional behaviors
  - Characteristics of high quality educators
  - Flexibility
  - Professionalism
  - Inspire children/parents
  - Passionate
  - Active listening
  - Relationship building
  - Respect
  - Collaboration with colleagues
  - Communication with parents

This list of traits included both professional knowledge and professional behaviors, categories the faculty felt were needed in order to be a successful early childhood educator. In everything the faculty did in this learning community, they made direct relationships between what occurred in their classroom and what occurred in the early childhood classroom. They knew their students planned to immediately enter the field upon graduation, and they felt an immense amount of

responsibility to graduate individuals who were competent and effective members of the discipline.

Initial Perceptions of Literacy and the Early Childhood Education Discipline

During the first two sessions, the participants and I spent the majority of the time identifying their initial perceptions of literacy within the Early Childhood Education discipline. At times this was challenging as we had to separate whether they were discussing instructional strategies required of early childhood educators or those required of preschool children. Once we clarified that we were focusing on the literacy specific to the profession of Early Childhood Education, the faculty examined their courses from the perspective of a faculty member, college student, preschool administrator, preschool student, and preschool parent. They made connections between the literacy required to be successful with the content of their courses and the literacy required to be successful in the field.

Perception of role as a literacy educator. During the first learning community session, we discussed at length the faculty's perception of their role as a literacy educator. They unanimously agreed that literacy was an integral part of their instructional role in their Early Childhood Education courses, as shown in the first response from the faculty during the first focus group:

> Amber: We're all literacy teachers.
> Meredith: We're all still literacy teachers.
> Jackie: Yeah.

This initial exchange showed they perceived literacy was part of their role as an Early Childhood Education faculty member. In the discussion that followed, they explained how many of their students needed support with foundational literacy skills. "Our students are lacking a lot of literacy skills, foundational literacy skills to be able to help them through life. A lot of those

foundational literacy skills aren't there yet, and they're necessary for what we're asking them to do" (Meredith, Focus Group 1). They understood that the students needed to strengthen their literacy skills in order to be successful with discipline-specific tasks in the field, and their initial view of themselves as a literacy educator was of one who taught foundational literacy. "We need to teach basic, foundational literacy skills in order for them to succeed in our class" (Amber, Focus Group 1). They found that their students were in great need of foundational literacy support, and without those skills the students would have difficulty finding success in their courses and in the Early Childhood Education field.

Literacy skills within the Early Childhood Education discipline. The faculty continued to discuss the role of literacy within their discipline, and they agreed that "literacy is entwined with our discipline; I don't think you can separate or tease it out. It just runs through everything" (Amber, Focus Group 1). The faculty provided many examples of literacy skills students needed to exhibit in order to be successful in their Early Childhood Education courses. The faculty engaged in a literacy skills activity, where they identified all of the literacy-related skills students needed to be successful in their courses (see yellow sticky notes in Figure 7). They also identified the strategies they currently used within their courses to support literacy (see blue sticky notes in Figure 7). At this stage of the activity, they simply listed the skills and strategies.

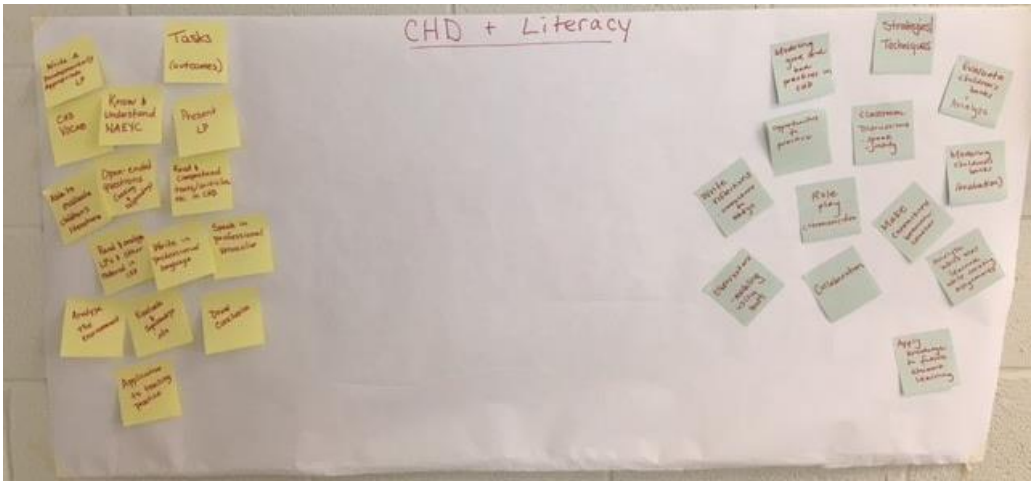


Figure 7: Early Childhood Education literacy skills and strategies.

I then asked the faculty to group similar literacy skills together (see Figure 8). The faculty discussed at length how to group these skills, and their first conclusion was to group them into two categories: foundational literacy and professional literacy, terms they had regularly used in their past experiences. As they discussed the meaning of these two categories more, they decided to expand to six main categories of literacy skills needed in their courses: foundational literacy, comprehension, writing, communication, critical thinking, and professional literacy. They decided that foundational literacy would represent the basic, foundational literacy skills. Comprehension, writing, communication, and critical thinking would represent the disciplinary literacy skills, and professional literacy would represent the literacy behaviors necessary to be an effective member of the discipline.

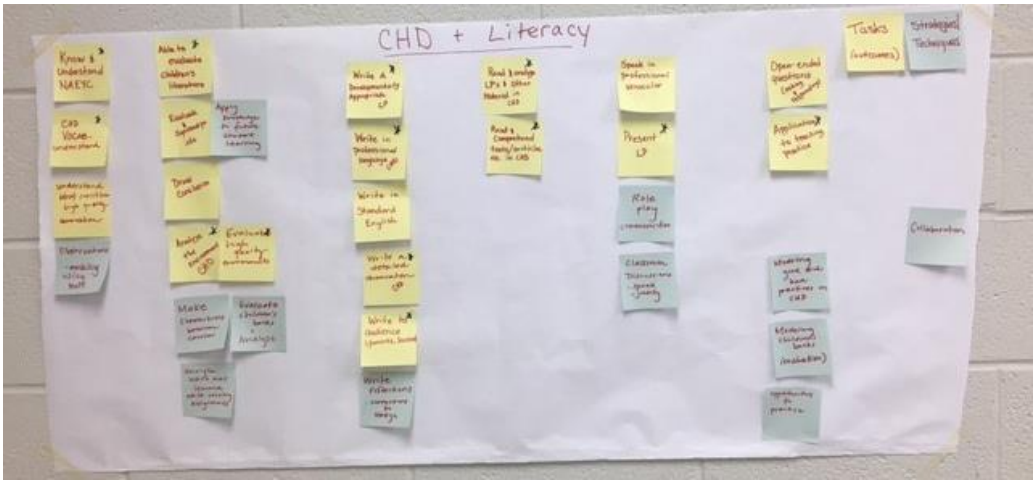


Figure 8: Early Childhood Education grouped literacy skills and strategies.

Foundational literacy skills. The faculty identified several foundational literacy skills their students needed to be successful with in order to succeed in their courses. This included basic reading and writing skills, but it also included basic communication skills. As their students were future educators, these foundational literacy skills were essential for both their courses and their future role as an early childhood teacher. They identified several foundational literacy skills students needed in order to be able to complete discipline-specific tasks. For example, "writing a lesson plan requires you to write a coherent sentence" (Meredith, Focus Group 1). Basic comprehension skills are necessary to understand more complex text, such as the Milestones of Child Development (VDSS, 2013), the state's guidelines for early childhood learning and development. Active listening skills are important in order to effectively communicate with students, parents, teachers, and administrators. Throughout the learning community, the faculty grappled with how to help those students with low foundational literacy skills grow enough in order to be successful in their course and the field.

Comprehension. Beyond basic comprehension of the textbooks and other resources, the faculty spoke of the need for their students to comprehend texts and resources specific to the field. First, the faculty spoke of the need for students to understand the vocabulary and

terminology specific to the Early Childhood Education field. Second, the faculty discussed the need for their students to comprehend content specific to the field, such as the Milestones (the state's guidelines for early childhood learning and development). "Students need to comprehend what they say and what they need to do to measure a particular strand" (Amber, Focus Group 1). Students needed to understand not only the words within the strands, but also the basic concepts that the strands represented. This comprehension was necessary before the students could apply their knowledge to the classroom and lesson design. Third, the students needed to be able to comprehend the texts specific to the field. "My students need to be able to efficiently digest college textbooks, professional magazines, and journals" (Jackie, Journal 2). These texts were written in different styles and formats, and students needed to be able to read and comprehend each source as they completed course assignments.

Writing. The faculty agreed that writing skills were very important within the field of Early Childhood Education, as articulated by Jackie in her second journal entry.

> Writing skills are very important in our field of study and the better we can express ourselves in the written language, the better we will be understood. As authors, [students] should be concise and direct, avoiding language unfamiliar with the reader – therefore know their audience and use vocabulary accordingly.

Beyond basic spelling, punctuation, and grammar, the faculty spoke of the need for their students to use higher level writings skills in their assignments.

> Students need to be specific in what they are writing to explain what they are going to be teaching and how they are going to be measuring it. We need students to be able to articulate both verbally and in writing what it is that they are going to be doing in the classroom (Meredith, Focus Group 1).

The faculty agreed that as students completed assignments within their courses, they needed to not only be able to make connections between their experiences and the research, but they also needed to write about these connections in a professional manner. For example, when writing

lesson plans and reports, students needed to integrate examples and justifications for their pedagogical decisions. Additionally, students needed to keep anecdotal records during their observations that included higher level analysis of what they observed in the classroom. In all of their writing, students needed to use discipline-specific language. "Early childhood educators are asked to write using the language of the field. Things such as newsletters, lesson plans, and bulletin boards all ask for educators to use their writing skills and terms specific to the field" (Meredith, Journal 2). Additionally, they needed to be able to write for multiple audiences: students, parents, and administrators.

Communication. The faculty expected early childhood educators, and thus their students, to engage in both active listening and effective verbal communication. "Active listening is an important skill that's a huge part of that literacy component. You have to be able to hear what someone is saying and then communicate back in a way that simulates authenticity in the conversation." (Amber, Focus Group 1). The faculty recognized the reciprocal relationship between listening and speaking, and they understand that both relied on a sound comprehension of the content. As students gained more content knowledge they would be able to participate in more authentic two-way conversations with their peers. "They will need to form, present, and debate the overall beliefs of Early Childhood Education and be well versed in one or more specific aspects" (Jackie, Journal 2). Additionally, students would need to articulate their comprehension and application of knowledge in a variety of manners and to a variety of audiences. "They may be called upon to write a factual and objective narrative, persuade a supervisor or parent, describe a child's strengths and weaknesses, or make a report on gathered data" (Jackie, Journal 2). Understanding the audience is important when deciding how best to communicate information.

Critical thinking. Each of the participants spoke and wrote of the importance of critical thinking within the Early Childhood Education field, as shared by Amber in her second journal.

> Early childhood educators use analytical thinking, synthesizing, and reflection as their thought processes. For example, we need to be able to create a lesson plan with clear objectives, execute the plan for individual children, assess whether the objective was met, and then evaluate the plan to see if it needs to be changed.

Students needed to justify and rationalize decisions, adapt lessons based on student diversity and needs, and reflect on their practice. Additionally, it is essential to engage in critical observation and application strategies.

> Among other things, as early childhood educators, we need to be efficient in gathering information regarding the development of young children. It is then incumbent upon us to analyze, apply standards, draw inferences, conclusions and predict positive outcomes for our students. We then transfer this knowledge into our classroom approaches and techniques (Meredith, Journal 2).

In every critical thinking skill the faculty discussed, they made direct connections back to the classroom. They understood the importance of engaging in high levels of critical thinking in order to be successful in both their classroom and the Early Childhood Education field.

Professional literacy. Finally, the faculty spoke of the importance of professional literacy within the Early Childhood Education field. "Literacy is necessary to be a professional in the field. You're representing the field" (Jackie, Focus Group 1). Once in a teaching position of their own, the students would be responsible for writing newsletters and content for websites, communicating with parents, colleagues, and administrators, and engaging in two-way conversations about the field. Additionally, throughout their career, early childhood educators need to be able to communicate their educational philosophy in written, verbal, and practical forms. Each of these tasks required sound professional literacy.

The faculty included professional behaviors as part of professional literacy. The students needed to understand which behaviors were appropriate for the Early Childhood Education field.

For example, they needed to show respect to others, listen without interrupting, show value to parents' concerns, speak positively about children, complete all tasks in a timely manner, take time to build relationships, and collaborate with colleagues. Beyond the knowledge and application of pedagogy, the faculty felt these professional literacy skills were extremely important.

Expectations of students' literacy abilities. The faculty's expectations of their students' literacy abilities varied depending on where the students were in the program. The faculty worked with students during all stages of their program, and they expected their students to develop their literacy and content knowledge throughout the program. While this meant they expected students who were later in the program to have stronger literacy skills, they often found that this was not necessarily the case.

The faculty separated their expectations into two categories: foundational literacy and disciplinary literacy. First, they expected their students to enter their classes with foundational literacy skills equivalent to a college freshman. They expected their students to read and comprehend the textbook and be able to write a solid paragraph that supports a central idea and includes concrete examples. Unfortunately, the faculty's expectations often did not align with their students' incoming skills, resulting in frustration.

> It is disheartening to see the literacy skills students arrive with. Many students have to be told that a paragraph is more than one sentence, don't capitalize proper nouns, and do not know how to read for information. They speak and write as though they are texting and do not necessarily understand how to be a "professional" in the field. Obviously we have some students who come in fully prepared to be in a baccalaureate program but many students need a lot of help with their literacy skills (Meredith, Journal 1).

For many of their courses, there were no literacy prerequisites (English Comprehension of Developmental English), and many of their students entered their courses without strong foundational literacy. Further, they found there were inconsistencies with what Early Childhood

Education faculty on other campuses expected of their students literacy-wise in their courses. "We hold our students to high standards, but this is not the case across the college. Then when those students come to our classes, they argue with our expectations" (Meredith, Focus Group 1). This resistance to their expectations added to the faculty's frustrations with supporting their students' foundational literacy as they felt alone in the process.

Second, the faculty expected their students to enter their classrooms ready to engage in discipline-specific literacy skills, especially as they progressed through the program. When students made a pedagogical decision when writing a lesson plan, they expected them to justify their points and explain why they made that decision. They expected them to be able to truly understand the Milestones and what the components of each standard meant in terms of the Early Childhood Education field. Finally, they expected their students to be able to apply their understanding of the Milestones to the field and the early childhood classroom.

Obstacles to literacy instruction within the Early Childhood Education discipline. The participants repeatedly discussed the challenges they faced in terms of their students' level of literacy when they entered their classes. They found that many of their students were not entering their coursework prepared for higher level literacy and thinking tasks. This wide range of abilities coming into their classroom was a major obstacle they faced as they had to determine how to allocate their time between foundational literacy instruction and support and the content and disciplinary literacy skills. This was a major obstacle they faced as the faculty felt they needed to bridge this literacy skills gap in a short timeframe. They argued there was not enough time in the semester to bring up their students' low levels of foundational literacy in order for them to master both the content and disciplinary literacy required of the field.

Avenues for student support with literacy. The faculty identified two main avenues for student support with literacy at the college. First, they identified the writing lab on campus. In theory, they felt this would be a strong resource for the students. However, they had many poor experiences where the student's work was worse after they met with a tutor in the writing lab. The faculty found their students were not going to the writing lab on their own, and they did not encourage them to go due to their own poor experiences.

Second, the faculty identified the English Composition and Developmental English classes offered on campus as a support option for students. They agreed that all of the skills taught in both Developmental English and English Composition would translate to the Early Childhood Education field. These skills included the reading, comprehension, summarizing and paraphrasing, discussion of texts, information literacy, scholarly sources, research skills, taking notes, and application. The faculty agreed that not only should these classes prepare students with the foundational literacy skills needed in college, but they would also prepare them to be reading to engage in the disciplinary literacy skills of their discipline.

Literacy instructional strategies utilized within the Early Childhood Education discipline. After identifying the literacy skills necessary to succeed in the Early Childhood Education courses, the faculty shared their current instructional strategies in their classrooms (see blue sticky notes in Figure 8). This was a powerful exercise for the faculty, as they realized the majority of the literacy instructional strategies they incorporated into their classes were focused on the foundational literacy skills many of their students were lacking. They defended this practice as they felt strongly that they needed to support their students' foundational literacy before they could incorporate higher level literacy instruction. However, they were surprised

they did not support the higher level, discipline-specific literacy skills as much as they thought they did.

Foundational literacy skills. The faculty clearly articulated their expectations for grammar, spelling, and the structure of their writing, despite students protesting that they did not see a connection. The faculty also worked with students one-on-one to provide support and provided many opportunities for peer support. They provided a lot of feedback so students could revise their work and show growth. Additionally, they scaffolded assignments to progress toward the final project. By providing opportunities for students to draft out sections of their final project, they were able to provide feedback and opportunities for revisions. The faculty were open to trying new strategies, but they were at a bit of a loss as to how to support the students' foundational literacy while also maintaining high expectations for both content and literacy in their courses.

Comprehension. The faculty expected students to read and comprehend a variety of texts, and they understood that some texts were in formats that were not familiar to the students. For example, the Milestones were a critical document for the field of Early Childhood Education. Many pedagogical decisions were based on the Milestones, and it was essential students were able to comprehend and apply their knowledge to their activities and assignments. The faculty each shared examples of how they modeled breaking down the Milestones into parts, identifying meanings of terms, making connections to the early childhood classroom, and used the standards as a foundation for pedagogical decisions. While this was often challenging for their students, they recognized the importance of comprehending the Milestones as they prepared to enter the field.

Writing. The students engaged in many authentic writing activities throughout the Early Childhood Education program. For example, students wrote lesson plans in almost every class, they wrote an educational philosophy statement, and they wrote anecdotal records of their observations. The faculty expected their students to write well-structured assignments that met each of the assigned criteria. However, they also pushed their students to go beyond writing the basic information and engage in critical writing where they justified their decisions, provided examples, and included evidence. In order to support their students in these latter writing skills, the faculty provided clear expectations through directions and rubrics, gave thorough feedback, and offered opportunities for revision. They shared papers of varying levels and modeled how to strengthen those papers by incorporating more examples, discipline-specific terminology, justification, or evidence.

Communication. The faculty agreed that it was essential they modeled effective communication with their students. They intentionally modeled proper use of Early Childhood Education terminology, and they shared expectations for their students to do the same. They provided many opportunities for students to work in focus groups to engage in the content, collaborate to reach consensus, and provide feedback for their peers. They shared with their students the importance of communicating the discipline, and they included authentic activities and assignments throughout the semester for them to practice and develop this skill.

Critical thinking. The faculty engaged the students in several activities in order to develop critical thinking. Each of the faculty shared examples of modeling the thinking process for various activities (e.g., lesson planning, anecdotal records). They also relied heavily on class discussions where they guided students through inquiry and discovery. However, they found that they were not able to reach all students in these group discussions.

Professional literacy. The faculty shared expectations of professional literacy within the Early Childhood Education field, and they outlined specific behaviors that were indicative of members of the discipline. They stressed the importance of these within the field and maintained high expectations within their own classes. Further, the faculty provided opportunities for students to engage in authentic activities (e.g., writing a class newsletter), and the faculty provided thorough feedback on their work. "I like for my classes to be interactive and practice, which affords students the opportunity to see how to use the skills in their personal and professional lives" (Meredith, Journal 2). Every student participated in practicum experiences in an early childhood classroom, and the faculty made direct connections concerning these authentic activities and professional literacy.

Self-efficacy with literacy instruction in the Early Childhood Education discipline. All three faculty shared they felt confident in their ability to teach the content and prepare students to enter the field of Early Childhood Education. However, they were struggling with how to strengthen students' level of foundational literacy enough to be able to focus on higher level literacy requirements. "We all feel comfortable we could teach what it is they need to know. We just need to get them to the baseline proficiency level with literacy" (Meredith, Focus Group 1). This was challenging for them, however, as they had to determine how to allocate instructional time between foundational literacy and disciplinary literacy.

> We do have to work with what we're given, but in a timely manner. If you want to learn to be literate, this is not the class you should be in. I can help you with some basics, but then we really gotta do what you're here to do (Jackie, Focus Group 1).

They understood the need for a certain amount of foundational literacy in order to engage in disciplinary literacy, but they found it difficult to support all of the students who needed it within their one semester.

Enhanced Assignments/Activities

In order to gain experience with and better understand the process of integrating disciplinary literacy instruction into their courses, the faculty each enhanced a current assignment or activity to include disciplinary literacy instruction and support during this learning community. The faculty spent the first two sessions learning more about disciplinary literacy within the Early Childhood Education discipline and unpacking Moje's (2015) 4E framework. This was powerful for the faculty as they had not viewed literacy in this manner before. After a lengthy discussion, the faculty agreed to focus their enhancements on the specific disciplinary practices in the *engage* level of the heuristic (problem framing, working with data, using varied media to consult and produce multiple texts, analyzing, summarizing, and synthesizing findings, examining and evaluating claims, and communicating claims). They expected their students to possess each of the specific disciplinary practices, but they agreed that they did not did not spend much time within class supporting their students in this area. They wanted their students to be able to think critically and perform higher level tasks similar to Early Childhood Educators, but they had not laid the groundwork for the various components of engagement that needed to be mastered first.

The faculty saw this enhancement activity as a way to not only improve their own instruction but also as a way to strengthen the program as a whole. Before discussing specific activities, the three faculty agreed they should each choose an activity that focused on a disciplinary literacy skill needed throughout the program. Further, they reviewed their evaluation of their current instruction in the sticky note activity (see Figure 8) to determine which disciplinary literacy skills they were not adequately supporting across the program. They agreed that approaching this enhancement activity from a programmatic perspective would have

a greater impact on their students' overall disciplinary literacy and build consistency of expectations and instruction across the program. Additionally, the activities could be shared across the faculty in the program and incorporated into each of their classes.

Jackie: Lesson plan rationale. In almost every Early Childhood Education class in the program, students needed to write lesson plans. The teachers use the same lesson plan rubric across the program. After identifying the overall concept, learning standards, and learning objectives, students needed to express their rationale for the lesson. "Teachers not only know what is important for children to learn but why it is important they learn it" (Jackie, Lesson Plan Assignment). Being able to justify why a student needs to learn a skills or concept, as well as how the activity will enhance the child's development, are practices that members of the discipline engage in on a daily basis. Articulating this rationale, whether in an oral or written format, is an essential skill for members of the discipline. It requires each of the disciplinary practices outlined by Moje (2015): problem framing, working with data, using varied media to consult and produce multiple texts, analyzing, summarizing, and synthesizing findings, examining and evaluating claims, and communicating claims. However, the faculty were finding that students at various stages of the program were struggling with developing and communicating a sound lesson plan rationale.

The lesson plan template used across the courses in the Early Childhood Education program outlined the organizational procedures for the content of the lesson plan. There was a paragraph explaining what was expected in the rationale:

> Provide a brief justification of why you feel the children need to learn the concept or skill you have selected for your objective. Describe how your activity will enhance the child's security and self-regulation, problem-solving, thinking skills, and academic and social competence. You must show that you are able to reflect upon your practice, be responsive to the needs of each child, and intentional, as you strive to promote positive outcomes for each child.

There was a summative rubric that outlined these same expectations. The faculty in each of the courses, especially as they neared the end of the program, expected their students to be able to justify, describe, apply, and reflect during the process of lesson planning. Each of the faculty in the learning community agreed that they did not spend class time working on this rationale, and they were frustrated each semester as about a third of their students struggled to develop a sound lesson plan rationale.

Jackie especially was frustrated with the poor quality of her students' rationales. She wanted them to make connections between the content of the course, the best practices published in the field, and the experiences in the classroom. However, she was finding that some of her students did not make these connections and seemed to not understand why or how to make these connections. Jackie noted her lack of confidence in being able to support her students with writing rationales beyond providing the current directions and rubric. Meredith and Amber shared similar frustrations in their classes and reinforced the importance of the lesson plan rationale for both class and program success. Jackie was hesitant to take on this assignment to enhance, but chose to do so after Meredith and Amber articulated their confidence in Jackie's knowledge and experience.

After much discussion and collaboration, the three faculty decided that they needed to be more intentional during class sessions on supporting their students' ability to develop a sound lesson plan rationale. The expectations did not change for the lesson plan rationale, but Jackie focused her enhancement on how the assignment was presented and supported during class. She wanted to include more formative practice for her students so they could better understand the process of writing a sound rationale. Further, she wanted them to have the opportunity to reflect on their rationale and the process of writing the rationale. As her students were studying to

become teachers with their own classrooms, Jackie felt that it was essential to engage her students in reflective practice.

Jackie developed a new document that outlined specific tasks to complete during the process that aligned directly with each of the disciplinary practices. These tasks are outlined in the second column of Table 2. Further, she outlined an activity during class where she would discuss in greater detail why the rationale was important, model the process of developing a rationale, and allow the students to practice in class both collaboratively and independently.

Table 2

Disciplinary practices with the lesson plan rationale.

Disciplinary Practice	Lesson Plan Rationale Task
Problem Framing	Review class discussion and rationale instructions.
Working with data	Review choice of concept, alignment, objectives, ages.
Using varied media to consult and produce multiple texts	Consult Milestones, standards, textbook, class notes. Identify skills and knowledge that show comprehension. Conduct research in credible sources to determine specific applications of skills and knowledge. Identify applicable discipline-specific terminology.
Analyzing, summarizing, and synthesizing findings	Analyze the skills and knowledge addressed in lesson. Compile the evidence from research and sources. Organize the evidence to support and defend your lesson.
Examining and evaluating claims	Evaluate your chosen techniques, procedures, assessments. Confirm opportunity for skill and knowledge application. Confirm evidence to support choices.
Communicating claims	Write a 1-2 paragraph lesson rationale. Include and cite evidence. Include applicable discipline-specific terminology.

Jackie planned to incorporate the class activity and intentional support for the lesson plan rationale in her current semesters' classes. She then planned to meet with Meredith and Amber to reflect on how her enhancements impacted student success with lesson plan rationales. After this discussion, Meredith would share the enhanced assignment and lesson with the rest of the Early Childhood Education faculty in the program.

Amber: Application of Milestones and domains. Throughout the Early Childhood Education program, students were expected to understand and engage with the Milestones (the state's guidelines for early childhood learning and development) and the four learning domains (cognitive, physical, social/emotional, and motor). When developing lessons in all classes, it was important that students could identify which Milestone(s) and domain(s) were addressed by the activity. However, the faculty were finding that students in many of the Early Childhood Education courses were struggling with thinking critically and making these connections independently.

In Amber's Infant and Toddler class, she required her students to complete a sensory and perception project where students were expected to make these connections. At first, Amber did not want to enhance this activity because she felt that her peers would not be able to benefit. Meredith and Jackie quickly assured Amber that while the targeted student age group might be different (infants vs. preschool), they did indeed require their students to make these same types of connections with domains and the Milestones in each of their classes. Additionally, Amber vocalized her uncertainty of determining the disciplinary literacy that was involved in this project. "We've never really analyzed our practice from a literacy point of view" (Amber, Session Discussion). This led into a lengthy discussion about the specific literacy skills required in order to complete the project. When in the past they shared they would have focused on

foundational literacy skills (e.g., grammar), they spoke specifically of the disciplinary literacy skills they expected out of their students (e.g., analysis, evaluation). At the end of this discussion, Amber felt more confident that choosing this project to enhance would not only positively impact her students' disciplinary literacy, but it would also positively impact her peers and the Early Childhood Education program.

Amber had incorporated the sensory and perception project in her Infant and Toddler course for several years. After reading the chapter and attending the class lecture on learning domains, students were required to "create a sensory/perception PowerPoint presentation to illustrate how various items contribute to the sensory development and perceptual abilities of infants and toddlers" (Amber, Sensory/Perception Project Directions). Amber gave her students a list of 18 items (e.g., small unbreakable mirror, soft bristle toothbrush, set of nesting cups), and the students needed to create one slide for each item that included the following information: picture of item, evidence of which domain the item stimulates for both an infant and a toddler, and explanation of how the items benefits both an infant and a toddler. She expected her students to independently conduct research and provide a documented source for each domain area. Additionally, she expected her students to independently make connections and apply their knowledge to the Early Childhood Education classroom.

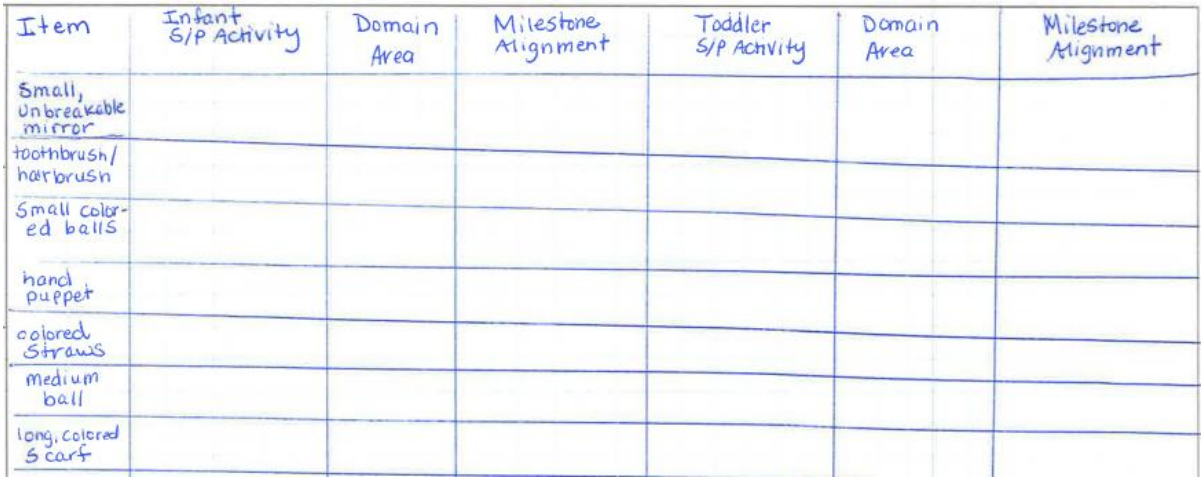
During one session, Amber shared her frustration with many of her students' inability to successfully complete the tasks associated with the project. Upon reflecting on this practice, Amber recognized she was making assumptions about what her students could do independently and shared with her peers, "I need to not assume but perhaps spend more time building up background knowledge and opportunities for practice" (Amber, Session Discussion). Meredith

and Jackie agreed that more formative practice would benefit the students both with the project and with discipline-specific tasks throughout the program.

Amber made several enhancements to the project which she felt would allow her to better support her students through the disciplinary practices (problem framing, working with data, using varied media to consult and produce multiple texts, analyzing, summarizing, and synthesizing findings, examining and evaluating claims, and communicating claims). First, she changed the way she introduced the project. Previously, she had simply handed out the project in class, went over the directions with the students, and asked if there were any questions. When she lectured on the domains previously, she made minimal connections to the Milestones and differences between infants and toddlers. Amber decided to start the lesson with a discussion on the definitions of the different learning domains. Once she was confident her students had a basic understanding of the domains, she then would lead a discussion on how the domain areas would change between infants and toddlers. In this discussion, she would give specific examples of domain-specific differences and ask her students to identify additional examples. Amber felt that this discussion would activate the students' background knowledge, guide them through the practice of *problem framing*, and provide them the opportunity to practice making connections between the domains and both infants and toddlers. Once this discussion was concluded, Amber would present and discuss the assigned project.

Second, Amber drafted a chart for her students to organize their notes during class discussions (see Figure 9). Amber felt it was important for her to model *working with data, using varied media to consult and produce multiple texts, and analyzing, summarizing, and synthesizing findings* as she identified an activity, domain area, and Milestone alignment for two or three items. During this modeling, she would use terminology specific to the domains,

Milestones, and age group, provide specific examples of resources where she conducted her research, and outline her thought process as she analyzed her research. Then she would model *examining and evaluating claims and communicating claims* for her students as she talked through the process of making decisions about the domains and Milestones the activities addressed for both infants and toddlers. Students would then work in pairs to practice all of the disciplinary practices as they completed the tasks for a handful of items. While they worked collaboratively, Amber would walk around the classroom to provide feedback. Incorporating this class activity would allow students to receive feedback from peers and their professor on their specific disciplinary practices.



Item	Infant S/P Activity	Domain Area	Milestone Alignment	Toddler S/P Activity	Domain Area	Milestone Alignment
Small, unbreakable mirror						
toothbrush/ hairbrush						
Small colored balls						
hand puppet						
colored straws						
medium ball						
long, colored scarf						

Figure 9: Amber's draft chart for enhanced sensory/perception project.

Finally, Amber changed the summative project to only include four items. The students would have already participated in class discussion, watched her as she modeled the process, and completed the authentic task collaboratively in class. She felt that students could show their mastery of the disciplinary practices by completing the tasks for four items.

Amber planned to implement the changes in her current Infant and Toddlers class. She was excited about the changes and was anticipating stronger projects from her students. She

articulated that this process of enhancing the project made her start to think about her other assignments in this and other classes.

Meredith: Early Childhood Education theory. In every course throughout the program, students were expected to learn the educational theorists and theories that grounded the Early Childhood Education field (e.g., Piaget, Montessori). The students were initially introduced to the theorists and theories in their first Early Childhood Education course, and they were expected to incorporate their knowledge of theory throughout the program. The students compiled a portfolio over the course of the program to include authentic work (e.g., lessons, videos, philosophy statements) representing their knowledge of theory and practice. As the program head, Meredith evaluated each student's portfolio, and her greatest concern was the students' lack of strong theoretical knowledge and practice. While many students could regurgitate the meanings of each theory, they were struggling with making connections between theory and practice and making pedagogical decisions based on theory.

A sound theoretical knowledge of the field of Early Childhood Education was crucial to being a successful member of the discipline and educator in the field, and Meredith was concerned that some students were graduating without having this sound theoretical knowledge. Meredith decided to focus her enhancements by developing a six-week activity in one of the last courses of the program: Observation and Participation in Early Childhood Education. In this course, students participated in a 60-hour observation practicum, completed anecdotal records of their observations, and wrote a developmental case study as their summative assessment for the course. She chose this course because this was the last course where she could strengthen the theoretical knowledge and application of her students who were about to graduate. It was her

intent that in future semesters she would incorporate these enhancements in all of the courses so students could continuously build knowledge of theory and practice throughout the program.

Due to the large number of observation hours, Meredith designed the course as a hybrid course, where students met in person every other week and completed assignments online in the off weeks. Students spent 60 hours observing in an Early Childhood Education classroom and wrote anecdotal records of their observations each week. Assuming the students had a sound knowledge of theory coming into the course, Meredith had developed a "theory review" module for students to independently work through during one of the online sessions early in the semester. Meredith required her students to watch recorded videos and read through a variety of resources focused on various theories and theorists. She then assigned an activity for students to analyze one of their anecdotal records, identify the learning domain, and choose a theory that was represented in the lesson. It was her intent that students would build knowledge and application of the theory as they used it in an authentic manner similar to members of the discipline. However, the majority of the students were not successfully completing this assignment because they were struggling with making the connections between the theory and practice.

The three faculty shared their frustrations regarding their students' difficulty making connections between theory and practice, and they agreed there needed to be a greater emphasis on theory throughout the program. They each expected their students to have this sound understanding of the theorists and theory and assumed they were able to apply it to the field of education. Having just decided that class discussion was an important component to her assignment enhancement, Amber suggested that Meredith move the module on theory to one of

the face-to-face sessions. This would allow Meredith to formatively assess her students' knowledge and then adapt the discussion based on their level of knowledge.

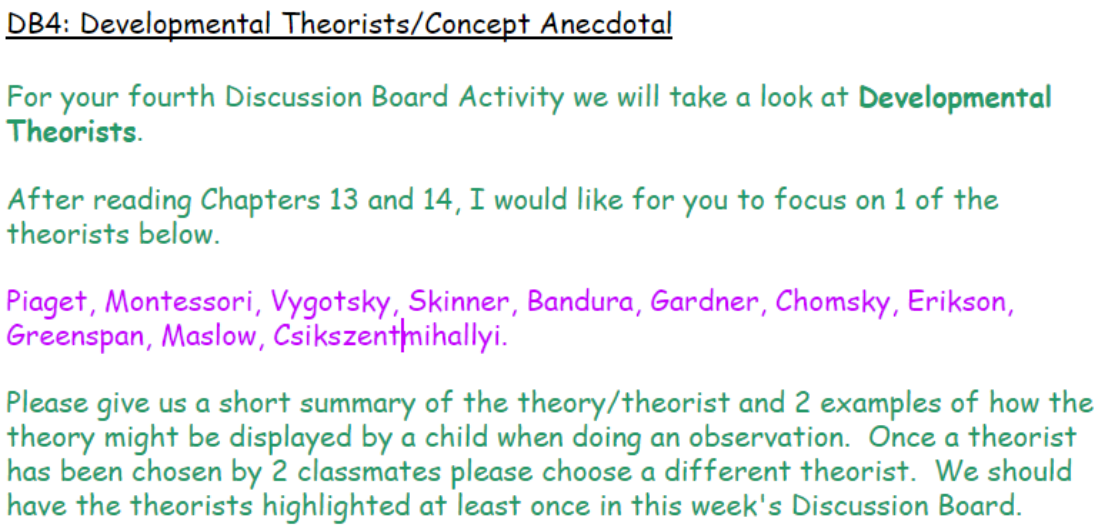
Meredith appreciated this suggestion and added that she wanted to provide more opportunity for her students to practice applying their knowledge of theory beyond one class discussion in order to address all of the disciplinary practices (problem framing, working with data, using varied media to consult and produce multiple texts, analyzing, summarizing, and synthesizing findings, examining and evaluating claims, and communicating claims). Meredith decided to provide opportunities to practice each of these disciplinary practices so that all students had the opportunity to strengthen their skills and practice.

Part of the summative developmental case study assignment was to make decisions about a child's educational environment based on their anecdotal records from their observation. Meredith decided to first lead her students through *problem framing* and discussed how and why they would need to use theory to support their pedagogical decisions as an early childhood educator. She explained that they would need to be able to make direct connections theory and practice, both between what they observed and the theory that was represented, and between the theory and which lessons to design. Further, students would need to do this specific to each of the learning domains.

Meredith then decided to restructure her course so students had six weeks of practice analyzing anecdotal records and applying their knowledge of theory before their summative developmental case study assessment. She wanted to provide her students an opportunity to *work with data* authentic to the field. She had a collection of photographs and anecdotal records from previous courses, and she went through them all to find excerpts that represented each of the learning domains. Additionally, she had a compilation of resources, videos, and texts all

focused on educational theory. She wanted her students to *use varied media to consult and produce multiple texts*, and she worked to find additional sources to add to this compilation.

After a discussion of the theories, she designed a series of activities where students would collaboratively and then independently *analyze, summarize, and synthesize findings, examine and evaluate claims, and communicate claims*. First, she modeled the process of analyzing an anecdotal record and identifying the domains and theorist that best applied. She then provided a handful of scenarios (e.g., Juan easily put the puzzles together and counted all of the children at circle.) and images of children, and the students had to work in their groups to identify the domains and theorists. Then she flipped the process and modeled starting with the theory and learning domain and identifying possible actions that would be representative. While the groups worked collaboratively, Meredith would walk around the classroom to provide support. Finally, the students would complete six discussion board activities (see Figure 10) over the next six weeks where she would provide brief anecdotal records for each of the six learning domains (cognitive, creative, emotional, language-literacy, physical, and social). Students would have to choose one anecdotal record, analyze it, provide the appropriate theory/theorist, and support their claim with evidence.


DB4: Developmental Theorists/Concept Anecdotal

For your fourth Discussion Board Activity we will take a look at **Developmental Theorists**.

After reading Chapters 13 and 14, I would like for you to focus on 1 of the theorists below.

Piaget, Montessori, Vygotsky, Skinner, Bandura, Gardner, Chomsky, Erikson, Greenspan, Maslow, Csikszentmihallyi.

Please give us a short summary of the theory/theorist and 2 examples of how the theory might be displayed by a child when doing an observation. Once a theorist has been chosen by 2 classmates please choose a different theorist. We should have the theorists highlighted at least once in this week's Discussion Board.

Figure 10: Meredith's enhanced discussion board activity.

Meredith planned to implement the changes in her current course starting the week following the end of the learning community. She knew it was a lot of work to prepare for this, but she was confident the changes would help the students about to graduate to strengthen their knowledge and theory and practice. She planned to translate this activity to other classes through the program in order to support students throughout the whole program.

In each of these assignment enhancements, the faculty exhibited a willingness to not only strengthen disciplinary literacy within their individual courses but also a willingness to strengthen disciplinary literacy across their program. They chose to enhance assignments that could be used by faculty throughout the program. The provided valuable support and feedback to each other throughout the process, and they shared plans to continue the enhancements after the completion of the learning community.

Post Perceptions of Disciplinary Literacy and the Early Childhood Education Discipline

After completing the process of discussing the role of literacy within Early Childhood Education courses, collaborating with peers to determine the most efficient way to enact programmatic change, enhancing an assignment to strengthen the students' skills with

disciplinary practices within the course and program, and reflecting upon the process through a journal entry, the participants and I spent the last session reflecting on possible changes in their perceptions. In this section, I outline the participants' perceptions of their role as a literacy educator, their practice with implementing disciplinary literacy instruction, and their self-efficacy with disciplinary literacy in the Early Childhood Education discipline at the end of the learning community.

Perceptions of role as literacy educator. At the beginning of the learning community, all three faculty members agreed that they had a role as a literacy educator in their Early Childhood Education courses. They recognized many of their students' low levels of foundational literacy, and they found themselves incorporating literacy support throughout their instruction. However, by the end of the learning community, the faculty strengthened this perception to include disciplinary literacy.

> It's essential and valuable and critical to what we're doing. It's the language of our field of student. We have to use it and our students have to learn it and use it, and it has to make sense or else we're not professional early childhood educators (Jackie, Focus Group 2).

Whereas before they felt their role was to support growth of foundational literacy skills, Jackie now understood part of their role as a literacy educator was to model disciplinary literacy skills throughout the semester.

The faculty built an understanding of disciplinary literacy and the role it played within the Early Childhood Education field. They unpacked Moje's (2015) heuristic for disciplinary practices, and they applied those practices to their discipline and specific courses. Through this process, they were able to identify specific skills as disciplinary literacy skills within Early Childhood Education.

> I hadn't thought about these skills being called disciplinary literacy before. Putting terminology, application of the material, etc. into the context of literacy was different. I wouldn't say my perception changed, but I think my emphasis has had to change on what and how I am teaching (Meredith, Focus Group 2).

This shift in mindset translated into more intentional teaching and modeling of discipline-specific behaviors, strategies, and tasks.

Amber also felt her perception of disciplinary literacy and her role as a literacy educator changed over the course of the learning community.

> I've kind of changed my perception through the five weeks in that I think my assumption was disciplinary literacy was just understood. And now I'm realizing that my job is to model, model, model. I wasn't looking at it from the point of view that it was my job to make sure they have it. I kind of looked at it from the point, 'Well, they're gonna read this text, they're supposed to do this and that, they're doing these assignments, of course they know their disciplinary literacy. They're right on it. They're good.' And now I realize that it doesn't necessarily work like that. I want them to be able to communicate, for example, and I've been focusing on active listening. So I think my perception has changed in that I need to be more cognizant of the fact that it might not be as easily understood as I once that it was (Amber, Focus Group 2).

In addition to acknowledging her changed perceptions, Amber also shared that there was still more to learn. She was invigorated by how much she had learned over the learning community, and she was excited to continue collaborating with her peers moving forward.

Disciplinary literacy instruction within the Early Childhood Education discipline.

The faculty identified two main types of changes they would like to make in their courses going forward. First, they wanted to look at each of the courses in the program and identify areas where they could provide more purposeful scaffolding for students, modeling of authentic tasks within the field, and purposeful instruction that included disciplinary literacy. They agreed it would be beneficial to bring together all of the Early Childhood Education faculty from their

campus and collaboratively identify disciplinary literacy practices that would benefit the program as a whole.

Second, the faculty discussed the need for larger scale, programmatic change. They spoke of the need for consistency across their courses, the program, and the four campuses. They wanted to set a clear standard for Early Childhood Education faculty of what was acceptable from students literacy-wise (writing, speaking, etc.) so that all faculty across the college held their students to the same standards. "Somewhere along the line, we need to get it uniform because that's where we lose them. That's why those who are what we call low achieving, are not getting further" (Meredith, Focus Group 2). The faculty agreed that this would require collaboration across campuses and across programs, a daunting task in the current climate at the college. They agreed that they would start with programmatic change within their program and then decide how to branch out to other areas of the college.

In order to do this within the Early Childhood Education program, the faculty wanted to use disciplinary literacy as a catalyst for programmatic change so that it was at the forefront of all curricular and programmatic design. This would require faculty to collaborate to determine common tasks and skills within their courses (e.g., classroom observations) and then identify both faculty and student expectations with disciplinary literacy so that there is consistency across the program. Once a master list of both functional and disciplinary literacy skills was identified, the faculty wanted to carry the expectations and strategies into future courses so that students were continuing to be exposed to disciplinary literacy instruction throughout the program. Additionally, they felt this would allow all faculty to make more connections in each class of the program between the content and literacy required in the field. This would give students an understanding of what was expected in the field and a better view of the big picture.

Self-efficacy with disciplinary literacy in the Early Childhood Education discipline.

The faculty were each confident in their ability to teach the content of their courses, as well as foundational literacy, at the beginning of the learning community. As the faculty worked through the learning community, their understanding of disciplinary literacy and the role it played within the Early Childhood Education discipline strengthened. By the end of the learning community, the faculty expressed a different type of confidence. Jackie shared that she was more focused in her instruction. She had a better idea as to how to support students' growth with disciplinary literacy in a way that would not only strengthen their literacy but also their understanding of the content and the field. Amber shared that she was more intentional when designing her lessons and activities. She not only wanted to model effective practices from the Early Childhood Education discipline, but she also wanted to provide ample opportunity for students to engage in the disciplinary practices as they worked to become members of the discipline. Meredith agreed with Jackie and Amber, but she also added that she had greater confidence in her ability to develop and monitor disciplinary literacy throughout the program. As the program head, Meredith felt great responsibility in making sure her graduates were prepared for a career in Early Childhood Education. With her better understanding of disciplinary literacy and how to incorporate it into her instruction, she felt she was better able to support her adjuncts as they developed their instructional practice.

Impact of the Learning Community on Participants' Experiences

The faculty agreed that this learning community experience was extremely valuable for them both as individual faculty and as part of the larger program. They shared a common goal as each of their courses built upon each other and they worked with many of the same students. Each of the faculty valued learning more about their colleagues, their courses, and their

successes and struggles. Because of this, they were motivated to go through their own courses and practices to improve their practice so their students were ready for their colleague's classes.

The faculty especially spoke of the power of engaging in reflective practice throughout the learning community. They were open as they looked at specific aspects of their instruction and their courses through a disciplinary literacy lens. This allowed them to identify specific aspects of disciplinary literacy that they were not addressing (e.g., unpacking and applying the Milestones) and then enhance their instruction to overcome the gap.

Through collaboration, the two adjuncts felt more connected on a "campus of adjuncts and commuters" (Amber, Focus Group 2). Not only were they collaborating with their colleagues, but they were taking part in course and program redesign. This was validating for them as they felt they held an important role within the program.

Finally, despite their busy schedules and high course loads, the faculty spoke of their desire for future learning communities. They recognized their practice benefited from the experience, and they knew they would be better faculty for their students if they continued. They brainstormed about branching out to the other Early Childhood Education faculty on their campus and setting up a learning community to continue addressing disciplinary literacy across the program. With Meredith’s leadership as the program head, they agreed that the work they accomplished in the learning community would immediately be put into action, thus positively impacting students throughout the program.

In summary, in this chapter I presented the findings from the three cases in this study. I presented the cases in the order of Humanities, STEM, and Early Childhood Education as this order showed a progression of knowledge and practice acquisition with disciplinary literacy.

First the data from the Humanities case revealed how the faculty became mindful of disciplinary literacy within their instruction and course redesign. Second the data from the STEM case demonstrated how the faculty shifted their perception and acknowledged that disciplinary literacy was a driving force in the teaching and learning of their disciplines. Finally, the data from the Early Childhood Education case exhibited how the faculty viewed disciplinary literacy as a catalyst for programmatic change.

CHAPTER 6

DISCUSSION AND CONCLUSION

In this final chapter, I start by presenting an overview of the study's purpose, research design, and research questions. Next, I present a cross-case analysis where I discuss the similarities between the cases that lead to literal replications, as well as the differences between the cases that lead to theoretical replications (Yin, 2018). Finally, I present limitations, implications, and further research.

Overview of Study

Large numbers of community college students are enrolling in discipline courses underprepared for the reading, writing, and critical thinking skills these courses require. The College Reading and Learning Association's (CRLA) position statement entitled *The Rights of Postsecondary Readers and Learners* (Greenbaum & Angus, 2018) outlines specific rights applicable to community college students and faculty in this particular situation:

> Postsecondary learners have a right to instructors who
> - Engage in ongoing development and have a commitment to lifelong learning for themselves and their students
> - Are knowledgeable about adult development and learning and understand the unique needs and complexities of the diverse adult learning population
> - Possess expertise in their field of study
>
> Postsecondary learners have a right to instruction that
> - Allows them to see literacy development as a constructive and lifelong process
> - Encourages reflection, critical analysis, and affective response
> - Is based on current research, theory, and practice
>
> Postsecondary learners have a right to institutions that
> - Assess programs and support professional development of reading instructors

The CRLA contends that these rights should guide curricular and course design and redesign in order to best support postsecondary learners and readers. (See Greenbaum & Angus, 2018, for the full position statement).

There are multiple avenues where community college students receive instructional support with literacy (see Figure 11). Students who do not test into college-level English can receive foundational literacy support in Developmental English courses, where they develop foundational literacy skills in reading, writing, communicating, and critical thinking. Students who test into college-level English can enroll in College Composition and Rhetoric courses where they learn literacy skills akin to content area literacy curricula. Additionally, students can receive disciplinary literacy instruction within their discipline courses (e.g., Mathematics, History), where they can gain knowledge and experience with disciplinary literacy practices specific to the field. These three avenues for literacy instruction are key components in a model for comprehensive community college adult literacy instruction.

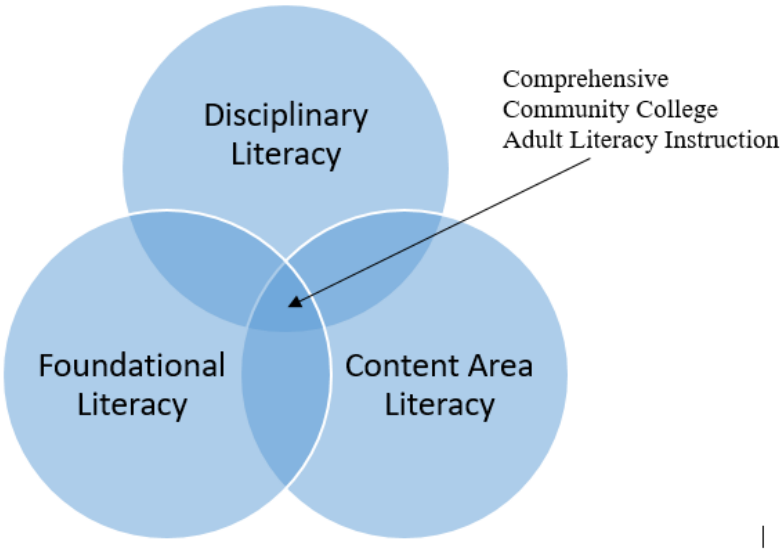


Figure 11: Comprehensive community college adult literacy instruction.

Faculty of both Developmental English and college-level English courses are highly trained in literacy theory and pedagogy, and are considered experts in their field. However, they often have limited knowledge of specific disciplinary content theories and typically provide

students with general literacy instruction for students to independently apply to disciplinary learning. Discipline faculty are highly trained in the content, theory, and pedagogy specific to their discipline. They excel in reading the texts of the discipline, speaking and interpreting the discourse, and producing artifacts specific to the field. Integrating disciplinary literacy instruction and practices within community college discipline courses could provide students the knowledge and experience necessary to understand the discourse, ways of knowing, and literacy practices of the discipline. However, they are not typically trained in literacy theory and pedagogy to support students with disciplinary literacy.

One way discipline faculty can develop this knowledge and experience in order to meet *The Rights of Postsecondary Readers and Learners* (Greenbaum & Angus, 2018) is through professional learning communities focused on integrating disciplinary literacy into their discipline courses. However, there is a dearth of research focused on how community college disciplinary faculty can develop this knowledge and experience. This qualitative, multi-case study (Yin, 2018) was designed to fill this gap by exploring how providing a literacy-based professional learning community intervention might impact community college discipline faculty's perceptions, self-efficacy, and practice with providing discipline-specific literacy instruction with their courses. More specifically, the purpose of this study was to investigate the impact participating in a literacy-based learning community has on community college discipline faculty's perceptions of their role as literacy educators, self-efficacy with integrating disciplinary literacy into content instruction, and practice of incorporating disciplinary literacy instruction within their courses. The following research questions were addressed:

1. How does participating in a literacy-based professional learning community impact community college discipline faculty's perception of their role as a literacy educator?

2. How does participating in a literacy-based professional learning community impact community college discipline faculty's self-efficacy in regard to integrating discipline-specific literacy instruction into their content courses?

3. How does participating in a literacy-based professional learning community impact community college discipline faculty's practice of incorporating disciplinary literacy instruction into their content courses?

The study was set in a large, multi-campus mid-Atlantic community college, offering programs in career and technical education, college transfer education, dual enrollment, international study abroad, general education, developmental studies, continuing education, and workforce training.

Three learning communities represented the three cases for this multi-case study, and each learning community included three and four faculty members from the same or related discipline: Humanities, STEM, and Early Childhood Education. The first case included three Humanities faculty members who taught such courses as Survey of Western Culture, Creative Thinking, or Survey of Twentieth-Century Culture. The second case included four faculty members in related STEM disciplines, more specifically Math (2), Mechatronics/Electrical (1), and Diesel Marine Technology (1). The third case included three Early Childhood Education faculty members who taught foundation, theory, and methods courses for aspiring early childhood educators (birth-3rd grade). The faculty participated in five learning community sessions, learned about Moje's (2015) 4Es heuristic for teaching disciplinary literacy, enhanced an assignment to include a focus on disciplinary literacy, collaborated with their peers, and completed four journal entries. I replicated the learning community curriculum with each of the three cases. See Chapters 4 for the full description of the institution, cases, faculty, and learning community curriculum.

I collected the following data for this study: learning community curriculum and documents, initial and final semi-structured focus group interviews, faculty journal entries, enhanced course activities, and researcher observations and reflexive journal. I manually coded all of the data using open coding, axial coding, and constant comparative analysis (Patton, 2002). I identified the final themes and subthemes for each case, as well as the cross-case analysis. See Chapter 4 for the full explanation of the methodology for this study.

Chapter 5 outlined the faculty's experiences throughout the learning community as well as the specific findings for each of the three cases. I presented the experiences of the faculty members throughout their learning communities, their understandings of the role literacy plays within their discipline, their perceptions of their role as a literacy educator, their practices with literacy instruction within their courses, and their levels of self-efficacy with incorporating disciplinary literacy into their instruction. Additionally, I presented any changes experienced by the participants as they learned about disciplinary literacy, unpacked Moje's (2015) 4Es heuristic, and enhanced current coursework to include disciplinary literacy. The three cases were presented in an order that showed a progression of knowledge and practice acquisition with disciplinary literacy: being mindful of disciplinary literacy, disciplinary literacy as a driving force, and disciplinary literacy as a catalyst for programmatic change. See Chapter 5 for a full description of the findings from each case.

In this final chapter, I present the cross-case analysis of the data across the three learning communities, where I discuss the similarities between the cases that lead to literal replications, as well as the differences between the cases that lead to theoretical replications (Yin, 2018). Following this analysis, I outline implications for community college faculty, administrators, and professional development providers.

Cross-Case Analysis

Yin (2018) argues case study researchers should aim to "develop strong, plausible, and fair arguments that are supported by your data" (p. 198). In order to do this, I first presented the findings for each case individually (see Chapter 5). In this section, I outline the cross-case analysis (Yin, 2018), where I describe the similarities and differences between the cases in terms of the impact the experience in the learning community had on the faculty's perception of their role as a literacy educator, their practice with disciplinary literacy, and their self-efficacy with integrating disciplinary literacy instruction within their courses. I also describe the similarities and differences in how the faculty learned about disciplinary literacy, the obstacles they faced in terms of literacy instruction, and the impact the learning community had on the faculty's experiences. These themes and subthemes are outlined in Table 3. Each of the themes and subthemes will be discussed in this section.

Table 3

Cross-Case Analysis: Themes and Subthemes

Theme	Subtheme
Understanding of Disciplinary Literacy	Develop basic understanding of disciplinary literacy Connect understanding to members of the discipline Apply disciplinary literacy to discipline and courses
Role Perception	Identify disciplinary literacy of discipline Identify practices of a disciplinary literacy educator Identify role as a disciplinary literacy educator advocate
Obstacles Faced	Varying levels of student ability Students' expectations of literacy in the disciplines Lack of time Lack of support
Practice with Disciplinary	Becoming mindful of disciplinary literacy

Literacy	Disciplinary literacy as a driving force for learning Disciplinary literacy as a catalyst for programmatic change
Self-Efficacy with Disciplinary Literacy	Developing disciplinary literacy understanding Developing disciplinary literacy collaborations Developing disciplinary literacy practice Developing disciplinary literacy independence

Understanding of Disciplinary Literacy

The faculty in each of the learning communities went through three stages of understanding disciplinary literacy. They first developed a basic understanding of disciplinary literacy. Next they connected their understanding of disciplinary literacy to their concept of membership in the discipline. Finally, they applied their understanding of disciplinary literacy to their own discipline and courses.

Develop understanding of disciplinary literacy. Prior to joining the learning community, the faculty admittedly held little to no understanding of disciplinary literacy. None of the faculty had specific training in literacy education, and they relied on their background knowledge of literacy as a student, practitioner, and faculty member. Initially, the faculty defined literacy as foundational reading and writing. However, as they discussed literacy in terms of reading, writing, communicating, and critical thinking, they began to not only develop a deeper understanding of literacy in general, but they also began to differentiate between foundational literacy and disciplinary literacy.

In each of the learning communities, we spent significant time in the first two sessions discussing foundational versus disciplinary literacy. We read Moje's (2015) *Doing and Teaching Disciplinary Literacy with Adolescent Learners* to learn about disciplines as cultures

and the 4Es heuristic with disciplinary practices. Each faculty member was a self-proclaimed member of the discipline, and they recognized they used each of the disciplinary practices outlined in the 4E heuristic: problem framing; working with data; using varied media to consult and produce multiple texts; analyzing, summarizing, and synthesizing findings; examining and evaluating claims; and communicating claims. It was through this process that the faculty began to develop their understanding of and appreciation for disciplinary literacy specific to their fields.

Connect understanding to members of the discipline. During the second learning community session, the faculty discussed what it meant to be a member of the discipline, and they outlined specific characteristics and behaviors consonant with a member of the discipline. This was a valuable activity for each of the faculty members, as it was the first time they had put down on paper (or Google Doc) the specific traits and practices specific to their field. While it was not a difficult process, the faculty all articulated they had never approached their discipline from this perspective. Further, defining what it meant to be a member of the discipline aided the faculty in understanding the disciplinary literacy practices specific to the field.

For example, the faculty in each of the learning communities identified discipline-specific texts members of the discipline read and engaged with. The Humanities faculty identified art and poetry as two important texts members of the discipline read, interpreted, and evaluated. The STEM faculty identified manuals, lab protocols, and diagnostic tools as texts experts in the field read, referenced, and utilized while performing tasks associated with the field. The Early Childhood Education faculty identified the Milestones (state guidelines for early childhood development and learning), learning objectives, and lesson plan protocols as essential texts used by members of the discipline. As the faculty worked to identify these specific

practices by experts in the field, they began to make connections to ways they could support such disciplinary literacy practices in their courses.

This process of making connections between the disciplinary practices of members of the discipline and students in their courses was easier in some disciplines than in others. The Early Childhood Education, Electrical, and Diesel Marine Technology faculty were training and preparing their students for direct entry into the field. The purpose of the Certificate and Associate's programs for these disciplines was to provide technical and authentic education and experience in a clearly-defined manner. However, the Humanities and Mathematics faculty found this process of connecting their students' practices to experts in the field was more challenging. The courses they taught in Humanities and Mathematics were either required or elective general education courses. They recognized that many of their students would not directly enter the field. Further, they acknowledged that they needed to overcome some of the stigmas associated with the discipline (e.g., Mathematics is not applicable to me.) After discussing this with their colleagues, they each agreed that even if students were not going to work in the field, it was necessary for them to be aware of what it meant to be a member of the discipline. Thus, they agreed it was essential they provided the opportunity for all students, regardless of career aspirations, to develop disciplinary literacy practices specific to their discipline.

Apply disciplinary literacy to discipline and courses. After developing their initial understanding of disciplinary literacy and making connections to their definitions of what it meant to be a member of the discipline, the faculty identified the specific literacy skills students needed to be successful in their courses. They separated these skills into foundational and disciplinary literacy. They broke the disciplinary literacy skills into four main categories:

disciplinary reading (to include terminology), disciplinary writing, disciplinary critical thinking, and communicating the discipline.

The faculty shared this was the first time they had broken literacy down into such specific categories, and for many of the faculty this was the first time they considered communicating and critical thinking as literacy. Each discipline included all four categories in their member of the discipline document, and the faculty agreed that these disciplinary literacy skills and practices were implied throughout the learning objectives for their courses. They expected their students to be able to be successful in each of these areas of disciplinary literacy, yet they recognized they had not supported their students with how to engage in these disciplinary skills and practices within their course instruction.

Perception of Role as Literacy Educator

During the first focus group, each of the faculty in each learning community agreed it was part of their role to address literacy in their own courses, yet this was not consistently put into practice within their courses. They held clear expectations of their students' level of foundational literacy, and they struggled with how to support students who did not meet these expectations. The faculty in each case clearly articulated their primary responsibility was to teach the content of the discipline, and they admitted this often impeded their ability to support students' foundational literacy.

As this was the first session, the faculty were not clear on their understanding of disciplinary literacy and how it related to their courses. Throughout the learning community, the faculty developed their perception of their role as a literacy educator to include disciplinary literacy. They progressed through three stages: first, they identified disciplinary literacy practices within their discipline; second, they identified teaching practices of a disciplinary

literacy educator; and third, they identified aspects of their role as a disciplinary literacy educator advocate.

Identify disciplinary literacy practices of discipline. Before the faculty could truly develop their perception of their role as a literacy educator, they needed to first understand the disciplinary practices of their specific disciplines. While Moje's (2015) 4E heuristic was developed for teaching disciplinary literacy within secondary schools, the faculty agreed it was applicable to the community college setting.

The faculty broke down the 4Es in Moje's heuristic and recognized that they in fact expected their students to engage in each of the 4Es: *engaging*, *eliciting/engineering*, *examining*, and *evaluating*. However, they recognized that their class activities all focused on the last three Es and rarely addressed the disciplinary practices within the *engage* level: problem framing; working with data; using varied media to consult and produce multiple texts; analyzing, summarizing, and synthesizing findings; examining and evaluating claims; and communicating claims. For example, Michael expected his Humanities students to *evaluate* a set of texts in the field but he did not provide opportunities for his students to work with various texts, draw conclusions, and communicate their claims. Michael acknowledged that providing such opportunities would strengthen his students' ability to *engage* in practices similar to an expert in the field.

Identify practices of a disciplinary literacy educator. In order to support students' development of disciplinary literacy practices, the faculty agreed one component of their role as a discipline faculty was that of a disciplinary literacy educator. Through collaboration, discussion, and reflection, the faculty identified specific ways they could support their students with disciplinary literacy in their courses. They referred to their literacy skills and instructional

strategies posters to identify possible areas they could incorporate disciplinary literacy instruction. They each chose one assignment or activity to enhance to include specific support with disciplinary literacy practices. They recognized the importance of apprenticing their students into the discipline by providing opportunities for them to engage in the disciplinary practices outlined in the *engage* component of Moje's (2015) 4Es heuristic.

Identify role as disciplinary literacy educator advocate. Beyond preparing to enhance their own practices within their courses and programs, the faculty in each of the learning communities acknowledged their role as an advocate for disciplinary literacy within their discipline. They recognized that there were opportunities to collaborate with colleagues outside of this learning community to strengthen disciplinary literacy throughout their courses, programs and across the college.

For example, the three part-time Humanities faculty spoke of the need to collaborate with full-time faculty across the discipline on enhancing disciplinary literacy in their coursework. The Mathematics faculty spoke of their role as an advocate for the discipline to both Mathematics majors and non-majors, where they needed to apprentice both members of the discipline and individuals who will engage with members of the discipline throughout their lives. Electrical and Diesel Marine Technology viewed themselves as advocates for their students, and this entailed supporting their students' ability to engage in strong disciplinary literacy practices within the field. Early Childhood Education faculty spoke of advocating to strengthen disciplinary literacy throughout the Early Childhood Education program, which involved collaborating with all of the Early Childhood Education faculty from their campus. In each of these examples, the faculty assumed a front line advocacy role for disciplinary literacy instruction within discipline courses at the college.

Obstacles with Disciplinary Literacy Instruction

Across the three learning communities, the faculty identified three main obstacles they had to overcome in order to implement disciplinary literacy instruction in their courses. These obstacles included varying levels of student ability, students' expectations of literacy in the disciplines, lack of time, and lack of support.

Varying levels of student ability. The faculty repeatedly spoke of their students' varying levels of ability in terms of foundational literacy and how it was difficult to support such variance within their instruction. The faculty were not trained in literacy education, and they did not know how to best support them with these foundational literacy skills. This was a challenge as they wanted to maintain high expectations for their students, but there was not enough time in the semester to strengthen these students' foundational literacy skills.

The faculty spoke of several support options at the college to help with students' lower levels of foundational literacy, but they were not overly knowledge about or confident in these support options. The faculty were not familiar with the coursework in the Developmental English sequence, and they had not had positive experiences with their students seeking assistance with foundational literacy skills in the Learning Assistance Center on campus. They agreed theoretically Developmental English coursework and English tutors should support students' foundational literacy, but they did not have tangible examples of how this occurred.

Depending on their program, students who tested into college-level English typically enrolled in College Composition and Rhetoric courses. Again, the faculty were not familiar with the coursework in these college-level English courses, nor were they confident it would support students' disciplinary literacy for their particular fields. Further, the faculty explained how many of their students were not required to take college-level English before enrolling in their

particular courses, thus presenting the potential for not even being exposed to these content area literacy skills.

Students' expectations of literacy in the disciplines. Faculty from the STEM and Early Childhood Education cases specifically spoke of students' verbal resistance to their literacy expectations within coursework and activities. For example, some Mathematics, Electrical, and Diesel Marine Technology students argued that reading and writing did not belong in their coursework and that they should just work with numbers or diagnostics. When the faculty required their students to write out explanations or justify their conclusions, they were often met with resistance. The Early Childhood Education faculty shared how many students did not understand why they needed to exhibit strong writing skills in their coursework, even though they would need to exhibit these skills as early childhood educators in the field. Further, students argued that other Early Childhood Education faculty at different campuses did not grade them on their grammar or spelling. Regardless of this resistance, the faculty maintained their high expectations of literacy student work, especially as it related to performance in the field.

The Humanities faculty did not experience the same level of verbal resistance as the other cases. They all taught 200-level courses in a field that included high levels of reading and writing, and it seemed as though students expected to have to complete literacy tasks. However, the faculty did speak of many students who did not write in a manner appropriate for a 200-level course. While some students lacked the foundational literacy skills, the faculty argued that many students exhibited laziness and a lack of regard for college-level writing.

Lack of time. All ten faculty members across the three cases spoke of their lack of time to dedicate to improving their practice, whether it was with course redesign of content or the inclusion of literacy. This obstacle of time is consistent with the research in the field (Gomez et

al., 2015; Gregory, et al., in press; Gregory & Colclough, in press; Romero, 2010). Full-time faculty taught between five and eight classes a semester, which totaled around 100-200 students. Two full-time faculty also taught adjunct at another institution. In addition, each of the full-time faculty held additional roles at the college above their teaching role (e.g., program head). The adjunct faculty were limited to three classes at this college. However, they either also taught at other institutions with up to seven classes total or also held a full-time position at the college or elsewhere.

With this many courses and students, the faculty found they spent large amounts of time grading and providing foundational literacy support for students. Some faculty made notes of both small and large changes they wanted to make for future semesters, but they mainly only had time to implement basic, content-specific curriculum and course changes. They admitted they did not have time to investigate additional ways to improve their practice outside of the discipline-specific content (e.g., incorporate disciplinary literacy).

Additionally, the faculty shared they did not have time to participate in professional development beyond the requirements of the college. The college held professional development days 2-3 times a year where they could attend a general meeting, meet with their discipline colleagues, and attend a handful of workshops on pedagogy, instructional technology, or college initiatives. Participating in a learning community over the course of the semester seemed daunting to the faculty, and all ten faculty were honest that they participated in this learning community because I coordinated all of the details, I provided snacks, and they wanted to support me and my research. They were also honest that they would not have the time to continue this learning community or start a new learning community once we finished. The faculty all genuinely wanted to improve their practice in order to benefit their students, but they

admitted to not having time to organize a learning community or initiate their own professional development.

Lack of support. The faculty in all three cases discussed a lack of administrative and collegial support, both for professional development and learning about integrating literacy into the disciplines. There were no specific disciplinary literacy standards or outcomes for their courses, and the faculty agreed their deans, program heads, and colleagues mainly focused on the content of the discipline. Without the requirements to include disciplinary literacy instruction in their courses, the faculty admitted that they did not feel they had the support to independently make this instructional change.

The college offered limited professional development funds, which the faculty mainly used for discipline-specific trainings, certifications, and conferences. The faculty all spoke of a desire for funding for more professional learning communities where they could collaborate with their peers. However, they were not confident this would become a reality.

Practice with Disciplinary Literacy

The faculty members in each of the cases chose to enhance an assignment from one of their courses. In doing so, the faculty applied their knowledge of their discipline and disciplinary literacy to their specific courses and coursework. The three cases represented three stages faculty traveled through as they developed their practice with disciplinary literacy (see Figure 12). First, the Humanities case represented the initial stages of learning about disciplinary literacy as they were mindful of disciplinary literacy in their courses. Second, the STEM case shifted from thinking of disciplinary literacy as secondary to the content of the course to viewing disciplinary literacy as a driving force for learning. Third, the Early Childhood Education case

used their growing knowledge of and experience with disciplinary literacy instruction as a catalyst for programmatic change.

Figure 12: Progression of developing practice with disciplinary literacy

Becoming mindful of disciplinary literacy. The Humanities faculty worked independently on selecting their assignment and disciplinary literacy practice to enhance. They did not teach the same Humanities courses, and they shared that Humanities courses were not required as part of any program at the college. While they had not collaborated before on course design or redesign, they embraced collaborating with their colleagues during this learning community. They brainstormed ideas for enhancements and provided feedback on how the planned enhancements would help the students in their class develop disciplinary literacy skills.

Each of the Humanities faculty agreed they had not considered or understood disciplinary literacy prior to this learning community. As they read, discussed, and reflected on their growing understanding of disciplinary literacy, they each agreed they were more mindful of disciplinary literacy at the end of the learning community. More specifically, they noted how they were more mindful as they designed and redesigned coursework, implemented disciplinary literacy instruction in their courses, and reflected upon their teaching practices.

At the end of the learning community, the faculty articulated their desire to continue developing their understanding of disciplinary literacy. However, they agreed that an essential

piece to this future development was collaborations with and mentorships by full-time faculty. They did not currently experience collaborations with or mentorships by full-time faculty at the college, and they repeatedly expressed their desire for this as they developed their practice. They expressed their need and desire for guidance and scaffolding from both full-time faculty and administration. Further, the faculty were concerned the decline in enrollment would impact their future course load, and they honestly shared they did not have time to develop their practice when they might not even be teaching in a future semester.

Disciplinary literacy as a driving force for learning. The STEM faculty also worked independently on selecting their assignment to enhance and focused on improving terminology and communication within their disciplines. Their main focus was to make sure their students were prepared to enter the workforce, either as a member of the discipline or as one who interacts with a member of the discipline. Despite each being full-time faculty on the same campus, they had not collaborated before on course design or redesign. Regardless, they embraced collaborating with each other during this learning community, brainstormed ideas for enhancements, and provided feedback on how the planned enhancements would help the students in their class develop disciplinary literacy skills.

Prior to this learning community, the faculty agreed they viewed literacy as a discipline parallel to their own. They each articulated this is how they experienced literacy instruction as a student, where they developed their literacy skills in English class and then transferred those skills into their discipline-specific courses. Thus, any literacy instruction they provided their students was in the form of foundational literacy support.

As the faculty progressed through the learning community, they gained a greater appreciation for the role disciplinary literacy played within their disciplines. Rather than

viewing literacy as separate from their discipline, they now viewed disciplinary literacy as a driving force for teaching and learning. More specifically, they expressed how the disciplinary literacy practices of their field were a driving force for course design and redesign. It was essential experts in technical fields (e.g., electricians, diesel mechanics) exhibit proper use of technical terminology, effective communication, critical thinking, and problem solving skills (Crawford, 2009). Thus, the faculty chose to address these skills in their enhancements.

The faculty were each full-time at the college, and most of them held leadership roles (e.g., program head) in their discipline. The faculty agreed that stipends or reassigned time would provide them with more time to make additional enhancements in their courses to support disciplinary literacy practices. However, they were not confident this would be supported by administration. With the recent decline in enrollment, the faculty were concerned about a potential layoff or an increase in course load due to colleagues' layoffs. The current budget crisis would not support funding stipends or reassigned time for faculty development.

Disciplinary literacy as a catalyst for programmatic change. The Early Childhood Education faculty, of all the cases, possessed the most pedagogical and literacy training. They each had a degree in Education, and their role as a faculty member was to prepare their students to enter the field as an Early Childhood Educator. Despite this knowledge and experience, the faculty initially struggled with separating foundational and disciplinary literacy skills and practices.

Once the faculty better understood disciplinary literacy and Moje's (2015) 4Es heuristic, they focused their attention mainly on the metalanguage of the discipline. In order for their students to be effective Early Childhood Educators, they would need to read, write, and communicate the language of the discipline. Further, as they made pedagogical decisions in their

own classrooms, these future educators would need to exhibit critical thinking and problem solving skills. As they shared the challenges they faced in their own classrooms, the Early Childhood Education faculty were both relieved they weren't alone and frustrated that students throughout the program struggled with these skills.

The Early Childhood Education faculty took a different approach than the other two cases and collaborated to identify enhancements that would impact the full program. They valued the role disciplinary literacy played within their field, and they chose to use disciplinary literacy as a catalyst for programmatic change. Together, the faculty agreed on the top three challenges their students exhibited in their courses and throughout the program: communicating a rationale; connecting the standards to lessons; and connecting theory, learning domains, and pedagogical decisions. Each faculty member took one of these issues and addressed it in their enhancements. The faculty provided feedback and supported each other throughout the enhancement process.

The learning community consisted of Meredith, the Early Childhood Education program head, and two adjunct faculty. Throughout the learning community, Meredith provided leadership and guidance for the two adjunct faculty members. She provided feedback on their enhancements and their current teaching practice, support in the areas of course design and redesign, and reassurance that their work in this learning community would benefit the students throughout the Early Childhood Education program. Further, she identified the plan to share their enhancements with the Early Childhood Education faculty at their next department meeting and solicit participation in future enhancements. Of all three cases, this was the only learning community where all faculty participated fully in all activities, journals, and sessions. The two adjunct faculty shared that they greatly appreciated the leadership provided by Meredith as they felt supported and valued as they worked toward programmatic improvements.

Self-Efficacy with Disciplinary Literacy

The data from the three cases revealed faculty self-efficacy with disciplinary literacy was impacted by their participation in the professional learning community. As faculty worked through the learning community, they experienced increased understanding, collaboration, practice, and independence. In additional Bandura's (1977) four sources of self-efficacy expectations were present during the learning communities.

Developing disciplinary literacy understanding. The faculty in all three cases spoke of the impact their greater understanding of disciplinary literacy had on their self-efficacy with incorporating disciplinary literacy into their instruction. In the beginning, they did not have a clear understanding of disciplinary literacy and how it related to their courses. As they developed their understanding of disciplinary literacy and how it integrated with the content of their courses, they agreed they felt more confident in their ability to incorporate it into their regular practice.

The faculty in each of the cases shared how it was beneficial to have a literacy expert as a member of their learning community. The faculty were not familiar with literacy theory and practices, and they often asked clarifying questions to strengthen their understanding of disciplinary literacy. Further, they appreciated Moje's (2015) explanation of her 4Es framework for teaching disciplinary literacy. On multiple occasions, faculty in each learning community shared that receiving support and encouragement from a literacy expert and valued colleagues, each examples of *verbal persuasion* (Bandura, 1977), strengthened both their understanding of and self-efficacy with disciplinary literacy. Additionally, in the Early Childhood Education case, Meredith, the program head, repeatedly reassured the adjunct faculty of the benefit of including disciplinary literacy within their instruction.

Developing disciplinary literacy collaborations. The faculty in all three cases spoke of the impact of collaboration on their self-efficacy with disciplinary literacy. The Humanities and Early Childhood Education cases included faculty from the same discipline, and they spoke of how the collaboration helped them to not feel alone in their struggles. The adjunct faculty felt more connected to other faculty and the college, especially the Early Childhood Education adjunct faculty who collaborated with the program head in their learning community. The each expressed how they valued the experience of participating in discussions with their colleagues, and they spoke of their desire to continue such collaborations going forward.

The STEM case included faculty from multiple, but related, disciplines. Despite being full-time faculty at the college, they had not participated in such a collaboration before and shared how they often felt isolated from their peers. The faculty spoke of how they valued their interdisciplinary collaboration in that it increased their awareness of how the different disciplines were related. This made them feel more supported by their peers as they recognized they experienced similar struggles across their courses.

As the faculty collaborated and provided support with the assignment enhancements, they often shared examples from their own courses. For example, Jackson shared his successful experiences scaffolding his Electrical students as they developed their ability to justify their claims. This acted as a *vicarious experience* (Bandura, 1977) for Alexander, and he used Jackson's experiences as a model for how he planned his assignment enhancements. Alexander shared how hearing about Jackson's success made him feel like he could also be successful with a similar practice.

Developing disciplinary literacy practice. The experience of enhancing an assignment/activity from their own courses had a positive impact on each of the faculty's self-

efficacy with disciplinary literacy. While the process of enhancing the assignment took time, they realized that there was minimal time, if any, added to their instruction. The faculty learned to integrate the content and disciplinary literacy strategies into the same lesson, and they each experienced success with this integration. They each felt success with this enhancement, and their *performance accomplishments* (Bandura, 1977) strengthened their self-efficacy when discussing future enhancements.

Each faculty member in each learning community agreed their students needed more support with *engaging* in Moje's (2015) six disciplinary practices. Whereas before they expected their students to be able to complete each of these practices, they realized they had not properly supported their students' growth in this area. Going through the learning community and applying their knowledge to their own course's assignments increased their self-efficacy with not only implementing disciplinary literacy into these specific assignments, but also their self-efficacy with implementing disciplinary literacy in future assignments.

Developing disciplinary literacy independence. The faculty spoke in the beginning of not knowing how to implement disciplinary literacy instruction in their courses and their desire for a tool box of strategies. They acknowledged both verbally and in their journal entries how their experience in the learning community strengthened their understanding of disciplinary literacy, their perception of their role as a literacy educator, and their practice with specific strategies to use within their courses. They valued collaboration, but they recognized they felt more independent in their ability to implement disciplinary literacy in their courses. Several faculty members expressed how they were excited about this sense of independence. This positive *emotional arousal* (Bandura, 1977) acted as a source of increasing their self-efficacy.

The faculty recognized that their collaborative experience was essential to move toward

independence. Further, they recognized that collaboration and independence could occur simultaneously, and it was necessary to continue to increase their self-efficacy. As they had new ideas for course redesign, they spoke of their desire to collaborate with colleagues, share ideas, and collaboratively continue to develop a toolbox of strategies specific to their discipline. The faculty felt their independence and self-efficacy would continue to rise when they implemented these strategies into their course instruction. Having this plan in place and ideas for future revisions separate from the learning community also contributed to this sense of independence.

Implications

The findings from this study lead to implications focused on four main areas: faculty collaboration, professional development, curricular standards, and student support options. The implications below address the rights outlined in the CRLA's position statement (Greenbaum & Angus, 2018) discussed earlier.

Support for Community College Faculty Collaboration

All ten of the faculty in this study repeatedly expressed their desire for more collaboration in their role as a community college faculty member. This desire for collaboration was prevalent regardless of whether the faculty member was full-time or part-time. They discussed four main types of collaboration: mentorships, discipline-specific, programmatic, and interdisciplinary. Regardless of the type, the faculty argued for the need for support for such collaborations from their colleagues and administration.

The faculty did not feel they received adequate support from the college in order to make these collaborations happen. They taught high course loads each semester, and there was not a mechanism in place to receive course release time or stipends to participate in collaborative professional development, such as learning communities. The faculty were not willing to teach

one less class (and thus receive a lower salary) in order to have the time to participate in professional development that was not required by the college. The faculty recognized the need for administrative support in order for such collaboration to occur.

Faculty professional development programs at community colleges can support faculty with organizing and managing learning communities, as well as with providing recognition of completion. The faculty greatly appreciated that they did not have to organize and manage the learning community in this study, and they honestly shared they would not have the time to serve in that leadership capacity. They spoke of potential future learning communities, but they identified the need for someone to serve as a leader. Stipends from professional development funding could be an option to explore.

Mentorships. Each of the part-time faculty spoke of the desire for more collaboration with the full-time faculty and program heads at the college. Some of the adjunct faculty taught at multiple institutions, and most felt disconnected to the college and faculty as a whole. Meeting with program heads and full-time faculty regularly to discuss course content, instructional strategies, and student issues could help the part-time faculty to feel more connected, as shown during the Early Childhood Education learning community in this study. The experience for the two part-time Early Childhood Education faculty not only validated their pedagogical decisions, but it also provided the platform for future collaborations between them and the program head.

Disciplinary Collaborations. The faculty valued collaborating with colleagues in their same discipline. Additionally, they valued sharing ideas, lessons, struggles, and concerns. This collaboration helped them to not only feel less alone in their struggles in the classroom, but it also provided an avenue for investigating possible solutions. The faculty in the Humanities and Early Childhood Education learning communities agreed that the collaborations they experienced

were more beneficial than typical discipline or program general meetings. Focusing on one specific topic over a longer period of time allowed them to reflect on their knowledge and pedagogical decisions. Further, they were able to receive feedback from their peers who were also deemed experts in the discipline.

Programmatic Collaborations. When looking at larger, programmatic needs, the Early Childhood Education faculty agreed that such a collaboration would allow them to work together, attain buy-in from the faculty, and achieve programmatic change. They brainstormed about how to structure programmatic collaborations and agreed that meeting regularly over the course of the academic year would be beneficial. The Early Childhood Education faculty clearly stated that it was important to set clear programmatic goals so they could structure the content of their meetings in order to lead to programmatic change could occur.

Interdisciplinary Collaborations. The four faculty in the STEM learning community appreciated that they were from different, yet related, disciplines. They agreed that many disciplinary literacy practices were similar across their disciplines, and it was beneficial for them to have their peers' perspectives as they applied their knowledge of disciplinary literacy to their own discipline. Two faculty were from very small disciplines, and they previously felt alone in their course planning, reflection, and revision. This interdisciplinary learning community provided them the experience of collaborating with peers from different disciplines, and they agreed they were more willing to collaborate with faculty from other disciplines in the future.

Additionally, the faculty in all three learning communities agreed that collaborating with English and Developmental English faculty would be beneficial. This collaboration would provide opportunities for the discipline faculty to learn more about what is taught in the English courses, and vice versa. This could lead to improved alignment of instruction to better support

students' literacy needs.

Professional Development for Disciplinary Literacy

Discipline faculty are highly trained in their field, and most are not trained in literacy theory and practice. Through professional development, faculty can strengthen their expertise in their own discipline as well as gain knowledge of literacy development and learning (Bharuthram, 2012). Learning communities provide faculty the opportunity to develop their knowledge over longer periods of time alongside their colleagues. In learning communities, faculty have more autonomy to design the content, process, and outcomes. Further, they can make direct connections and applications to their own classrooms and reflect with their peers over extended periods of time. Experiencing professional development in this manner may positively impact faculty's self-efficacy with implementing disciplinary literacy instruction in their courses.

Professional development focused on disciplinary literacy is important for faculty of all disciplines, even those that are not typically considered literacy-heavy disciplines. Many programs at community colleges are technical or trade-focused. Literacy skills are important in these courses too, and they impact a student's success once they enter the workforce (Crawford, 2009; Perin, 2018). However, institutional support is necessary to support faculty from all disciplines as they participate in professional development (Romero, 2010).

Revise Community College Course Standards to Include Disciplinary Literacy

Community college general education courses have specific standards that address disciplinary content. Typically, these standards do not address the disciplinary literacy practices required of a member of the discipline. Including such standards that address these specific disciplinary literacy practices could lead to greater recognition of the importance of teaching

these skills within the disciplines. Discussions between discipline and literacy faculty could lead to a greater understanding of these disciplinary literacy practices and how to address them in the course standards.

Examine Literacy Support Options for Community College Students

There are numerous literacy support options for community college students in place in many institutions, such as learning assistance centers, developmental education courses, and college-level English courses. The faculty in this study did not hold high levels of value or understanding for these support options. They each had negative experiences with the foundational literacy support their students received from the learning assistance center tutors. They were not confident these tutors would be able to adequately support their students with the disciplinary literacy practices they defined during this learning community. The faculty admitted to not knowing what was specifically being taught in Developmental English or English courses. They had not collaborated with any faculty of these courses to learn more about the courses' curricula and learning outcomes. Further, they did not believe that the coursework could relate to their specific discipline.

This lack of knowledge and value in the current literacy support options left the faculty feeling alone in the quest to support their students with disciplinary literacy in their courses. For example, the faculty felt the need to provide foundational literacy support for their students in order for them to be successful in their college-level courses. The faculty struggled with this as they had a lot of content to cover over the course of the semester.

Examining the current foundational literacy support options for community college students could indicate areas of strength, possibilities for collaboration, and areas for improvement. For example, reviewing curricula for Developmental English classes could reveal

possibilities for increasing student preparation for disciplinary literacy practices, such as identifying and supporting claims. Or, reviewing tutoring protocols for learning assistance center staff could reveal opportunities for tutors to address disciplinary literacy practices, such as key disciplinary terminology. Ultimately greater communication between the multiple providers of literacy support could lead to a more cohesive literacy education for community college students.

Limitations

One limitation in this study is that the participants were not fully representative of discipline community college faculty. Despite using multiple methods to invite faculty from all disciplines to participate, I was unable to secure larger numbers of participants and the three learning communities remained small. This resulted in fewer discipline and literacy faculty to share individual perceptions and experiences, and fewer colleagues to provide feedback and support. Further, only eight of the ten faculty fully participated in the learning communities. I made repeated attempts to invite the faculty to return to the sessions, collaborate with their peers, complete the journal entries, and enhance their individual assignment. This did result in some further participation, although the faculty both articulated their busy schedules and difficult work climate prevented them from finishing the learning community. Since this was a multi-case of three learning communities at one community college, generalizations to other community college discipline faculty and institutions should be made with caution.

A second limitation is was that no Learning Assistance Center staff or English or Developmental English faculty members who were currently working at the college volunteered to participate in the study. Since I taught Developmental English courses at this college previously, I fulfilled this role. I provided information about the current state of literacy

instruction at the college to the best of my ability, but it is possible that there were instructional strategies or curricular changes of which I was not aware. Collaborations between discipline and current literacy faculty would have been beneficial to ensure the current state of literacy at the college was correctly represented. Further, it could have laid the foundation for future collaborations between these faculty and departments at the college.

A final limitation is that not all faculty were able to implement their enhanced assignments either during the learning community or shortly thereafter. The learning community included five sessions held over six to eight weeks, and less than half of the faculty implemented disciplinary literacy instructional strategies in their courses during this time frame. However, none of the faculty were able to implement their enhanced assignment during the learning community. For the STEM faculty who taught some four- and eight-week courses, the learning community schedule aligned with their course schedules and they planned to implement their enhanced assignments during the next four- or eight-week session that began a week or two after the learning community ended. The Humanities and Early Childhood Education faculty taught sixteen-week courses and would not be able to implement their enhanced assignments until the next semester. This prevented these faculty from experiencing and reflecting upon the implementation of their enhanced assignment during the community, and thus they were not able to receive feedback and support from their peers. The faculty discussed their desire to continue collaborating with their peers, and it is my hope that they were able to fulfill that desire.

Further Research

This multi-case study shows promising results of community college discipline faculty's participation in a literacy-focused professional learning community. Further research could extend these findings to address additional disciplines (including literacy), faculty, programs, and

community colleges. Semester-long learning communities may provide more opportunities for participants to engage in the content, implement strategies and activities in their classrooms, reflect on this experience, and collaborate with peers. Grants for release time may attract larger numbers of faculty who are teaching high course loads at one or more institutions.

Program assessments for community college literacy programs evaluate instruction and literacy support provided through learning assistance centers and developmental education courses. Extending this assessment to include the literacy addressed in discipline courses could provide a more comprehensive view of the literacy needs of today's community college students as well as possible avenues for strengthening the support for these students.

Professional development and support from administration are key elements to supporting discipline faculty with implementing disciplinary literacy instruction in their courses. Future research could investigate the perceptions of faculty developers, instructional designers, programs heads, and administrators (e.g., deans), and others, in regard to disciplinary literacy instruction in college-level discipline courses.

Conclusion

In conclusion, this study contributes to the field of research in disciplinary literacy, community college instruction, and professional development. The data from the three cases revealed the experience in a disciplinary literacy professional learning community positively impacted the participants' understanding of disciplinary literacy, perception of their role as a literacy educator, practice with implementing disciplinary literacy in their courses and programs, and self-efficacy with disciplinary literacy instruction.

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APPENDIX A

Tentative Disciplinary Literacy Learning Community Curriculum

Session 1

Topics:

- Introduction to Learning Communities
- General Literacy Strategies vs. Academic Literacies, Higher Education

Goals:

- In this initial session, participants will learn about the purpose of a learning community and how they will work together to reach common goals. The group will identify their purpose, goals, topics, and structure.
- The participants will compare and contrast general literacy strategies and disciplinary literacies in the context of both K-12 and higher education.

Readings:

- PLCs: DuFour (2004), Bergman (2014), Jacobs (2005)
- K-12: Moje (2008), Heller (2010), Fang (2014), Shanahan & Shanahan (2012)
- Higher Education: Jacobs (2007), Lea & Street (1998), Gunn, Hearne, & Sibthorpe (2011)

Reflection Questions:

- What are my personal goals for this learning community?
- What are my literacy concerns for my students?
- What is my background in literacy?
- What literacy strategies do I currently incorporate into my classes?
- Should every teacher be a teacher of reading/writing/speaking?
- What do students need to be able to do in order to meet the objectives of my discipline (e.g., reading, writing, speaking)

Session 2

Topics:

- Supporting at-risk students with literacy in a discipline course
- Discipline-Specific Literacies

Goals:

- Participants will gain an appreciation and understanding of the struggle at-risk students face in their college classes. Developmental education and general reading strategies will be discussed.
- Participants will start to explore the discipline-specific literacies for their particular courses. They will identify the importance of each skill in the overall success in the course.

Readings:

- Faggella-Luby (2012), Heller (2010), Gillis (2014), Maloney (2003)
- Course Outline/Syllabus for each course taught in discipline
- General Education Competencies

Reflection Questions:

- What do my students struggle with literacy-wise?
- How do I accommodate their needs?
- What support do I need in order to meet their needs?
- What do I expect my students to walk in the door with in regard to literacy?
- What literacy skills do my students need to complete preparatory work (homework)?
- What literacy skills do my students need to succeed in the class?

Session 3

Topics:

- Discipline-Specific Writing
- Discipline-Specific Vocabulary

Goals:

- Participants will examine the writing skills necessary to succeed in their courses. They will identify specific assignments that require these skills. They will collaborate with the learning community to brainstorm ways they could support their students in building discipline-specific writing skills.
- Participants will examine specific vocabulary skills necessary to succeed in their courses. They will identify specific assignments that require these skills. They will collaborate with the learning community to brainstorm ways they could support their students in building disciplinary vocabulary knowledge.

Readings:

- Discipline Specific Writing Assignments/Rubrics
- Exemplars from the field
- Boyd, Sullivan, Popp & Hughes (2012)
- Required Course/Discipline Specific Texts
- Additional Discipline-Specific Texts

Reflection Questions:

- How should students write in my discipline?
- What type of writing should they use?
- What type of writing do I typically receive from my students?
- What is my role in supporting their writing development in my course?
- What other resources do my students have to strengthen their discipline-specific writing?
- What role does vocabulary knowledge play in my course?
- How should/could students build their vocabulary knowledge in my course?
- What is my role in helping students build their vocabulary?
- What other resources do my students have to build vocabulary?

Session 4

Topics:

- Information Literacy and the Disciplines
- Assignments that require discipline-specific literacies

Goals:

- Participants will examine the role information literacy plays within their discipline. They will identify specific assignments that require these skills. They will collaborate with the learning community to brainstorm ways they could support their students in building information literacy knowledge.
- Participants will evaluate their current assignments and explore the disciplinary literacy requirements for student success. The faculty will brainstorm with the learning community to identify areas where possible disciplinary literacy instruction could occur.

Readings:

- Course Outline
- Course Curriculum
- Current Course Assessments

Reflection Questions:

- What does an information literate student look like in my class?
- What would he/she be able to accomplish within my discipline?
- Where do my students struggle in terms of information literacy?
- How do my current course assignments support my students' literacy development?
- What changes could I make to my current course assignments to better support my students?
- What resources could I pull into my class and curriculum to better support my students?
- What professional development do I need to better support my students?

Session 5

Topics:

- Disciplinary Literacy Assessments
- Curriculum change

Goals:

- Participants will discuss formative and summative assessments in the classroom to evaluate students' disciplinary literacy skills. Peer and self-assessments will also be discussed.
- Participants will identify areas of potential curriculum change within their classes. They will make a plan for how to implement the curriculum change, both in terms of instructional design and instructional delivery.

Readings:

- Current Course Assessments
- Lea (2004)

Reflection Questions:

- How do I know what my students know?
- How do my current assessments identify students' abilities to read, write and think critically?
- In what areas of my course would I like to implement curriculum change?
- From whom do I need support in order to implement this change?
- What is my timeline for implementing this change?

Session 6

Topics:

- Support options, collaboration with key stakeholders
- Conclusion, plan for next semester

Goals:

- Participants will identify the various support options both faculty and students have to develop disciplinary literacy instruction and strategies in the classroom.
- Participants will wrap up the learning community. They will share their plans for curricular change in their course(s) the next semester. They will identify a plan for either a continuance of the learning community or follow up.

Reflection Questions:

- What support do I need to implement disciplinary literacy instruction in my classes?
- From whom am I currently reaching out for support, and how is she/he supporting me?
- From whom should I reach out to for support?
- What has been the most powerful aspect of disciplinary literacy I've learned through this learning community?
- What is my first step of action upon the completion of this learning community?

What do I still want to learn about disciplinary literacy for my courses?

APPENDIX B

Final Disciplinary Literacy Learning Community Curriculum

Session 1

Topics:

- Introduction to Learning Communities
- Introduction to Disciplinary Literacy
- Focus Group 1

Activities:

- Meet each other and share brief personal autobiographies
- Discuss purpose and structure of study, answer questions, complete informed consent
- Identify specific dates and locations for learning community sessions
- Discuss access and materials on shared Google Drive
- Discuss overview of disciplinary literacy
- Conduct initial focus group

Preparatory Activities:

- n/a

Session 2

Topics:

- Introduction to Disciplinary Literacy Learning Community
- General Literacy Strategies vs. Academic Literacies, Higher Education
- Defining Literacy in the Disciplines
- Supporting Students with Literacy in Discipline Courses

Activities:

- Discuss the tenets of learning communities.
- Identify common purpose, goals, values, and mission of learning community.
- Identify four components of literacy: reading, writing, critical thinking, communication
- Identify expected literacy tasks within discipline courses
- Identify instructional strategies used to support students with literacy tasks.
- Compare and contrast general literacy strategies and disciplinary literacies in the context of higher education.

Preparatory Activities:

- Read DuFour, R. (2004). What is a PLC? *Educational Leadership, 61*(8), 6-11.
- Read Moje, E. (2015). Doing and teaching disciplinary literacy with adolescent learners: A social and cultural enterprise. *Harvard Educational Review, 85*(2), 254-278.
- Review and bring course outline/syllabus for each course taught in discipline
- Review and bring General Education Competencies for each course taught in discipline
- Post Journal Entry 1 on Google Drive

Session 3

Topics:

- Discipline-Specific Writing, Reading, Critical Thinking, and Communication
- Unpacking and Applying Moje's 4E Heuristic
- Defining 'Member of the Discipline'
- Enhancing Instruction to Address Disciplinary Literacy
- Enhancing Assignments and Activities that Require Discipline-Specific Literacies

Goals:

- Categorize expected literacy tasks and instructional strategies into four components of literacy (reading, writing, critical thinking, and communication) and type of literacy (general of discipline-specific).
- Discuss the specific roles of discipline-specific writing, reading, critical thinking, and communication in terms of course success.
- Discuss Moje's 4E heuristic and apply to discipline courses.
- Identify what it means to be a member of the discipline.
- Identify strengths of individuals with supporting disciplinary literacies.
- Identify possible areas to enhance instructional strategies to support disciplinary literacy.
- Collaborate with learning community members to brainstorm about strengths and areas for enhancements.

Preparatory Activities:

- Review and bring 2-3 assignments or activities that require discipline-specific literacies
- Review Moje's article
- Post Journal Entry 2 on Google Drive

Session 4

Topics:

- Enhancements of Assignments/Activities
- Assessing Disciplinary Literacy
- Formative and Summative Assessments
- Curriculum Change
- Key Stakeholders

Goals:

- Discuss current progress of assignment/activity enhancements.
- Collaborate with learning community members for decision-making of enhancements.
- Identify current plan for assessing disciplinary literacy within assignment/activity.
- Collaborate with learning community members to brainstorm about enhancements for assessment related to assignment/activity.

Preparatory Activities:

- Bring current enhanced assignment/activity and plans for future enhancements
- Post ‘before’ assignment/activity and assessment on Google Drive
- Review and bring current assessment for assignment/activity
- Post Journal Entry 3 on Google Drive

Session 5

Topics:

- Enhancements of Assignments/Activities and Related Assessments
- Identification of Action Plan
- Conclusion of Learning Community
- Focus Group 2

Goals:

- Share current enhanced assignment/activity and related assessment.
- Identify areas of potential curriculum change within their courses and/or program.
- Identify action plan for implementing curriculum change within their courses and/or program.

Preparatory Activities:

- Bring enhanced assignment/activity and related assessment
- Post ‘before’, ‘during’, and ‘after’ assignment/activity and assessment on Google Drive
- Bring ideas for curriculum change within courses and/or program
- Post Journal Entry 4 on Google Drive

APPENDIX C

Focus Group Interview Protocol

Initial Focus Group Interview

1. When you hear the phrase, 'Every teacher is a teacher of literacy', what is your reaction considering your role as a faculty in higher education?
2. What are your current perceptions of disciplinary literacy?
3. Discuss some examples of discipline-specific literacy strategies your students need to be able to use within your courses?
4. Where do your students currently receive support for these strategies?
5. How do you currently support students in your classes with these strategies?
6. Whose role do you feel it is to support your students with these strategies?
7. What types of assignments do you have that address/require these strategies?
8. Discuss your level of confidence in your ability to support students with the reading strategies specific to your discipline.
9. What types of professional development activities have you taken, if any, that focus on reading, writing, critical thinking, and communicating within specific disciplines? Or within college in general?
10. What is your current level of confidence in terms of implementing disciplinary literacy instruction within your course(s)?

Final Focus Group Interview Protocol

1. What are your current perceptions of disciplinary literacy? Discuss the changes, if any.
2. How do you currently view the role disciplinary literacy plays in your courses and program? Discuss changes, if any.
3. How do you currently view your role in integrating disciplinary literacy within your courses?
4. What specific changes, if any, have you made regarding your instruction (or plans for instruction) in relation to disciplinary literacy? Assignments, pedagogy, expectations
5. Has your confidence level with disciplinary literacy changed over the course of this learning community? Explain how and why.
6. What has been the role/impact of this learning community on all of the above?
7. What is your action plan going forward regarding your personal practice and collaboration in your discipline? What are your needs to put this action plan into place?
8. Is there anything else you would like to share?

APPENDIX D

Individual Reflective Journal Entry Prompts

Journal Entry 1

Below are some reflection questions to start you thinking about the work we'll do in this learning community. When we talk about literacy, we are thinking about all components: reading, writing, thinking, and communicating. Please take some time to journal about your thoughts before our next session. You do not need to answer all of these questions, nor are you limited to these questions. Journal freely about what is on your mind.

- What are my personal goals for this learning community?
- Which course(s) might I want to focus on during this learning community?
- What assignments, activities, and/or assessments might I want to focus on during this learning community?
- What is my background in literacy?
- What literacy skills do my students need in order to meet the objectives of my discipline and course(s)?
- What are my experiences with my students in terms of their literacy skills?
- How do I support my students' literacy growth within my course(s), and what additional support, if any, do they need?
- What support, if any, do I need in order to better meet my students' needs?

Journal Entry 2

Below are some questions to guide your continued reflection on literacy within your discipline. Think specifically about the 'ways of knowing' within your discipline, and translate that to both the content and process students experience within your class(es). Please take some time to journal about your thoughts before our next session. You are not required to answer all of these questions, nor are you limited to these questions. Journal freely about what is on your mind.

Thinking

- What thinking processes do experts in my field commonly use?
- In thinking about my activities, assignments, and assessments, which thinking processes do I expect my students to use?
- What expectations do I have for my students regarding these processes when they enter my classroom?
- What support, if any, do I give my students in regard to these thinking processes?

Writing

- What type of writing do experts in my field commonly use?
- What opportunities do I give my students to write throughout the semester?

- What expectations do I have for my students regarding writing when they enter my classroom?
- What support, if any, do I give my students in regard to writing?

Vocabulary

- What are some examples of discipline-specific vocabulary that I expect my students to master by the end of the semester?
- How do students show me their knowledge of this vocabulary throughout the semester? Provide an example.
- What support, if any, do I give my students in regard to vocabulary

General

- What are my personal strengths as an expert in my field in the above categories?
- What are my personal strengths as a faculty member in the above categories?
- Which course(s) might I want to focus on during this learning community?
- What assignments, activities, and/or assessments might I want to focus on during this learning community?

Journal Entry 3

Now that we've been investigating disciplinary literacy within your field for the past few weeks, take some time to reflect on your current position with disciplinary literacy. Think specifically about the conversations we've had, as well as how you've applied it to your practice. Please take some time to journal about your thoughts before our next session. You do not need to answer all of these questions, nor are you limited to these questions. Journal freely about what is on your mind.

1. How would you describe disciplinary literacy within your discipline? In what disciplinary skills do your students struggle with the most?
2. What does it mean to be a member of the field for your discipline? How does a member participate literacy-wise?
3. What are your current perceptions of your role as a literacy educator within your discipline? Have your thoughts changed over the past couple weeks? Or not? Explain.
4. What assignment, activity, and/or assessment have you decided to work with over the rest of the community? What is the specific literacy component you are working on enhancing?
5. Have you made any changes in your practice in regard to literacy? Do you have any ideas as to changes you would like to make going forward? Describe any examples.
6. How has the collaboration you've experienced so far in this learning community impacted any or all of the above answers?

Journal Entry 4

Now that you've worked on enhancing an activity/assignment within your course, take some time to reflect on the process and the product. Think specifically about how you enhanced the disciplinary literacy aspect of your activity/assignment and what that process looked like for you as a discipline expert. Please take some time to journal about your thoughts before our next session. You do not need to answer all of these questions, nor are you limited to these questions. Journal freely about what is on your mind.

1. Describe the original assignment/activity you worked with in terms of both the discipline and literacy content. Why did you choose this one to work with?
2. What were the enhancements you made to the assignment/activity? Explain your thought process as to why you chose to make those enhancements. How do those enhancements support content-specific and disciplinary literacy knowledge/skills?
3. When considering your assessment for this assignment/activity, as well as others in your course(s), what enhancements, if any, do you feel you would need to make in order to assess the disciplinary literacy component?
4. Are there other assignments/activities that you feel you could make similar enhancements too? Explain.
5. In terms of other assignments/activities/assessments in your course(s), what support and resources would you need to implement similar enhancements?
6. What has been the most powerful aspect of disciplinary literacy I've learned through this learning community?
7. What do I still want to learn about disciplinary literacy going forward?

VITA

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EDUCATION

Ph.D., Curriculum and Instruction: Literacy Leadership
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Old Dominion University, August 2018
Dissertation: *A Multi-Case Study of Community College Discipline Faculty's Participation in a Disciplinary Literacy Professional Learning Community*

M.Ed., Reading
Virginia Commonwealth University, May 2002

B.A., Sociology, minor in Early Education
University of Richmond, May 1997

EXPERIENCE

2018	**Research Fellow** for Drs. Sue Kimmel and Shana Pribesh; AASL: Causality: School Libraries and Student Success II (CLASS II), Old Dominion University, Norfolk, VA.
2017-2018	**Graduate Assistant** for Dr. Jamie Colwell, Literacy Coaching Certificate Program, Old Dominion University, Norfolk, VA
2017	**Research Assistant** for Dr. Jeffrey DiScala, The Lilead Project, Old Dominion University, Norfolk, VA
2016-2017	**Adjunct Faculty,** Teacher Education, Department of Teaching and Learning, Old Dominion University, Norfolk, VA.
2016	**Adjunct Faculty**, Teacher Education, Humanities & Social Sciences Department, Tidewater Community College, Chesapeake, VA.
2016	**Research Fellow** for Drs. Sue Kimmel and Shana Pribesh; AASL: Causality: School Libraries and Student Success II (CLASS II), Old Dominion University, Norfolk, VA.
2014-2016	**Faculty Professional Development Manager**, Batten Center for Teaching Excellence, Academic Affairs, Tidewater Community College, Chesapeake, VA.
2014	**Research Assistant** for Dr. Helen Crompton, Mobile Learning in Large Science Classes, Old Dominion University, Norfolk, VA.
2013-2014	**Assistant Professor**, Developmental English, Humanities & Social

	Sciences Department, Tidewater Community College, Chesapeake, VA.
2009-2012	**Adjunct Instructor**, Developmental Reading, Humanities & Social Sciences Department, Tidewater Community College, Virginia Beach, VA.
2008-2012	**Director of Family Ministry**, Francis Asbury United Methodist Church, Virginia Beach, VA (**Assistant Director,** Francis Asbury Preschool, 2012)
2003-2007	**Instructor and Program Head**, Developmental Reading, J. Sargeant Reynolds Community College, Richmond, VA
2001-2003	**Reading Specialist**, *Success for All* Facilitator, Blackwell Elementary School, Richmond, VA
1997-2001	**Classroom Teacher**, 2nd and 3rd grade, Blackwell Elementary School, Richmond, VA, (**Grade Level Chairperson**, 1999-2001)

RESEARCH

PEER REVIEWED JOURNAL ARTICLES

Gregory, K., Bol, L., Bean, T., & Perez, T. (in press, 2019). Community college discipline faculty's attitudes and self-efficacy with literacy instruction in the disciplines. *Journal of Behavioral and Social Sciences, 6.*

Crompton, H., Gregory, K., & Burke, D. (in press, 2018). Humanoid robots supporting children's learning in an early childhood setting [Special Issue]. *British Journal of Educational Technology.*

Gregory, K. H., Colclough, M. N. (in press, 2018). Community college discipline faculty perceptions of role as literacy educators. *Inquiry: The Journal of the Virginia Community College System.*

Crompton, H., Burgin, S. R., De Paor, D. G., & Gregory, K. (2018). Using mobile devices to facilitate student questioning in large undergraduate science classes. *International Journal of Mobile and Blended Learning, 10*(1), 48-61.

Crompton, H., Burke, D., & Gregory, K. H. (2017). The use of mobile learning in PK-12 education: A systematic review. *Computers in Education, 110*, 51-63.

Gregory, K. H. & Burbage, A. K. (2017). Exploring faculty development identity through self-study: Teaching philosophies, reflective practice, and critical friendship. *Journal of Ethnographic & Qualitative Research, 12*(2), 110-124.

Gregory, K. H., Diacopoulos, M. M., Branyon, A., & Butler, B. M. (2017). From skepticism to scholarship: Learning and living self-study research in a doctoral seminar. *Studying Teacher Education, 13*(2), 1-18.

Colwell, J. & Gregory, K. (2016). Exploring how secondary pre-service teachers' use online social bookmarking to envision literacy in the disciplines. *Reading Horizons, 55*(3), 62-97.

Crompton, H., Burke, D., Gregory, K., & Grabe, C. (2016). The use of mobile learning in science education: A systematic review. *Journal of Science Education and Technology, 25*, 149-160.

BOOK CHAPTERS

Bean, T., Gregory, K., & Dunkerly-Bean, J. (2018). Disciplinary literacy. In R. Flippo & T. W. Bean (Eds.), *Handbook of college reading and study strategy research* (3rd ed., pp. 89-97). New York: Routledge.

Pribesh, S. & Gregory, K. (2018). Causal research. In R. V. Small and M. A. Mardis (Eds.), *Research Methods for Librarians and Educators: Practical Applications in Formal and Informal Learning Environments* (pp. 145-152). Santa Barbara, CA: Libraries Unlimited.

Branyon, A., Diacopoulos, M. M., Gregory, K., & Butler, B. M. (2016). The power of autobiography: Unpacking the past, understanding the present, and impacting the future while establishing a community of practice. In D. Garbett & A. Ovens (Eds.), *Enacting self-study as methodology for professional inquiry* (pp. 119-125). Auckland, New Zealand: University of Auckland.

Gregory, K. H., & Crompton, H. (2015). The relationship between mobile learning, instructional delivery and student motivation in a large undergraduate science class. In H. Crompton, & J. Traxler (Eds.), *Mobile learning and STEM: Case studies in practice* (pp. 162-172). Florence, KY: Routledge.

PRESENTATIONS

INTERNATIONAL

Branyon, A., Diacopoulos, M., & Gregory, K. (2018, January). *Relationships, relevance, and rigor: Creating a community of practice.* Paper presented at the Hawaii International Conference in Education. Honolulu, Hawaii.

Branyon, A., Diacopoulos, M. M., Gregory, K., & Butler, B. M. (2016, July). *The power of autobiography: Unpacking the past, understanding the present, and impacting the future while establishing a community of practice.* Paper presented at the Herstmonceux XI: The Eleventh International Conference on Self-Study of Teacher Education Practices, East Sussex, England.

Crompton, H., Burgin, S., De Paor, D., Gregory, K., & Summers, R. (2014, October). *A qualitative study to investigate the use of mobile learning to facilitate student questioning in a large university classroom.* Paper presented at the The World Conference on Mobile and Contextual Learning, Istanbul, Turkey.

NATIONAL

Diacopoulos, M., Gregory, K., Branyon A., & Butler, B. M. (2018, April). *Breaking practice down to its naked core: Learning how to do self-study research.* Paper presented at the American Educational Research Association Annual Conference, New York City, NY.

Perez, T., Gregory, K., & Baker, P. (2018, April). *Using an Identity-Based Relevance Intervention to Support Developmental Community College Students' Educational Commitment and Motivation*. Poster presented at the American Educational Research Association Annual Conference, New York City, NY.

Gregory, K. (2018, February). *A qualitative content analysis of novels used in community college developmental English classes.* Poster presented at the Conference on Academic Research in Education, Las Vegas, NV.

Gregory, K. H. & Diacopoulos, M. M. (2018, February). *Novice or expert? Unpacking, understanding, and reframing perceptions.* Poster presented at the Conference on Academic Research in Education, Las Vegas, NV.

Bean, T., Gregory, K., & Dunkerly-Bean, J. (2017, December). *College Reading in the Age of Disciplinary Literacies: Change Theory and Mindfulness in Moving the Field Forward.* Paper presented at the Literacy Research Association, Tampa, Florida.

Crompton, H., Burgin, S., Gregory, K. H., De Paor, D., & Summers, R. (2017, April). *Using Mobile Devices to Facilitate Student Questioning in Large Undergraduate Science Classes*. Poster presented at the American Educational Research Association Annual Conference, San Antonio, TX.

Diacopoulos, M. M., Gregory, K. H., & Branyon, A. (2017, April). *Skirting the Edge of Chaos: Maintaining a Community of Practice in a Doctoral Program.* Paper presented at the American Educational Research Association Annual Conference, San Antonio, TX.

Gregory, K., Bol, L., & Bean, T. (2017, January). *Community College Faculty's Attitudes and Self-Efficacy with Literacy Instruction in the Disciplines.* Paper presented at the Conference on Academic Research in Education, Las Vegas, NV.

Gregory, K., Burbage, A. (2017, January). *Exploring Faculty Development through Self-Study: Teaching Philosophies, Reflective Practiced, and Critical Friendship.* Poster presented at the Conference on Academic Research in Education, Las Vegas, NV.

Kimmel, S., Pribesh, S., Wine, L., & Gregory, K. (2017, January). *Essential partners in community engagement and social responsibility: Causal relationships between librarian's best practices, student learning, and improvement science.* Paper presented at the Association for Library and Information Science Education Annual Conference, Atlanta, Georgia.

Gregory, K. H., Colclough, M. N. (2016, April). *Community college discipline faculty perceptions of role as literacy educators.* Paper presented at the American Educational Research Association Annual Conference, Washington, D.C.

Gregory, K. H., Diacopoulos, M., Branyon, A., & Butler, B. M. (2016, April). *From skepticism to scholarship: Learning and living self-study research in a doctoral seminar.* Paper presented at the American Educational Research Association Annual Conference, Washington, D.C.

Crompton, H., Burke, D., Sunday, K., Baker, P., Gregory, K., Asija, J. (2016, February). *Humanoid robots supporting children's intellectual and social dispositions in an early childhood setting.* Paper

presented at the Society for Information Technology and Teacher Education Conference, Savannah, GA.

Burgin, S. R., Crompton, H., Gregory, K. H., De Paor, D., & Summers, R. (2015, April). *Using mobile technologies to facilitate student-to-teacher questioning in a large undergraduate astronomy course.* Poster presented at the Annual Meeting of the National Association for Research in Science Teaching, Chicago, IL.

TEACHING

Old Dominion University (2016-2018)

TLED 408 Reading and Writing in the Content Areas
Spring 2017: F2F, n=17; Blended, n=14

TLED 468 Language Acquisition and Reading for Students with Diverse Learning Needs
Summer 2018: Online, n=18
Summer 2017: Online, n=17; Online, n=17
Fall 2016: Online, n=24

TLED 478 Integrating Instruction across the Curriculum, PreK-6 (Practicum Course)
Spring 2018: Blended, n=18
Fall 2017: F2F, n=24
Spring 2017: Blended, n=21

Tidewater Community College (2009-2016)

EDU 200 Introduction to Teaching as a Profession (Practicum Course)
Fall 2016: Online, n=13
Summer 2016: Online, n=15

ENF 1 Preparing for College English I

ENF 2 Preparing for College English II

ENG 4 Preparing for College Reading I

ENG 5 Preparing for College Reading II

J. Sargeant Reynolds Community College (2004-2007)

EDU 295 Teaching Reading to Children

ENG 04 Reading Improvement I

ENG 05 Reading Improvement II

ENG 107 Critical Reading